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RESEARCH ARTICLE

The Use of Gamification Methods Through Thematic Activities to Enhance Vocabulary Mastery of Fifth Grade Students at SDN 006 Palembang

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Abstract

This study examines the effectiveness of gamification methods integrated with thematic activities in enhancing the vocabulary mastery of fifth-grade students at SDN 006 Palembang. The research was motivated by students' common challenges in memorizing and retaining vocabulary. The objective was to determine whether there is a significant difference in vocabulary achievement between students taught using gamification and those taught through conventional methods. A quantitative approach with a pre-test–post-test experimental design was applied. The participants were two fifth-grade classes: class 5B as the experimental group (N = 29) and class 5A as the control group (N = 30). A 50-item vocabulary test served as the main instrument. Due to the non-normal distribution of data, the Wilcoxon Signed-Rank Test was used for within-group analysis, and the Mann-Whitney U Test was used for between-group analysis.The results showed significant improvement in both groups from pre-test to post-test. However, the experimental group achieved a higher post-test mean rank (34.79) than the control group (25.37), with a statistically significant difference (p = .033). These findings indicate that the use of gamification integrated with thematic activities has a significant positive impact on improving vocabulary mastery among fifth-grade students.

Keyword: *gamification, vocabulary mastery, thematic activities*

Introduction

Vocabulary plays a central role in second language acquisition, influencing learners' ability to comprehend and produce language across reading, writing, speaking, and listening skills. A sufficient vocabulary repertoire enables learners to understand texts, express ideas effectively, and participate in various communicative contexts. However, vocabulary mastery remains one of the most persistent challenges for young learners, particularly at the elementary level, where students often struggle with memorizing, retaining, and accurately using new words. These difficulties may stem from linguistic factors such as pronunciation, spelling, and semantic complexity, as well as motivational issues that limit students' engagement in learning activities (Apoko, 2023; Tseng, 2023; Hidayatullah, 2023).

Pronunciation and spelling inconsistencies in English frequently hinder vocabulary acquisition, causing learners to confuse forms and meanings. Moreover, many English words have multiple meanings depending on context, making it more difficult for students to apply vocabulary appropriately in real communication. These challenges indicate the need for learning approaches that not only present vocabulary but also support active engagement and meaningful retention.

Recent literature emphasizes the effectiveness of contextualized learning strategies, which allow students to encounter vocabulary in authentic, meaningful situations. Exposure to words through reading, listening, and thematic tasks helps learners create associations that enhance comprehension and long-term retention (Nguyen, 2022). However, despite the benefits of contextual learning, many students remain passive or demotivated when exposed to repetitive or traditional teaching methods. This situation highlights the necessity for instructional innovations that can increase motivation and sustain engagement.

Gamification has emerged as a promising pedagogical approach in this regard. By integrating game-like elements—such as points, badges, levels, challenges, and rewards—into the learning process, gamification transforms vocabulary instruction into a more interactive and enjoyable experience. Research shows that gamified learning environments can significantly boost students' motivation, participation, and vocabulary retention (Baccanti, 2022; Thurairasu, 2022). Game-based vocabulary learning (GBVL) also encourages collaboration, competition, and repeated exposure to target words, all of which contribute to better mastery.

Empirical studies further demonstrate that students involved in gamified or game-based learning programs show higher post-test vocabulary scores and display more positive attitudes toward learning. Yu and Yu (2023), for instance, reported a 30% improvement in vocabulary achievement in a flipped classroom setting that incorporated gamification, with more than 85% of participants expressing heightened engagement.

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The need for such innovation is evident in the context of SDN 006 Palembang, where many students reportedly struggle to remember and apply English vocabulary taught in class. According to the homeroom teacher, students often forget new words shortly after instruction, suggesting that traditional methods such as rote memorization are insufficient. This condition indicates the necessity for an engaging instructional approach that can attract students' interest and provide opportunities for active participation.

Gamification supported by thematic activities presents a relevant solution to this problem. Thematic gamified tasks allow students to encounter vocabulary within meaningful contexts while simultaneously engaging them through competitive and rewarding mechanisms (Sadeghi et al., 2022). Such activities not only enhance students' enjoyment and confidence but also strengthen their ability to retain and use vocabulary over time (Huseinović, 2023; Yang et al., 2023). Therefore, integrating gamification into vocabulary instruction is expected to improve students' learning motivation, vocabulary retention, and overall English proficiency.

