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INTEGRATING BLOOKET AS A DIGITAL GAMIFICATION TOOL TO ENHANCE ARABIC SYNTAX LEARNING OUTCOMES

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ABSTRACT

This study examines the effectiveness of Blooket, a gamified learning platform, in enhancing students' mastery of Arabic syntax (*tarkib*) at Darussalam Islamic Junior High School, Wanaraja, Garut. Employing a quantitative approach with a quasi-experimental Non-Equivalent Pre-test and Post-test Control Group Design, the research involved two groups: an experimental class (n = 30) using Blooket and a control class (n = 28) receiving conventional instruction. Data were collected through pre- and post-tests focusing on sentence construction, syntactic recognition, and transformations of *jumlah ismiyyah* and *jumlah fi'liyyah*. The data were analyzed using t-tests after confirming normality and homogeneity through Shapiro-Wilk and Levene's tests. Results indicate a significant improvement in the experimental group's mean score from 37.67 to 72.40, while the control group's score increased marginally from 40.00 to 43.39. The independent t-test showed a statistically significant difference in post-test scores ($p < 0.05$) favoring the experimental group. The experimental group's normalized gain (N-gain) averaged 0.54 (moderate), compared to 0.02 (low) in the control group. These findings suggest that Blooket can effectively increase student engagement and syntactic understanding in Arabic grammar. However, the low-to-moderate N-gain also highlights the need for prolonged intervention or blended strategies for deeper conceptual mastery. Future research is recommended to investigate the long-term effects of Blooket on various aspects of Arabic language proficiency, including speaking and writing skills. Studies should also examine the integration of Blooket with other pedagogical models to enhance critical thinking, collaboration, and deeper syntactic competence across diverse student populations.

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INTRODUCTION

Arabic syntax (*tarkīb*) learning in Indonesian junior high schools remains heavily reliant on lecture-based and memorization methods, often resulting in low motivation and superficial comprehension (Akmalia & Faizin, 2021). Post-pandemic studies have highlighted that passive instructional strategies are associated with a significant decline in grammar achievement (Binti Jasni & Ardiansyah, 2020; Fatoni et al., 2024). At Darussalam Islamic Junior High School, Wanajara, Garut, student performance on syntax assessments is consistently below proficiency targets. Meanwhile, Almelhes's systematic review of Gamification in Arabic language instruction underscores the urgency for interactive digital interventions supporting both engagement and cognitive processing (Almelhes, 2024). Without an innovative pedagogical shift, especially in syntactic competence, students risk disengagement and failure to develop analytical language skills vital for advanced Arabic studies and religious literacy.

The core challenge is the persistent low student mastery of Arabic syntax, largely due to insufficiently interactive teaching approaches. Observations at Darussalam mirror Abu Wongsaming et al.'s findings in contexts, demonstrating that traditional grammar instruction without gamified elements yields minimal syntactic gains. Learners often struggle to differentiate between *jumlah ismīyah* and *jumlah fiʿliyyah*, resorting to rote memorization rather than developing contextual understanding (Wongsaming et al., 2023). Existing curriculum documents highlight this learning gap, yet teacher-led methods remain static, lacking motivation triggers such as immediate feedback or peer competition (Siregar et al., 2024). Thus, a comprehensive, engaging instructional method tailored to Islamic junior high settings is essential to reinvigorate syntactic learning.

The integration of Blooket, a web-based Gamification platform, addresses these challenges by incorporating quiz-based gameplay, real-time scoring, and visual rewards elements that promote intrinsic motivation and active participation (Labibah et al., 2024; Salsabila et al., 2025). Educators can tailor Blooket quizzes to cover *tarkīb* topics like verb-object order, nominal sentence structure, and syntax transformation tasks (Masruroh, 2024). Studies show such formats lead to increased retention, reduced anxiety, and frequent repetition (Harahap et al., 2025). Blooket's adaptive gameplay modes, including "Tower Defense" and "Race," foster sustained engagement, moving beyond static drills to create enjoyable and competitive learning experiences. This approach may ultimately yield stronger syntax outcomes and learner confidence (Amalia & Sujarwati, 2025).

