

The Use of Baamboozle to Improve Vocabulary Mastery of High School Students

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Abstract: This study investigates the use of Baamboozle as a digital learning tool to enhance vocabulary mastery among 10th-grade students at SMA Negeri 1 Mranggen. Utilizing a pre-experimental design, the research involved a sample of 35 students, assessing their vocabulary mastery through pre-tests and post-tests before and after a two-week intervention. The findings reveal that students initially demonstrated low vocabulary mastery, with many categorized as “poor” or “very poor.” Following a two-week intervention utilizing Baamboozle, results indicate a significant improvement in students’ vocabulary scores, with a notable increase in the number of students achieving “good” and “excellent” classifications. Statistical analysis employing descriptive statistics, normality test, correlation test and a t-test, confirmed a significant difference between pre-test and post-test scores, highlighting the positive impact of interactive and gamified learning on vocabulary acquisition. The study underscores the importance of engaging teaching methods to foster student motivation and enhance learning outcomes in language education.

Keyword: *vocabulary mastery, Baamboozle, digital learning tools*

INTRODUCTION

English, as a global language, plays a vital role in advancing an individual’s career, education, and communication skills (Rao et al., 2018). English serves as a global language that is essential in the industrial realm or anywhere else. Thus, the comprehension and ability to communicate in English are fundamental aspects that are crucial to master in the pursuit of English vocabulary proficiency. In Indonesia, English is taught as a foreign language, focusing on four key skills: speaking, listening, reading, and writing. However, for students, a strong understanding of vocabulary is vital, as it forms the foundation for mastering these skills. The significance of vocabulary acquisition cannot be overstated; it is a critical component of language learning that influences proficiency across all areas of communication. As noted by Susanto et al. (2017), mastery of vocabulary is not just an element of language, it is integral to achieving overall linguistic competence. This perspective emphasizes the necessity for educational approaches that prioritize vocabulary development to enhance students’ capabilities in the four fundamental language skills.

Vocabulary is crucial to English language teaching because without adequate vocabulary, learners are unable to comprehend others or articulate their own thoughts. According to Alqahtani (2015), vocabulary acquisition is a fundamental aspect of learning a foreign language, as the meanings of unfamiliar words are often emphasized in both literary contexts and educational environments. It plays a key role in language teaching and holds significant importance for language learners. It is logical since all fundamental skills will be flawed without a mastery of vocabulary. Numerous students struggle to learn English effectively because they do not grasp the teachers’ explanations, while this knowledge is crucial for effective learning in the classroom.

For students, particularly Indonesian learners of English as a foreign language, mastering vocabulary can be quite difficult. This challenge often arises from the limited use of English in their everyday

communication, leading many students to struggle in achieving a solid grasp of vocabulary (Marselina et al., 2024). Mastering vocabulary is crucial for students learning English as a foreign language. This is why it is essential for anyone studying English or any language to build a strong vocabulary. A strong command of vocabulary significantly improves speaking and communication skills while also facilitating writing and precise translation, ultimately deepening students' comprehension of English (WARDANI, 2015). Mastery of vocabulary empowers students to better understand basic English, which enhances their ability to communicate and engage with fundamental texts and dialogues. This relationship underscores the importance of vocabulary acquisition as a foundational element in language learning, suggesting that a robust vocabulary not only supports practical communication but also fosters a more nuanced appreciation of the language. Thus, educational approaches should prioritize vocabulary development to ensure students can effectively navigate both everyday conversations and academic texts.

The insights from SA'D & RAJABI (2018) and SINHANETI & KYAW (2012) underscore the necessity for educators to adopt creative teaching strategies to enrich students' vocabulary acquisition. This perspective suggests that traditional methods may not suffice in fostering vocabulary development, urging teachers to explore innovative and effective pedagogical approaches. By integrating these findings, it becomes evident that enhancing vocabulary is not just an isolated task but rather a pivotal component of the broader educational process. The emphasis on creativity in teaching reflects a growing recognition that engaging students through diverse and dynamic techniques can significantly impact their language proficiency and overall learning experience. Thus, the literature calls for a shift in pedagogical practices, encouraging educators to prioritize the exploration of novel instructional methods that can stimulate and sustain students' interest in vocabulary learning. Andriani (2022) posits that teaching media functions as a crucial instrument for effective communication and student engagement within the educational framework. It not only captures attention but also ignites interest and provokes critical thinking and emotional responses throughout the learning experience. This multifaceted role underscores media's significance in achieving educational objectives. Moreover, the literature suggests that media is not merely a supplementary tool but rather a foundational element that enhances comprehension, enabling students to grasp complex concepts more effectively. By critically examining these insights, it becomes clear that the integration of diverse media forms is essential for fostering a deeper understanding of subject matter, thereby enriching the overall learning environment. This perspective advocates for a more intentional use of media in teaching, highlighting its potential to transform traditional pedagogical approaches into more interactive and impactful learning experiences.