Based on this rationale, the present study investigates the effectiveness of gamification in improving vocabulary achievement among students at SDN 006 Palembang. Specifically, the study examines whether is there a significant difference in vocabulary achievement between students at SDN 006 Palembang who are taught through gamification and those who are taught without using the gamification method. The findings are anticipated to contribute to the growing body of research on technology-enhanced and game-based learning, offer practical insights for teachers, and support schools in implementing more innovative instructional strategies to enhance student learning outcomes.

Method

This study employed a quantitative experimental design to examine the effectiveness of gamified thematic activities on students' vocabulary mastery. Experimental designs are widely used to establish causal relationships between variables through controlled intervention and systematic comparison (Alford & Teater, 2025). In this study, a pre-test–post-test control group design was implemented, with one group receiving gamification-based instruction and the other receiving traditional vocabulary teaching.

The experimental group participated in vocabulary learning through gamified thematic activities, which incorporated game mechanics such as points, challenges, and rewards within thematic contexts. The control group received instruction through conventional methods, including direct teaching and textbook-based exercises, without gamification elements. This design made it possible to attribute differences in learning outcomes to the intervention.

Before the intervention, both groups completed a pre-test to establish baseline vocabulary knowledge. A post-test was administered at the end of the treatment to measure changes in vocabulary mastery. The comparison of pre-test and post-test scores between groups allowed for the evaluation of the effectiveness of gamified thematic activities.

The study investigated two primary variables. The independent variable was the use of gamified thematic activities, defined as the integration of game-based learning elements with thematic instructional content. The dependent variable was students' vocabulary mastery, operationalized as their ability to recognize, understand, and use English vocabulary accurately. Control variables such as age, instructional time, and curriculum were maintained consistently across both groups to minimize external influences on the results.

The population of the study consisted of all fifth-grade students at SDN 006 Palembang. From this population, two intact classes were selected using convenience sampling based on accessibility and practicality. Class 5B was assigned as the experimental group (29 students), and Class 5A served as the control group (30 students). Both classes shared similar demographic characteristics, school environment, and curriculum structure, ensuring comparability in evaluating the intervention.

Data were collected using vocabulary tests, consisting of a pre-test and a post-test. The tests contained 50 multiple-choice items designed to measure students' ability to identify and use vocabulary encountered during the intervention. Test items were aligned with the thematic material used in the learning activities to ensure relevance and content validity. Observation checklists, activity logs, and engagement surveys were also used to support the analysis of the learning process and student participation.

To ensure instrument validity, a try-out was administered at a different school prior to the study. The 100-item test was analyzed using the Pearson Product–Moment correlation. Of these, 72 items met the validity criteria ($p < .05$) and were retained, while 28 invalid items were revised or removed. This process ensured that the test items accurately measured vocabulary mastery.

Reliability was assessed using Cronbach's Alpha. The analysis of 23 try-out responses yielded a coefficient of 0.753, indicating acceptable internal consistency. Standardized observation and activity logs were also used to maintain uniform data collection procedures.

Data analysis employed both descriptive and inferential statistical techniques. Descriptive statistics—including means, standard deviations, and percentage scores—were used to summarize vocabulary performance before and after the intervention. Inferential analyses consisted of:

- Paired-sample t-test for comparing pre-test and post-test scores within the experimental group;
- Independent-sample t-test for comparing post-test scores between the experimental and control groups.

These analyses evaluated whether gamified thematic activities produced significant improvements in vocabulary mastery. Reliability and validity statistics from the try-out supported the accuracy and consistency of the instruments used.

The teaching procedure in this study follows a structured approach to implement gamification and thematic activities in vocabulary learning. The procedure consists of three main phases: pre-teaching, while-teaching, and post-teaching, ensuring that students engage with the learning material effectively and that the intervention is systematically applied.

In the pre-teaching phase, students in both the experimental and control groups take a pre-test to assess their baseline vocabulary mastery. The teacher introduces the lesson objectives and provides an overview of the topics to be covered. The experimental group receives an introduction to the gamification-based thematic activities, while the control group follows a traditional teaching approach.

Result and Discussion

Result of Experimental Group

The data were collected from the pre-test and post-test administered to the experimental group, which consisted of 29 students from class V B. The pre-test was conducted prior to the implementation of the treatment using gamification methods, while the post-test was given after the treatment to assess the improvement in students' vocabulary mastery.