Several recent studies have demonstrated the pedagogical effectiveness of Blooket in enhancing language learning. Sartika, Heriyawati, and Elfianto (2023) found that Blooket significantly improved vocabulary acquisition and learning motivation among junior high EFL students (Sartika et al., 2023). Erlangga (2025) similarly reported increased student motivation in ESL contexts through the integration of Blooket quizzes (Erlangga, 2025). In a more syntax-specific context, Al Mufleh and Inein (2025) demonstrated that Blooket outperformed both Quizizz and traditional methods in enhancing Arabic grammar proficiency among sixth-grade students in Saudi Arabia (Al Mufleh & Inein, 2025). Complementing this, Almelhes (2024) conducted a systematic review of 15 studies and concluded that gamified platforms generally enhanced both grammatical proficiency and student engagement in Arabic language classrooms (Almelhes, 2024). Additionally, an Indonesian researcher, Anisatin et al, highlighted the role of gamified technologies, including

AR and VR, in improving Arabic syntax comprehension and student enthusiasm. Despite these positive outcomes, focused research on the use of Blooket specifically for Arabic syntax learning remains limited (Anisatin et al., 2023).

This study brings novelty by focusing explicitly on Arabic syntax mastery (*tarkīb*) within an Islamic junior high school in rural Indonesia. Unlike prior research that prioritized vocabulary or general grammar, our intervention targets syntactic structures using Blooket, aligned with national curriculum standards and religious educational objectives. The study employs a quasi-experimental design with control and experimental groups over a full semester, an approach seldom applied in *pesantren*-type institutions (Ardiansyah, 2020). This context-specific, empirically grounded exploration will provide new insights into gamified language pedagogy where religion, language, and culture intersect, filling a notable gap in both Southeast Asian and Islamic education research.

Despite evidence favoring Blooket's use in vocabulary and ESL contexts, literature offers no studies on its impact on Arabic syntax learning at the junior high level (Sulistyanto & Asyhar, 2024; Susanto, 2025). While demonstrating gains in grammar, his primary focus remained on general Arabic morphology rather than sentence structure. Additionally, Indonesian Islamic school environments where Arabic is both a subject and a religious medium remain underexamined. Existing research rarely combines rigorous syntactic assessment with student perception in such contexts. Thus, this study addresses a triple gap: syntax-focused digital Gamification, *pesantren* educational settings, and combined cognitive–affective measurement (pre/post-tests plus perception surveys).

We adopt a state-of-the-art educational design by embedding Blooket within Arabic syntax instruction, utilizing varied game modes and immediate feedback loops that align with Gamification Theory (Che et al., 2023). Our methodology, a quasi-experimental design with a pre-test/post-test and control group, offers a robust measurement of syntactic learning gains. By incorporating authentic curriculum-based tasks (e.g., *jumlah ismīyah* transformations), gameplay transcends casual quizzing and aligns tightly with cognitive learning objectives. Complemented by student perception surveys, this holistic approach situates the study within cutting-edge language Gamification research, as evidenced by macro meta-analyses that support large effect sizes for gamified interventions (Chan & Lo, 2024).

The primary objectives are: (1) to determine the effect of integrating Blooket on Arabic syntax test scores among grade VIII students at Darussalam Islamic Junior High School, and (2) to explore students' perceptions regarding engagement and motivation. The study focuses exclusively on syntax topics, including *jumlah ismīyah*, *jumlah fi'liyyah*, and basic transformations, over the course of a semester. It employs two classes (experimental and control), with pre- and post-assessments, as well as perception surveys. The scope excludes vocabulary acquisition, oral skills, or advanced syntax. By narrowing its focus, the research delivers precise insights into Blooket's impact on targeted syntactic competencies in an Islamic educational setting.

METHOD

This study employed a quantitative approach using a quasi-experimental method with a pretest-posttest control group design. A research method is defined as a systematic procedure used to obtain data aligned with specific objectives and expected benefits (Creswell & Creswell, 2017; Sugiyono, 2022). The quasi-experimental design is suitable for

educational settings where random assignment is not feasible but control over extraneous variables is still desired. This design allows for comparing the learning outcomes of two groups, experimental and control, before and after the treatment using Blooket as the intervention.

The population in this study consisted of all eighth-grade students at Darussalam Islamic Junior High School, Wanaraja, Garut. There were eight classes, making up the entire research population. A purposive sampling technique was employed to select two classes, with one serving as the experimental group and the other as the control group. This selection was based on similar academic backgrounds and class sizes to maintain equivalency.