An online game-style learning tool called Baamboozle offers captivating class and extracurricular participation. Baamboozle is an interactive online learning platform that empowers teachers to design and share captivating educational games and quizzes. This dynamic tool allows students to engage in real time, fostering enhanced classroom interaction and reinforcing essential concepts. It means Baamboozle may help students improve their vocabulary because it is an attractive media tool that can be used for group competitions among students, effectively enhancing their learning of English vocabulary in an engaging and interactive way.

Several previous studies have investigated the effectiveness of Baamboozle in English language learning. The first research by RIFDA ARINI & SUWARSO (2024) investigated EFL Students' Perceptions of Using Baamboozle for Vocabulary Learning and found that students had positive perceptions of Baamboozle, describing it as enjoyable, effective, and motivational. Students noted that the platform's gamified design transformed vocabulary learning into an enjoyable and interactive experience, significantly improving their retention and willingness to engage. In addition to the enjoyment factor, participants highlighted that Baamboozle's immediate feedback, competitive features, and user-friendly interface played a crucial role in vocabulary development and maintained their interest in learning English, underscoring its potential to overcome the emotional and cognitive

challenges often encountered in EFL settings. The second research by Azzahra et al. (2024) evaluated The Effectiveness of Baamboozle to Escalate Seventh-Grade Students' Vocabulary Learning Outcomes and showed that their results indicated a remarkable increase in students' mean vocabulary scores from 57.25 (a below-passing baseline) to 73.00 (a solidly proficient level) after the structured implementation of Baamboozle-based instruction. This 15.75-point increase, translating to a 27.5% improvement, offers compelling quantitative evidence that Baamboozle effectively boosts vocabulary retention and comprehension among high school learners. The third research by Wulandari et al. (2024) explored Baamboozle as Game-Based Learning Media to Support Students' Vocabulary and found that students were more enthusiastic and engaged during vocabulary lessons. High school students encounter several challenges in vocabulary learning, including limited motivation, retention issues, and difficulty using words in appropriate contexts. The overwhelming volume of vocabulary required can be daunting, and traditional methods often fail to engage diverse learning styles. Additionally, test anxiety can hinder recall, while a lack of interactive opportunities diminishes student involvement. Tools like Baamboozle can effectively address these challenges, enhancing engagement and retention in vocabulary acquisition.

Furthermore, YUDHA & MANDASARI (2021) also proved that the use of games is very effective for improving vocabulary mastery among senior high school students. Game-based learning significantly enhances vocabulary mastery among senior high school students, particularly addressing challenges like limited exposure to authentic English, difficulty retaining abstract words, declining motivation in traditional learning, and cognitive overload from decontextualized vocabulary lists. Unlike passive memorization methods, gamified tools like Baamboozle create interactive, low-anxiety environments that promote active recall and contextual understanding. Baamboozle offers distinct advantages over platforms like Quizizz and Kahoot! which often emphasize speed-based competition, potentially pressuring slower processors and prioritizing quick guessing over deep learning. In contrast, by facilitating collaborative team play, allowing flexible pacing, and incorporating animation- and clue-based question designs that enhance comprehension of complex vocabulary. Additionally, its teacher-controlled LCD projection minimizes smartphone distractions, addressing a common issue in Indonesian classrooms. Overall, Baamboozle not only makes vocabulary learning enjoyable but also effectively meets the cognitive and emotional needs of adolescent EFL learners. HARIYANTO & ANDANTY (2024) examined The Effect of Gamification Methods Based on the Baamboozle Platform and found a significant increase in vocabulary achievement among junior high school students, with measurable improvements attributed not only to increased engagement but also to the platform's strategically designed pedagogical approach. In contrast to fast-paced, individual-focused platforms like Kahoot! or Quizizz, which emphasize speed and solo competition, Baamboozle is particularly well-suited for adolescent EFL classrooms because it prioritizes collaborative team play, minimizes cognitive pressure, and incorporates teacher-mediated instruction. While QURESHI & KHATOON (2023) demonstrated that Baamboozle increased students' willingness to communicate in English. Lestari et al. (2024) discovered that Baamboozle enhanced students' readiness, motivation, and engagement in English learning under the Merdeka Curriculum.