In this study, the scores were classified using the grade intervals adapted from the Indonesian national grading scale (post-Curriculum 2020). Based on the data collected, the students' performance in the pre-test and post-test is presented in the following table:

Table 1. The Score Distribution in the Experimental Class

Score Interval	Category	Pre-test Frequency	Pre-test Percentage	Post-test Frequency	Post-test Percentage
86–100	Excellent	3	10.30%	24	82.80%
71–85	Good	2	6.90%	4	13.80%
56–70	Average	5	17.20%	1	3.40%
40–55	Poor	12	41.40%	0	0%
0–39	Unsatisfactory	7	24.10%	0	0%
Total		**29**	**99.9%**	**29**	**100%**

The table above provides a clear comparison of the students' performance before and after the experimental treatment. From the pre-test results, it can be seen that the students' initial abilities were varied, with a significant concentration in the lower performance categories. Specifically, 12 students (41.4%) were in the 'poor' category, and 7 students (24.1%) were in the 'unsatisfactory' category. Combined, these two categories accounted for over 65% of the class. Conversely, only a small fraction of students achieved high scores, with just 3 students (10.3%) in the 'excellent' category, 5 students (17.20%) with 5 average category and 2 students (6.9%) in the 'good' category. This indicates that prior to the intervention, the majority of students had a low mastery of the subject matter.

The post-test results, however, show a dramatic and positive transformation in student performance. There was a remarkable shift from the lower categories to the highest one. The 'excellent' category surged from just 3 students to 24 students, making up 82.8% of the class. Furthermore, the 'poor' and 'unsatisfactory' categories were completely eliminated, with zero students falling into these brackets after the treatment. The remaining students all scored in the 'good' (4 students, 13.8%) and 'average' (1 student, 3.4%) categories.

In conclusion, the data demonstrates a significant improvement in the students' scores after the experimental treatment. The substantial increase in the number of students in the 'excellent' category, coupled with the complete disappearance of students in the 'poor' and 'unsatisfactory' categories, strongly suggests that the teaching method or intervention used in the experimental class was highly effective in enhancing students' academic performance.

The Results of the Control Group

The data for the control class, which consisted of 30 students, was also gathered using a pre-test and a post-test. The scores were analyzed to determine the students' performance levels before and after a period of conventional instruction. The distribution of these scores is detailed in the table below.

Table 2. The Score Distribution in the Control Class

Score Interval	Category	Pre-test Frequency	Pre-test Percentage	Post-test Frequency	Post-test Percentage
86–100	Excellent	4	13.30%	24	80.00%
71–85	Good	5	16.70%	5	16.70%
56–70	Average	6	20.00%	1	3.30%
40–55	Poor	9	30.00%	0	0.00%
0–39	Unsatisfactory	6	20.00%	0	0.00%
Total		**30**	**100%**	**30**	**100%**

The table above illustrates the academic performance of the control class students before and after the study period. In the pre-test, the students' scores were distributed across all performance categories. The largest group of students was in the 'poor' category, with 9 students (30.0%). Additionally, 6 students (20.0%) were in the 'unsatisfactory' category and another 6 (20.0%) were in the 'average' category. This means that exactly half of the class (50%) started in the 'poor' or 'unsatisfactory' levels. The higher-level categories contained fewer students, with 4 students (13.3%) in 'excellent' and 5 students (16.7%) in 'good'. This pre-test data establishes a baseline of mixed abilities, with a tendency towards the lower end of the performance scale.

The post-test results for the control class show a very significant improvement. Similar to the experimental class, there was a major shift in performance. The number of students in the 'excellent' category increased dramatically from 4 to 24, now constituting 80.0% of the class. The 'poor' and 'unsatisfactory' categories were completely eliminated, dropping to zero students. The number of students in the 'good' category remained the same at 5 students (16.7%), while the 'average' category was reduced to a single student (3.3%).

In conclusion, the data indicates that the students in the control class also experienced a substantial enhancement in their scores. The significant increase in 'excellent' scores and the elimination of the lowest-performing categories suggest that the conventional teaching methods applied to this group were also highly effective in improving student learning outcomes over the course of the instructional period.

Statistical Analyses

The statistical analyses in this study were conducted to determine the effectiveness of using gamification methods in enhancing the vocabulary mastery of fifth-grade students. Before performing the tests, a normality test was carried out using the SPSS version 29.0 for Windows. The results showed that the data from both the experimental and control groups were not normally distributed, as indicated by a significance value (Asymp. Sig.) less than 0.05. Therefore, non-parametric statistical tests were employed in this study to ensure the appropriateness and reliability of the results.