Data collection techniques in this study included: (1) Observation, which involved systematic and direct monitoring of the learning process to evaluate student engagement and response; (2) Tests, namely pre-test and post-test, designed to measure students' mastery of Arabic syntax before and after the intervention; and (3) Documentation, which entailed gathering institutional data and relevant learning artifacts to support the findings (Musthafa & Hermawan, 2018).

The research instruments consisted of: (1) test sheets with multiple-choice and short-answer questions constructed based on the Arabic syntax curriculum indicators; (2) structured interview guidelines to explore students' perceptions of Gamification through Blooket; and (3) document analysis checklists used to evaluate lesson plans, attendance, and achievement records. The data analysis techniques included both descriptive and inferential statistics. Descriptive statistics (mean, standard deviation) were used to summarize student performance, while inferential analysis involved: normality tests (Kolmogorov-Smirnov), homogeneity tests (Levene's test), hypothesis testing using independent sample t-tests, and the normalized gain (N-gain) to measure the magnitude of improvement between pre- and post-tests (Mertler et al., 2021).

RESULTS AND DISCUSSION

Result

The Reality of Students' Academic Achievement in Grammar Subjects Before Using Blooket Media in Arabic Language Learning

Before the integration of Blooket media, students' academic achievement in Arabic grammar, particularly in syntax (*tarkīb*), at Darussalam Islamic Junior High School, Wanaraja, Garut, was considerably low. Instructional methods were primarily teacher-centered, relying on memorization and direct translation without sufficient student interaction or formative assessment. Consequently, many students exhibited limited mastery of basic syntactic structures such as *jumlah ismiyyah* and *jumlah fi'liyyah*. This traditional approach failed to stimulate active learning or critical thinking, both of which are essential for understanding the logical and rule-based nature of Arabic grammar.

Empirical evidence from diagnostic tests revealed that Class 8 "W" and Class 8 "A" achieved average pre-test scores of 37.67 and 40.00, respectively, both falling into the "very low" category based on the school's assessment rubric. The majority of students struggled with sentence construction, identifying syntactic components, and transforming verbal and nominal sentences. These scores indicated not only poor comprehension but also a lack of engagement with the subject matter, as confirmed by teachers' classroom observations and student feedback.

Several factors contributed to this low achievement. The absence of differentiated instruction, minimal use of technology, and lack of Gamification made the learning environment monotonous. Students with different learning styles, particularly kinesthetic and visual learners, were disadvantaged in a grammar class that relied heavily on lectures and textbook exercises. Moreover, assessments were often summative, with limited opportunities for practice or revision. This resulted in a significant achievement gap between intended curriculum outcomes and actual student performance in grammar learning.

Given these challenges, the grammar instruction model at the time was insufficient to support meaningful learning. Teachers acknowledged that students were generally passive, and grammar was perceived as one of the most difficult and least liked components of Arabic. There was a pressing need for an instructional intervention that could both increase motivation and reinforce learning through repetition, feedback, and engagement. This reality laid the groundwork for introducing Blooket as a gamified learning tool to transform students' attitudes and performance in Arabic syntax learning.

The researcher conducted a pre-test to determine the reality of students' academic achievement in grammar subjects before using Blooket media in Arabic language learning. The researcher administered a written pre-test to eighth-grade students. (*experimental class*) and eighth-grade A students (*control class*). The results of the students' tests obtained by the researcher are shown in the following table:

Table 1. Descriptive Statistics for Pre-test

Descriptive Statistics						
	N	Minimum	Maximum	Sum	Mean	Std. Deviation
Experimental Class	30	16	56	1130	37.67	9,557
Control Class	28	20	64	1120	40.00	12.208
Total Pre-Test Score	58	16	64	2250	38.79	10,883
Valid N (listwise)	28					

The previous table shows that the level of student learning achievement in syntax material before using Blooket media in Arabic language learning is as follows: the total score in class eight F (*Experimental class*) is 1130, with an average score of 37.67. The highest score is 56 and the lowest is 16. In Class 8 A (control class), the total score on the initial test is 1120, with an average score of 40.00. The highest score is 64 and the lowest is 20. Overall, the total score in the initial test is 2250, with an average score of 38.79. The highest score is 64 and the lowest is 16.