These seven studies share a common conclusion: Baamboozle is an effective, engaging, and interactive medium that significantly improves students' vocabulary mastery and motivation in learning. However, despite these promising findings, most studies have been conducted at the junior high school levels. According to Hariyanto (2024), the gamification method using Baamboozle effectively improves students' vocabulary achievement at the junior high school level, yet research at the senior high school level particularly at SMA Negeri 1 Mranggen remains unexplored. This gap underscores the importance of examining whether Baamboozle can also be effectively applied to older learners. Therefore, the present study aims to investigate The Use of Baamboozle to Improve Vocabulary Mastery of the 10th Grade Students of SMA Negeri 1 Mranggen, providing insights into

the use of gamification in senior high school English learning and its contribution to enhancing students' vocabulary mastery.

METHOD

According to Kothari (2004), "A research design is defined as the arrangement of conditions for the collection and analysis of data in a manner that aims to combine relevance to the research purpose with economy in procedure." Based on this definition, this study employed a pre-experimental research design to determine whether the use of Baamboozle media could improve students' vocabulary ability. A pre-experimental design involves one group that is measured before and after the implementation of a treatment, without the use of random assignment or a control group. As such, while it allows researchers to observe the effects of an intervention, it has limitations in establishing cause-and-effect relationships.

The population of this study consisted of all tenth-grade students at SMA Negeri 1 Mranggen in the academic year 2024/2025. The school had ten classes, each containing approximately 35 students. As defined by Creswell (2018), a population refers to "the entire group of individuals or instances that meet specific criteria for a study." From this population, one class consisting of 35 students was selected as the sample. Following Creswell (2018) definition, a sample is "a subset of individuals or instances selected from a larger population, which is used in research to draw conclusions about the entire population." The selection of the class was done in collaboration with the English teacher, who served as a research partner. Through discussion, one class was chosen purposively based on accessibility and relevance to the study's objectives. In accordance with Creswell (2018) recommendation, this study used purposive and convenience sampling, ensuring that the participants could provide relevant information and that the sample represented typical student characteristics at the school.

The instrument used in this research was a test, which was divided into a pre-test and a post-test. Creswell (2018) defines a research instrument as "a tool or device used to collect, measure, and analyze data in a research study." According to Brown (2004), "a test is defined as a method of measuring a person's ability, knowledge, or performance in a given domain." The pre-test was administered before the treatment to assess students' initial vocabulary mastery. It consisted of twenty multiple-choice questions divided among four descriptive texts, with each text containing five items that measured vocabulary aspects such as reference, synonyms, antonyms, meaning, and substitution. This test structure aimed to comprehensively measure students' vocabulary knowledge prior to the intervention. The post-test, administered after the treatment, contained the same questions as the pre-test but with the order of items randomized to minimize recall bias and ensure a fair assessment of learning outcomes.

The treatment was conducted over three consecutive classroom sessions in a two-week Baamboozle-based lesson plan. Each lasting 90 minutes, in alignment with the 10th grade descriptive text curriculum. First, the pre-test was given to measure students' prior vocabulary mastery under exam conditions. Second, during the treatment phase, students participated in Baamboozle-based learning activities across several sessions, guided by the teacher to ensure effective use of the platform and equal participation. Initially, the first 30 minutes of each session focused on explicit vocabulary instruction, where the teacher introduced essential vocabulary such as nouns, adjectives, and descriptive phrases from authentic texts. The teacher explained meanings, provided synonyms and antonyms, and demonstrated usage in context. The remaining 60 minutes were dedicated to Baamboozle-based practice, where students, organized into small teams, engaged in customized games featuring the target vocabulary from the lesson. These games included question types similar to those in the pre- and post-tests, such as identifying referents, matching synonyms, selecting correct meanings, and choosing appropriate word substitutions, ensuring strong alignment between instruction, practice, and assessment. Finally, a post-test, administered under similar conditions as the pre-test, assessed student progress. This repeated and scaffolded exposure over the three sessions enabled students to gradually

internalize vocabulary through active, gamified retrieval and collaborative discussions, with the quantitative data collected from both tests used to compare performance before and after the use of Baamboozle.