For analyzing the differences between the pre-test and post-test within the same group, the Wilcoxon Signed-Rank Test was used. This test is suitable for comparing two related samples when the assumption of normality is not met. In the context of this research, it was used to assess the improvement in vocabulary scores before and after the application of gamification in the experimental class, and conventional methods in the control class.

Meanwhile, to compare the performance between the experimental and control groups, the Mann-Whitney U Test was utilized. This test serves as the non-parametric alternative to the Independent Samples T-Test and is used to determine whether there are statistically significant differences between two independent groups.

All statistical tests were run using SPSS 29.0 on a Windows operating system, ensuring the accuracy of data processing and interpretation. The analyses provided a comprehensive understanding of the treatment effects on students' vocabulary mastery, and the significance values obtained helped to confirm the research hypothesis.

The Statistical Analysis on the Pretest and Posttest of the Experimental Group by Using Wilcoxon Signed-Rank Test

To examine the effect of the gamification method on students' vocabulary mastery, a statistical comparison was conducted between the pretest and posttest scores of the experimental group (Class 5B). Since the results of the

normality test indicated that the data were not normally distributed, the researcher employed a non-parametric statistical test, specifically the Wilcoxon Signed-Rank Test, using SPSS version 29.0 for Windows.

This test is suitable for comparing two related samples to determine whether their population mean ranks differ. According to Pallant (2020), the Wilcoxon Signed-Rank Test is an appropriate alternative to the paired sample t-test when the assumption of normality is violated. Furthermore, non-parametric tests are especially useful in educational research where data sets are often small and not normally distributed.

Table 3. Wilcoxon Signed-Rank Test of the Experimental Class

Ranks

		N	Mean Rank	Sum of Ranks
Post test - Pre test	Negative Ranks	0[a]	.00	.00
	Positive Ranks	29[b]	15.00	435.00
	Ties	0[c]		
	Total	29		

a. Post test < Pre test
b. Post test > Pre test
c. Post test = Pre test

Test Statistics[a]

	Post test - Pre test
Z	-4.704[b]
Asymp. Sig. (2-tailed)	<,001

a. Wilcoxon Signed Ranks Test
b. Based on negative ranks.

The first step in the analysis involves examining the Ranks table, which provides a clear and descriptive overview of how the student scores changed. This table is exceptionally insightful as it shows a perfectly consistent pattern of improvement. The "Negative Ranks" row indicates an N of 0, meaning that not a single student performed worse on the post-test. Similarly, the "Ties" row shows an N of 0, confirming that no student's score remained the same. The most significant finding from this table is in the "Positive Ranks" row, which displays an N of 29. This demonstrates a unanimous positive outcome: 100% of the students in the study improved their scores after participating in the experimental teaching program. This initial descriptive finding strongly suggests a universally positive impact.

Next, we turn to the Test Statistics table. While the Ranks table showed us that students improved, this second table tells us if that improvement is statistically meaningful and not just a result of random chance. The table presents a Z-score of -4.704. The Z-score is a standardized measure that reflects the strength of the difference found; a score this far from zero is a powerful indicator of a very strong effect. The most crucial piece of information for our conclusion is the p-value, listed as "Asymp. Sig. (2-tailed)," which is < .001. This value represents the probability that such a large and consistent improvement could have happened randomly. A probability of less than 0.1% is extremely small, giving us very strong confidence that the result is genuine.

Given this extremely low p-value, a clear statistical decision is made. The result is compared against the standard alpha level of 0.05, a conventional threshold for significance in research. Since our p-value (< .001) is much smaller than 0.05, we reject the null hypothesis (H_0) and, in turn, accept the alternative hypothesis (H_1).

In conclusion, the acceptance of the alternative hypothesis confirms that the findings are statistically sound. The unanimous improvement observed in the Ranks table is validated as a significant, non-random event. Therefore, we can state with a high degree of confidence that the experimental teaching method was highly successful. It had a significant and profoundly positive impact on the students' academic performance.

The Statistical Analysis on the Pretest and Posttest of the Control Group by Using Wilcoxon Signed-Rank Test

To determine whether there was a significant difference in vocabulary mastery before and after treatment in the control group, a Wilcoxon Signed-Rank Test was applied. This non-parametric test is used to analyze paired data when the data distribution is not normal. The test was conducted using SPSS version 29.0 for Windows on the pretest and posttest scores of 30 students in the control group.