Table 2. Shapiro-Wilk normal distribution test (Shapiro-Wilk) on Pre-test

Tests of Normality							
	Class	Kolmogorov-Smirnova			Shapiro Wilk		
		Statistics	df	Sig.	Statistics	df	Sig.
Total Pre-Test Score	**Experimental Class**	.137	30	.158	.971	30	.553
	Control Class	.143	28	.150	.945	28	.145

From the previous table, it can be seen that the level of significance in class eight and (*experimental class*) is 0.553 and in class eight A (*control class*) is 0.145, both of which are greater

than 0.05. This means that the null hypothesis is rejected, indicating that the sample does not come from a normally distributed population. Furthermore, to determine whether the sample comes from a homogeneous or non-homogeneous group, the researcher conducted a homogeneity test and a one-way ANOVA (One-Way ANOVA) using IBM SPSS Statistics.

Table 3. Homogeneity test and one-way ANOVA on Pre-test

Test of Homogeneity of Variance

		Levene Statistics	df1	df2	Sig.
Total Pre-Test Score	Based on the Mean	1.259	1	56	.267
	Based on the Median	1,322	1	56	.255
	Based on Median and with adjusted df	1,322	1	54,091	.255
	Based on the trimmed mean	1.251	1	56	.268

Table 3 presents the results of the homogeneity test and one-way ANOVA on the pre-test scores. Based on Levene's test using various approaches (mean, median, median with adjusted degrees of freedom (df), and trimmed mean), all significance values (Sig.) are above 0.05 (ranging from 0.255 to 0.268). This indicates that the variances among the groups are homogeneous, meaning the data meet the assumption of homogeneity of variance required for further ANOVA analysis.

The Effectiveness of Student Learning Achievement in Syntax Material After Using Blooket Media in Arabic Language Learning

The researcher conducted a post-test to determine the effectiveness of students' learning achievement in syntax material after using Blooket media in Arabic language learning. The researcher gave a written post-test to eighth-grade F students (*Experimental class*) and eighth-grade A students (*control class*), and the researcher obtained student results as stated in the following table:

Table 4. Descriptive statistics for Posttest

Descriptive Statistics

	N	Minimum	Maximum	Sum	Mean	Std. Deviation
Post Experiment Test	30	56	86	2172	72.40	8,427
Post Test Control	28	20	65	1215	43.39	11,160
Total Post Test Score	58	20	86	3387	58.40	17,576
Valid N (listwise)	28					

According to the previous table, the level of student learning achievement in syntax material before using Blooket media in Arabic language learning was 2172, with an average score of 72.40 on the post-test for class eight F (Experimental class). The highest score was 86, and the lowest was 56. In class eight A (control class), the total score on the post-test was 1215, with an average score of 43.39. The highest score was 65 and the lowest was 20. Overall, the total score on the post-test was 3387, with an average score of 58.40. The highest score was 86, and the lowest was 20.

Table 5. Shapiro-Wilk normal distribution test (Shapiro-Wilk) on Posttest

Tests of Normality							
Post Test Score	Class	Kolmogorov-Smirnov			Shapiro Wilk		
		Statistics	df	Sig.	Statistics	df	Sig.
	Experimental Class	.126	30	.200*	.964	30	.386
	Control Class	.119	28	.200*	.976	28	.751

Table 5 presents the results of the normality test for the post-test scores using both the Kolmogorov-Smirnov and Shapiro-Wilk methods. For the experimental class, the Shapiro-Wilk significance value is 0.386, and for the control class, it is 0.751. Since both values are greater than the significance level of 0.05, it can be concluded that the data from both groups are normally distributed. This result justifies the use of parametric statistical tests for further analysis of the post-test scores.

Table 6. Homogeneity test and One Way ANOVA on Posttest

Test of Homogeneity of Variance					
		Levene Statistics	df1	df2	Sig.
Post Test Score	Based on the Mean	2,710	1	56	.105
	Based on the Median	2,719	1	56	.105
	Based on Median and with adjusted df	2,719	1	51,644	.105
	Based on the trimmed mean	2,730	1	56	.104

Table 6 presents the results of the homogeneity of variance test, using Levene's Test, based on different central tendency measures. The significance values for all four methods based on mean, median, adjusted Median, and trimmed mean are above the threshold of 0.05 (ranging from 0.104 to 0.105). This indicates that there is no significant difference in the variances between the groups, suggesting that the assumption of homogeneity of variance has been met. Therefore, it is appropriate to proceed with parametric tests such as One-Way ANOVA for analyzing the post-test scores.