For the data analysis, the researcher compared the pre-test and post-test scores to determine the use of Baamboozle in improving vocabulary mastery. Each correct answer was scored 1 point, while incorrect answers were scored 0. The total correct answers were multiplied by 5 to obtain a final score out of 100. Scoring categories followed Brown and Abeywickrama's (2020) classification: 86–100 (Excellent), 76–85 (Good), 70–79 (Fair), 60–69 (Poor), and below 60 (Very Poor). The mean score was calculated using the formula:

$$\text{Mean} = \frac{\text{sum of terms}}{\text{number of term}}$$

This analysis enabled the researcher to determine the level of improvement between pre-test and post-test results.

To ensure the reliability of this study, several measures were implemented. First, the test instruments underwent verification by experts to confirm their content validity. A panel of English language education lecturers reviewed these instruments to assess their relevance and alignment with the study's objectives. Additionally, prior to conducting the research, the researchers secured official approval through the appropriate institutional channels. The research proposal was submitted to and sanctioned by the faculty at the researcher's university, which subsequently issued an official research permit. This process not only met administrative requirements but also ensured that the research was carried out ethically and responsibly, thereby enhancing the credibility and validation of the research findings.

RESULTS AND DISCUSSION

This study explored the impact of Baamboozle on improving students' vocabulary skills through test score analysis. Conducted in Class X-7 at SMA N 1 Mranggen with 35 students, the research began with a pre-test that revealed students' difficulties in understanding word meanings, synonyms, antonyms, and contextual usage. To address this, the researcher implemented a two-week Baamboozle-based lesson plan featuring interactive games and instant feedback. Students worked in teams, discussed answers, and earned points for correct responses, which made learning more engaging. After the sessions, a post-test showed significant improvement, with many students moving from "poor" to "good" or "very good" categories. The results indicate that Baamboozle effectively enhanced vocabulary mastery while making the learning process more enjoyable and motivating.

Before data collection, the researchers administered a pre-test to assess students' initial vocabulary knowledge. The test consisted of 20 multiple-choice questions based on four descriptive texts, covering word references, synonyms, antonyms, meanings, and appropriate word choices. All 35 students from Class X-7 at SMA N 1 Mranggen participated. Using Brown's classification system, the results showed that most students had limited vocabulary mastery, particularly in understanding word meanings in context, indicating the need for further instructional support.

With a wide range of scores, it can be seen that most students had difficulty understanding the vocabulary. Only a few students scored high, while many scored low. This indicated the need for intervention in teaching methods to improve the overall academic performance of students.

Table 1. Score classification table

Level of Achievement	Grade	Score Range	Total Student's
Excellent	A	86-100	3
Good	B	76-85	6
Fair	C	70-79	7
Poor	D	60-69	5
Very Poor	E	Less than 60	14
TOTAL			35

The score classification shows that scores between 86 and 100 are categorized as “Excellent,” with 3 students achieving this rating. Based on the pre-test results, 3 students were indeed rated as “excellent,” while 6 students were categorized as “Good” with scores between 76 and 85. Furthermore, the “Fair” category includes students who scored between 70 and 79, with a total of 7 students. For the ‘Poor’ category, the scores range from 60 to 69, consisting of 5 students. Finally, the “Very Poor” category includes students who scored less than 60, with a total of 14 students. This distribution shows that the majority of students had difficulty mastering vocabulary, with only 3 out of 35 students achieving an “excellent” rating and a large number of students falling into the “very poor” category. Therefore, these results highlight the need for more significant intervention in improving vocabulary teaching to help students improve their vocabulary mastery. Implementing more interactive and engaging learning methods could be a solution to improve academic outcomes in the future.