Table 4. Wilcoxon Signed-Rank Test Results for the Control Group

Ranks

		N	Mean Rank	Sum of Ranks
post test - Pre test	Negative Ranks	0[a]	.00	.00
	Positive Ranks	30[b]	15.50	465.00
	Ties	0[c]		
	Total	30		

a. post test < Pre test
b. post test > Pre test
c. post test = Pre test

Test Statistics[a]

	post test - Pre test
Z	-4.786[b]
Asymp. Sig. (2-tailed)	<,001

a. Wilcoxon Signed Ranks Test
b. Based on negative ranks.

The first part of the analysis focuses on the Ranks table, which offers a transparent summary of the individual student score changes. The results presented in this table are remarkably clear and positive. The "Negative Ranks" row shows an N of 0, which means that absolutely no students in the control group performed worse after the period of instruction. Furthermore, the "Ties" row also has an N of 0, indicating that every student's score changed. The most compelling information is found in the "Positive Ranks" row, which shows an N of 30. This demonstrates that all 30 students—the entire control group—achieved a higher score on their post-test. This unanimous improvement suggests that the traditional teaching method was also consistently effective for all participants in this group.

Next, the analysis moves to the Test Statistics table, which is used to determine if the consistent improvement noted above is statistically meaningful. The table reports a very strong Z-score of -4.786. This value measures the overall strength of the difference between the pre-test and post-test scores, and a score of this magnitude is a powerful indicator of a non-random effect. The most critical value for our conclusion is the p-value, identified as "Asymp. Sig. (2-tailed)," which is < .001. In simple terms, this p-value tells us that the probability of all 30 students improving their scores purely by chance is less than 0.1%. This is an extremely low probability, providing a high level of confidence in the result.

Based on this powerful statistical evidence, a formal conclusion is drawn. The p-value (< .001) is significantly smaller than the standard alpha level of 0.05, which is the threshold used in research to determine significance.

Therefore, the null hypothesis (H_0), which states there is no significant difference, is rejected. Consequently, the alternative hypothesis (H_1), which states that there is a significant difference, is accepted.

In summary, the statistical analysis confirms that the improvement observed within the control group is not a coincidence. The acceptance of the alternative hypothesis means we can confidently conclude that the conventional teaching method also had a highly significant and positive impact on student performance. This finding is vital, as it establishes that both the experimental and traditional methods were effective, setting the stage for a direct comparison to determine which was more effective.

The Statistical Analysis on the Posttest of Experimental and Control Groups by Using Mann-Whitney U Test

To determine whether there was a significant difference in vocabulary learning outcomes between students taught using the gamification method (experimental class) and those taught using conventional methods (control class), a Mann-Whitney U Test was applied. Since the data did not meet the assumption of normality, this non-parametric test was chosen. The analysis was performed using SPSS version 29.0 for Windows.

Table 5. Mann-Whitney U Test Results

Ranks

	Class	N	Mean Rank	Sum of Ranks
Results of Vocabulary Mastery	Experimental Class (Gamification Method)	29	34.79	1009.00
	Control Class (Konvensional)	30	25.37	761.00
	Total	59		

Test Statistics[a]

	Results of Vocabulary Mastery
Mann-Whitney U	296.000
Wilcoxon W	761.000
Z	-2.131
Asymp. Sig. (2-tailed)	.033

a. Grouping Variable: Class

The Mann-Whitney U Test was employed as the definitive statistical procedure to compare the final vocabulary mastery outcomes between the two independent study groups. This test directly assesses whether a significant difference exists between the Experimental Class (N=29), which was taught using the Gamification Method, and the Control Class (N=30), which received instruction via the Conventional Method. The primary objective of this analysis is to determine if the experimental teaching strategy resulted in a statistically superior performance compared to the traditional approach.

The initial evidence is presented in the Ranks table, which provides a clear descriptive comparison of the two groups. This table calculates the mean rank for each group based on the combined scores of all 59 students. The results show that the Experimental Class achieved a Mean Rank of 34.79, which is notably higher than the Mean Rank of 25.37 obtained by the Control Class. This difference in mean ranks indicates that students in the experimental group generally achieved higher scores and, therefore, higher ranks on the vocabulary mastery test than their counterparts in the control group. This descriptive result strongly suggests that the Gamification Method was the more effective of the two.

While the Ranks table suggests a difference, the Test Statistics table provides the necessary inferential data to determine if this difference is statistically significant. The analysis produced a Mann-Whitney U value of 296.000 and a standardized Z-score of -2.131. The most critical value for drawing a conclusion is the p-value, reported as the Asymptotic Significance (2-tailed), which is .033. This p-value represents the probability that a difference in mean ranks as large as the one observed could have occurred simply due to random chance.