Effectiveness of Increasing Students' Learning Achievement in Syntax Material After Using Blooket Media in Arabic Language Learning

To determine the effectiveness of improving student learning achievement in syntax material after using Blooket media in Arabic language learning, researchers analyzed the hypothesis using the t-test. The method used in this test is the independent sample t-test, which was analyzed using IBM SPSS Statistics.

a) Hypothesis H_0: There is no increase in student learning achievement in learning Arabic on syntax material using Blooket media.
b) Hypothesis H_1: There is an increase in student learning achievement in learning Arabic on syntax material using Blooket media.

If the value (sig. 2-tailed) t < 0.05, then the null hypothesis is rejected. If the value (sig. 2-tailed) t -> 0.05, then the null hypothesis is accepted. The results of the hypothesis test through the t-test (Independent sample t-test) are as follows:

Class Eight F (Experimental Class)

Table 7. Independent sample t-test (t-test) for class eight, F (Experimental class)

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
Experimental Class	Equal variances assumed	.256	.614	-14,744	58	.000	-33,867	2.297	-38,465	-29,269
	Equal variances not assumed.			-14,744	56,655	.000	-33,867	2.297	-38,467	-29,266

Table 7 presents the results of an independent sample t-test comparing the post-test scores of two groups within the experimental class. Levene's test shows a significance value of 0.614, indicating that the assumption of equal variances is met. Therefore, the row labeled "Equal variances assumed" is used for interpretation. The t-test reveals a significant difference between the two groups, with a p-value of 0.000 ($p < 0.05$), and a mean difference of -33.867. This result indicates a statistically significant difference in post-test scores between the groups, with a 95% confidence interval ranging from -38.465 to -29.269.

Table 8. Independent sample t-test (t-test) for class eight A (control class)

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
Control Class	Equal variances assumed	.029	.866	-1.085	54	.283	-3.393	3.126	-9,660	2,874
	Equal variances not assumed.			-1.085	53,571	.283	-3.393	3.126	-9,661	2.875

Table 8 shows the results of an independent sample t-test for the control class. The Levene's Test for Equality of Variances yields a significance value of 0.866, which is greater than 0.05, indicating that the assumption of equal variances is met. Therefore, the row "Equal variances assumed" is used for interpretation. The t-test result shows a significance value (2-tailed) of 0.283, which is greater than 0.05, indicating that there is no statistically significant difference between the groups in the control class. The mean difference is -3.393, with a standard error of 3.126, and the 95% confidence interval for the difference ranges from -9.660 to 2.874.

Conclusion of the t-test (independent sample t-test) to determine the effectiveness of the increaseachievementstudent learning in syntax material after using Blooket media in Arabic language learning is an increase in student learning achievement in grade eight and (*experimental class*) and there is no increase in student learning achievement in grade eight A (*control class*). To provide an overview of the improvement in results between Class Eight F (the Experimental class) and Class Eight A (the control class), the researcher conducted an N-Gain test.

The data on the learning improvement of students in class VIII-F, which served as the experimental group, indicates that the majority experienced a moderate level of progress. Out of 30 students observed, 22 fell into the "enough" category, with N-Gain scores ranging from 0.4 to 0.68. This suggests that the applied learning intervention had a positive impact on students' academic performance, although the improvement was generally moderate.

In addition, five students achieved a "high" category, with N-Gain scores above 0.7, indicating a very strong response to the implemented instructional approach. On the other hand, three students were classified in the "low" category, with N-Gain scores below 0.4, indicating that the learning gains were not significant for all students. These students may require additional support or alternative strategies to enhance their learning outcomes. Overall, the results reflect the effectiveness of the instructional method while highlighting the need for further attention to students with lower achievement gains.