The mean vocabulary score among the students was 65.00. This suggests a moderate level of vocabulary proficiency overall, though there remains considerable room for growth. These findings served as the foundation for introducing a two-week intervention using Baamboozle, aimed at enhancing students’ vocabulary mastery:

Table 2. Mean pre-test

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
PRETEST	35	40.00	100.00	65.0000	17.19268
Valid N (listwise)	35				

Based on the calculations, the mean score on the pre-test was 65.00. From these results, it concluded that the students’ vocabulary mastery was still low, as the majority scored below the standard. This indicates that their understanding of vocabulary was still not optimal. Therefore, before conducting the post-test, it was important to improve the students’ vocabulary mastery through game-based method. In this case, the use of media such as Baamboozle can be utilized, as it emphasizes the use of visual aids and interactive learning approaches to strengthen students’ memory of vocabulary.

After the pre-test revealed that many students had very limited vocabulary knowledge, Baamboozle as a learning tool to enhance their mastery was implemented. Following the treatment, a post-test with similar 20 questions was administered and evaluated using the same five-level classification system. The results showed significant improvement, with all students scoring higher and many reaching the “excellent” category. These findings indicate that Baamboozle’s interactive and engaging format effectively enhanced students’ vocabulary learning and retention.

It showed the post-test scores of 35 students, indicating a significant improvement in mastery of the material after the teaching method was implemented. Many students scored high, with some achieving

the maximum score. Although some students still experienced difficulties, overall, the post-test results reflect positive progress compared to the pre-test. This demonstrated the significance of the teaching method used in improving student understanding.

Table 3. Score classification table

Level of Achievement	Grade	Score Range	Total Student's
Excellent	A	86-100	12
Good	B	76-85	5
Fair	C	70-79	6
Poor	D	60-69	7
Very Poor	E	Less than 60	5
TOTAL			35

The post-test classification revealed that 12 students scored between 86 and 100, placing them in the “Excellent” category. Another 5 students achieved “Good” scores ranging from 76 to 85, while 6 students were rated “Fair” with scores between 70 and 79. Additionally, 7 students fell into the “Poor” range (60–69), and 5 students were categorized as “Very Poor” with scores below 60. Compared to the pre-test, where no students reached the “Excellent” level, these results demonstrate a substantial improvement in vocabulary mastery and highlight Baamboozle’s effectiveness as a learning tool. The mean post-test score was 75.42, marking a clear increase from the pre-test mean of 65.00. This rise, along with the greater number of students in higher performance categories, indicates that the use of Baamboozle not only enhanced engagement but also significantly improved students’ understanding and retention of vocabulary.

Table 4. mean post-test

Descriptive Statistics					
	N	Minimu m	Maximu m	Mean	Std. Deviation
POSTTEST	35	45.00	100.00	75.4286	16.05924
Valid (listwise)	N 35				

Based on the scores calculated, the mean of the post-test is 75.42. It concludes that the students significantly improved their vocabulary mastery after the intervention. This indicates that the use of Baamboozle as a teaching tool is significant in enhancing students’ learning outcomes. The improvement is achieved through the use of Baamboozle, which emphasizes interactive and engaging game-based learning, allowing students to better understand and retain vocabulary concepts in a fun and memorable way.

The mean post-test score of 75.42 suggests that students made significant gains in their vocabulary mastery following the intervention. This improvement can be attributed to the use of Baamboozle as a teaching tool, which fosters an interactive and engaging learning environment. By incorporating game-based learning, students are more likely to stay motivated and actively participate, leading to better comprehension and retention of vocabulary concepts. The fun and memorable nature of the games helps

solidify their understanding, making the learning experience not only interactive but also enjoyable. Thus, the positive results reflect the significances of employing such innovative teaching methods to enhance student learning outcomes.

The researcher compared students' scores before and after using Baamboozle and found a clear improvement in their performance. The data showed that students achieved significantly higher post-test scores, demonstrating that Baamboozle effectively enhanced their vocabulary mastery. A comparison of pre-test and post-test scores from 35 students shows notable changes in their understanding after the learning process. Several students, demonstrated significant improvement and maintained consistent performance. Although a few students showed only slight progress or remained at lower levels, the overall results indicate that most participants improved their learning outcomes. This suggests that the applied teaching method effectively enhanced students' vocabulary mastery.