To make a final statistical decision, the p-value of .033 is compared against the standard alpha level of .05. Since .033 is less than .05, the result is confirmed to be statistically significant. This leads to the rejection of the null hypothesis (H_0), which assumes no difference between the groups, and the subsequent acceptance of the alternative hypothesis (H_1). Therefore, it can be concluded with strong statistical confidence that the observed difference in vocabulary mastery between the two classes is not a coincidence. The Gamification Method led to a significantly higher level of student achievement compared to the Conventional Method, proving it to be the more effective teaching strategy in the context of this research.

Interpretation

This section presents a comprehensive interpretation of the research findings detailed previously. This interpretation aims to synthesize the descriptive and statistical results to answer the primary research question: whether the use of gamification methods through thematic activities effectively enhances the vocabulary mastery of fifth-grade students at SDN 006 Palembang.

The analysis began with the understanding that both the experimental and control classes demonstrated clear room for improvement based on their pre-test results. A majority of students in both groups started in the "Average," "Poor," and "Unsatisfactory" mastery categories, which validated the need for an effective teaching intervention.

The first significant finding, based on the Wilcoxon Signed-Rank Test, is that both teaching methods proved to be highly effective in improving learning outcomes within their respective groups. Both the experimental class using gamification ($Z = -4.704$; $p < .001$) and the control class using conventional methods ($Z = -4.786$; $p < .001$) showed a highly statistically significant improvement. The fact that 100% of students in both classes improved their scores indicates that a consistent learning process occurred in both environments. This finding is crucial because it establishes that the conventional method used was not a failing approach, but rather a functional one that provided a valid basis for comparison.

While both methods were effective on their own, the core research question centered on which method was more superior. To answer this, the Mann-Whitney U Test was employed as the definitive analysis to compare the post-test scores between the experimental and control groups. This test was key to determining the comparative impact of the gamification method.

The results from the Mann-Whitney U Test provided a clear and conclusive answer. The experimental group achieved a notably higher Mean Rank (34.79) compared to the control group (25.37). This difference was then confirmed to be statistically significant, with a p-value (Asymp. Sig. 2-tailed) of .033, which is less than the standard alpha level of .05. The interpretation of this result is that the superior performance exhibited by the experimental class was not a result of chance. Rather, it is a robust and statistically reliable outcome, indicating that students taught with the gamification method collectively achieved a higher level of vocabulary mastery than those taught with the conventional method.

Therefore, based on the comprehensive series of statistical analyses, the alternative hypothesis (H_1) is accepted. It can be concluded that the use of the gamification method integrated

with thematic activities is significantly more effective than the conventional teaching method in enhancing the vocabulary mastery of fifth-grade students in the context of this study. The gamification method not only succeeded in improving student scores but also proved to be a superior instructional strategy compared to the traditional approach.

Conclusions and Recommendations

The findings of this study provide clear evidence regarding the effectiveness of the gamification method in enhancing students' vocabulary mastery. Based on the statistical analysis, the experimental group consistently outperformed the control group, as reflected in the higher mean rank obtained in the descriptive results. This initial indication of effectiveness was further validated through the Mann-Whitney U Test, which yielded a statistically significant p-value of .033 ($p < .05$).

The significance of this result confirms that the superior performance of the gamification group was not due to random chance. Accordingly, the null hypothesis was rejected, demonstrating that the gamification method was not only effective but significantly more effective than the traditional teaching method.

Overall, the results affirm that gamification serves as a superior pedagogical approach for improving students' vocabulary mastery within the context of this study. Future research may further explore its application across different language skills, learning contexts, and student populations.

In light of the conclusions drawn from this study, the following suggestions are proposed:

1. For Teachers : Given its proven effectiveness, teachers are encouraged to adopt and integrate the principles of the experimental teaching method into their pedagogical practices.
2. For the School Administration : The school administration is advised to support and facilitate the implementation of the experimental teaching method on a broader scale. This support could include organizing in-house training for the teaching staff, providing the necessary educational resources and materials, and officially incorporating the method into the school's curriculum policies to improve the overall quality of instruction.
3. For future researchers : This study opens several promising avenues for investigation. It is recommended that this research be replicated with larger and more diverse student populations to confirm the generalizability of these findings. Additionally, future studies could employ qualitative methods, such as interviews and observations, to explore the specific motivational components of gamification that contribute to student success.

Finally, a longitudinal study would be valuable to assess whether the vocabulary knowledge acquired through the gamification method such a study could provide deeper insights into the lasting impact of gamification on students' language development and inform future educational strategies.

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