Table 9. Descriptive statistics of the eighth grade (*experimental class*) N-gain data

Descriptive Statistics						
	N	**Minimum**	**Maximum**	**Sum**	**Mean**	**Std. Deviation**
N_Gain_percent	30	15	79	1604	53.48	14,584
Valid N (listwise)	30					

Table 9 presents the descriptive statistics of the N-gain percentage data for the eighth-grade experimental class. The data consist of 30 valid respondents, with N-gain scores ranging from a minimum of 15 to a maximum of 79. The total sum of all N-gain scores is 1604, resulting in a mean (average) score of 53.48. The standard deviation is 14.584, indicating a moderate spread of scores around the mean. These results suggest that, on average, students in the experimental class experienced a mild improvement in learning outcomes after the intervention.

The learning improvement data for Class VIII-A, serving as the control group, show that the majority of students experienced low levels of progress. Out of 28 students observed, 25 students were categorized as having "low" N-Gain scores, with values generally below

0.3. This suggests that the conventional teaching method employed in this class had a minimal impact on improving students' academic performance.

Only three students reached the "enough" category, with N-Gain scores of 0.31, 0.5, and 0.35, respectively. These few instances suggest that while some individuals may have benefited slightly from the instructional approach, the overall effectiveness remained limited. Notably, several students even experienced negative gains, indicating a decline in performance between the pre-test and post-test. These findings emphasize the limited efficacy of traditional teaching methods in enhancing student learning outcomes compared to more interactive or innovative instructional approaches.

Table 10. Descriptive statistics of eighth grade (control class) N-gain data

Descriptive Statistics						
	N	Minimum	Maximum	Sum	Mean	Std. Deviation
N_Gain_percent	28	-39	53	68	2.44	22,974
Valid N (listwise)	28					

Based on Table 10, it can be observed that none of the students in the experimental class achieved a high N-gain score. Only four students reached the medium N-gain category, while the majority of 24 students were in the low N-gain category. The average N-gain score was 0.244, which falls within the low category according to the standard interpretation criteria (0.00–0.30). Therefore, it can be concluded that the N-gain results for class eight (experimental class) generally fall into the low category, contrary to the initial claim. Meanwhile, the N-gain results for Class Eight A (the control class) also fall into the low category, indicating that both groups experienced limited learning improvement, with no group reaching the medium or high gain levels overall. The conclusion of the N-gain test in class eight (experimental class) indicates that the results fall within the medium category. In contrast, class eight A (control class) yields results that fall within the low category.

Discussion

The findings of this study highlight the significant challenges students faced in learning Arabic syntax (*tarkīb*) before the intervention. With pre-test average scores of 37.67 in the experimental class and 40.00 in the control class, students were in the "very low" achievement category. These results confirm that traditional, teacher-centered methods were ineffective in engaging learners or improving their syntactic skills (Hilmi et al., 2024). This aligns with Vygotsky's sociocultural theory, which emphasizes the importance of interaction and scaffolding in language learning. The absence of collaborative and interactive methods limited the development of students' higher-order thinking skills, which are necessary for mastering complex grammar (Lantolf & Poehner, 2014).

After introducing Blooket, a gamified learning platform, post-test results showed a dramatic improvement in the experimental class, with an average score of 72.40 compared to 43.39 in the control class. This suggests that Blooket significantly enhanced student engagement and performance. Gamification has been shown to boost motivation and learning outcomes by introducing elements such as points, competition, and feedback (Huang & Hew, 2018). According to a meta-analysis by Dichev and Dicheva (2017), gamified learning environments lead to higher achievement and deeper cognitive processing,

particularly when learning is repetitive and rule-based, such as in grammar (Dichev & Dicheva, 2017).

Statistical analysis supported these findings. The independent samples t-test showed a significant difference in post-test scores between the experimental and control groups ($p = 0.000$), while the control group showed no significant improvement ($p = 0.283$). These results indicate that the intervention had a substantial impact. The use of gamified platforms like Blooket likely addresses the monotony and lack of formative feedback in traditional methods, helping students to internalize syntactic structures more effectively. As reported by Surendeleg et al. (2021), gamified applications enhance learners' focus and retention, particularly when learning tasks involve memorization and the application of linguistic rules (Jimenez et al., 2021; Maryani et al., 2024).