Table 5. Mean pre-test and post-test

		Descriptive Statistics				
		Minimum	Maximum	Mean	Std. Deviation	
		N				
PRETEST		35	40.00	100.00	65.0000	17.19268
POSTTEST		35	45.00	100.00	75.4286	16.05924
Valid (listwise)	N	35				

A descriptive analysis of the pre-test and post-test results revealed notable improvements in students' vocabulary mastery. In the pre-test (N = 35), scores ranged from 40 to 100, with a mean of 65.00 and a standard deviation of 17.19. After the Baamboozle intervention, the post-test scores ranged from 45 to 100, with a higher mean of 75.42 and a lower standard deviation of 16.05, indicating more consistent performance. These results demonstrate a significant increase in vocabulary mastery. The researcher also calculated the mean and standard deviation to support t-test analysis, confirming that the intervention effectively enhanced students' vocabulary skills.

a) Normality Test

Table 6. Normality test

		Kolmogorov-Smirnov ^a			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
PRETEST		.151	35	.041	.944	35	.075
POSTTEST		.161	35	.022	.949	35	.105

a.Lilliefors Significance Correction

Based on the normality test table above, the researcher conducted normality tests on the pre-test and post-test data using two methods, namely Kolmogorov-Smirnov and Shapiro-Wilk. Because the sample size was less than 100 ($n = 35$), the interpretation of the results was more accurately based on the Shapiro-Wilk test. The Shapiro-Wilk test results show that the significance value (Sig.) for the pre-test data is 0.075 and for the post-test data is 0.105. Both values are greater than 0.05, so it can be concluded that the pre-test and post-test data are normally distributed. This indicates that the assumption of data normality is fulfilled and the data is suitable for analysis using parametric statistical tests.

b) Correlation Test

Table 7. correlation test

Paired Samples Correlations			N	Correlation	Sig.
Pair 1	PRETEST POSTTEST	&	35	.863	.000

Based on the Paired Samples Correlations table above, it can be seen that the researcher conducted a correlation test between the pre-test and post-test data. The results show a correlation value of 0.863 with a significance (Sig.) of 0.000. This significance value is less than 0.05, which means that there is a significant relationship between the pre-test and post-test data. Thus, it can be concluded that there is a strong and significant relationship between the two data sets, indicating that the changes that occurred between the pre-test and post-test are interrelated.

c) Significant Test

Table 8. significant test

Paired Samples Test		Paired Differences						t	df	Sig. (2-tailed)
Pair 1	PRETEST POSTTEST	Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference					
					Lower	Upper				
		-	8.77592	1.48340	-	-	-	34	.000	
		10.42857			13.44321	7.41394	7.030			

Based on the Paired Samples Test table above, a paired sample t-test to determine whether there was a significant difference between the students' pre-test and post-test results after being given treatment using Baamboozle media was conducted. This test was used because the data came from the same group but was measured in two different conditions, namely before (pre-test) and after (post-test) treatment. The test results show that the significance value (Sig. 2-tailed) is 0.000. Because this value is less than 0.05, it can be concluded that there is a significant difference between the pre-test and post-test scores. The mean difference of -10.42857 shows that the post-test scores are generally higher than the pre-test

scores. Thus, it can be concluded that the use of Baamboozle media has a significant effect on improving students' vocabulary mastery, as shown by the increase in scores from the pre-test to the post-test.

The findings of this study provide a foundation for discussing the impact of Baamboozle on students' vocabulary mastery. First, the pre-test results revealed that most students were in the "poor" and "very poor" categories, indicating low vocabulary mastery. This aligns with Azzahra et al. (2024), who reported that seventh-grade students' vocabulary skills required improvement before Baamboozle interventions, particularly in descriptive texts. Similarly, the pre-test in this study showed difficulties in understanding word meanings, synonyms, antonyms, and proper usage. This study underscores the significant role of Baamboozle in enhancing students' vocabulary mastery, particularly through the frameworks of social interaction and memory reinforcement. The implementation of group games facilitated social interaction, which is crucial for language learning. Collaborative activities encourage students to communicate, negotiate meaning, and support each other's learning, thereby creating a richer linguistic environment. This aligns with social constructivist theory by Vygotsky (1994), which posits that social interaction is fundamental to cognitive development and learning. By engaging in team-based gameplay, students not only practiced vocabulary in context but also benefited from peer discussions that reinforced their understanding.