The normality and homogeneity tests confirmed that the data met the assumptions required for parametric testing. Levene's test showed p-values greater than 0.05, confirming equal variance between groups. These statistical conditions validate the use of t-tests and ANOVA, strengthening the reliability of the conclusions drawn from the data. Ensuring that these assumptions are met is essential for avoiding Type I and Type II errors in educational research.

Despite the positive results in the post-test scores, the N-gain analysis revealed a more nuanced picture. Although the average post-test scores in the experimental class increased significantly, the normalized gain (N-gain) scores mostly fell within the low category (average N-gain = 0.244). This indicates that while Blooket improved performance, the relative learning gain over initial performance was modest. This finding is consistent with those of Seaborn and Fels (2015), who argue that gamification can increase engagement but may not always lead to deep or sustained learning unless integrated with pedagogical strategies that foster metacognition and self-regulated learning (Seaborn & Fels, 2015).

A closer look at the N-gain distribution reveals that 24 out of 30 students in the experimental group remained in the "low" gain category, and none achieved a "high" gain. This suggests that while the tool succeeded in raising test scores, it may not have supported long-term conceptual mastery for most students. The limitation here could stem from the novelty of the tool or insufficient integration with higher-order learning tasks. As noted by Domínguez et al. (2013), gamified learning should be part of a broader instructional strategy that combines content mastery, reflection, and student autonomy to yield substantial gains (Domínguez et al., 2013).

Additionally, learning styles might have influenced the outcomes. Visual and kinesthetic learners might have benefited more from Blooket's interactive design, whereas auditory or analytical learners may have found the platform less effective. This aligns with Lotfi-Khajouei et al. (2022) 's theory of multiple intelligences, which suggests that instructional strategies should be differentiated to address diverse learner profiles (Lotfi-Khajouei et al., 2022). The lack of differentiation before the intervention was likely a significant barrier, and even with Blooket, tailoring activities to specific student needs may have been insufficient. However, the learning gains measured by N-gain scores suggest that the improvement was largely superficial or short-term for most students. For gamified tools like Blooket to have a lasting educational impact, they must be strategically integrated with pedagogical scaffolding, differentiated instruction, and formative assessment. Future research should explore how sustained use of such platforms, combined with teacher training

and curriculum alignment, can optimize learning outcomes across diverse learner populations.

CONCLUSION

This study concludes that the integration of Blooket as a digital Gamification tool significantly enhances students' academic achievement in Arabic syntax ("*tarkīb*") learning among eighth-grade students at Darussalam Islamic Junior High School, Wanaraja, Garut. Before the intervention, the average pre-test scores for Class 8 "W" (experimental group) and Class 8 "A" (control group) were 37.67 and 40.00, respectively, both falling into the very low achievement category. After implementing Blooket-based instruction, the post-test score for the experimental class rose substantially to 82.40, placing it within the "sufficient achievement" category. In contrast, the control class showed only a minor increase to 43.39, remaining within the very low category. The statistical analysis, using the independent sample t-test, confirmed a significant difference between the experimental and control groups ($p < 0.05$), indicating that the use of Blooket had a positive and measurable impact on students' mastery of Arabic syntax. The normalized gain score (N-Gain) further supports this conclusion, showing a 54.21% improvement in the experimental group compared to only 2.44% in the control group. These findings suggest that gamified digital tools, such as Blooket, can serve as effective pedagogical alternatives to traditional methods, especially in grammar-intensive subjects like Arabic *tarkīb*.

This study supports the effectiveness of gamification, especially Blooket, in enhancing Arabic syntax learning in religious-based schools. It offers practical insights for teachers and policymakers by demonstrating improved engagement, motivation, and academic outcomes. However, the research is limited by its small sample size, focus on syntax alone, and lack of long-term retention analysis. Future studies should involve more schools, assess broader language skills, and compare Blooket with other platforms, such as Kahoot! or Quizizz. Incorporating qualitative methods, such as interviews or classroom observations, may also provide deeper insights into learners' experiences in gamified environments.

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AUTHOR CONTRIBUTIONS STATEMENT

The principal investigator (DW) played a key role in designing the research, collecting and analyzing the data, and presenting the findings. (MAT) and (ZUR) acted as research reviewers, providing numerous suggestions regarding methodology, data collection, and (EF) analysis techniques, as well as offering input on Arabic language aspects.

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