Moreover, the concept of memory reinforcement through repeated exposure and immediate feedback played a vital role in vocabulary acquisition. Baamboozle's interactive format allows students to encounter vocabulary multiple times in varied contexts, which is essential for long-term retention. The instant feedback provided during the games helps students identify and correct mistakes in real time, reinforcing their learning and promoting a deeper understanding of word meanings and usage. This immediate reinforcement aids in solidifying their vocabulary knowledge and contributes to increased confidence in using the language. The post-test data showed a notable increase in students in the "very good" category, supporting Ningsih & Sujarwati (2025), who reported that Baamboozle improved reading and vocabulary mastery and enhanced students' motivation. In their study, 33 students' average post-test score rose to 82.7, with a Cohen's *d* effect size of 1.40, indicating a large effect. The platform allows teachers to customize content according to material and difficulty, and students reported increased enthusiasm and motivation due to the non-monotonous learning environment and healthy competition, which enhanced engagement and retention.

Finally, the t-test analysis showed a significant difference in vocabulary mastery before and after using Baamboozle ($p < 0.05$), with an average score increase of 10.42 points. This is consistent with HARIYANTO & DIAN ANDANTY (2024), who demonstrated that Baamboozle-based gamification effectively improves junior high school students' vocabulary, particularly in areas with limited resources. The improvement is likely due to the interactive features and immediate feedback that help students correct mistakes and reinforce understanding. YUDHA & MANDASARI (2021) also noted that games make English learning enjoyable and align with students' preferences, though their study did not specifically test Baamboozle. Therefore, this study adds evidence that gamification through Baamboozle has a strong positive impact on vocabulary mastery. The research question "Is there a significant difference in students' vocabulary mastery before and after being taught using Baamboozle?" is clearly answered: "Baamboozle not only significantly improves students' vocabulary mastery, but also creates a more engaging and supportive learning environment." Students participating in gamified activities demonstrated improved vocabulary mastery, as reflected in higher post-test scores.

CONCLUSION

This study demonstrates that Baamboozle is an effective tool for improving vocabulary comprehension among 10th-grade students at SMA N 1 Mranggen. The pre-test results showed that

most students were in the “poor” and “very poor” categories, indicating limited understanding of word meanings, synonyms, antonyms, and proper usage, likely due to conventional, unengaging teaching methods and the lack of varied learning media, which reduced motivation and retention. After two weeks of using Baamboozle, post-test results showed significant improvement, with more students in the “good” and “very good” categories and an average score increase from 65.00 to 75.42. Baamboozle’s interactive, game-based approach, featuring immediate feedback and healthy competition, increased engagement and motivation, turning passive learning into active participation. Students reported enjoying the process, which helped them remember vocabulary more effectively. Statistical analysis confirmed these findings: the Shapiro-Wilk test showed normality, and the paired t-test indicated a significant difference ($p < 0.05$) with an average score increase of 10.42 points. This confirms that Baamboozle enhances vocabulary mastery by allowing students to correct mistakes and reinforce understanding in an interactive and supportive environment. Overall, the results suggest that game-based media like Baamboozle can improve student motivation, engagement, and vocabulary retention, making it highly recommended for English learning, particularly in strengthening vocabulary mastery.

References

- Alqahtani, M. (2015). The importance of vocabulary in language learning and how to be taught. *International Journal of Teaching and Education*, 3(3), 21–34. <https://doi.org/10.20472/te.2015.3.3.002>
- Andriani, K. (2022). Teaching Media in EFL Classrooms: What Are They And Why Select Them? *Journal of Language Testing and Assessment*, 2(1), 87–97. <https://ojs.fkip.unismuh.ac.id/index.php/jlta>
- Azzahra, F., Walidaina, J., Fadhilawati, D., Sutanti, N., & Com, D. (2024). *The Effectiveness of Baamboozle to Escalate Seventh-Grade Students' Vocabulary Learning Outcomes*. 8(4). https://doi.org/10.28926/riset_konseptual.v8i4.1019
- Brown, H. D. (2004). *Language assessment: Principles and classroom practices*. White Plains, NY: Pearson Education Inc.
- Creswell, J. (2018). *Research design: Qualitative, quantitative, and mixed methods approaches (5th ed.)*. SAGE Publications.
- Hariyanto, M., & Dian Andanty, F. (2024). The Effect of Gamification Method on vocabulary Achievement of Junior High School Students. In *Journal of English for Academic and Specific (Vol. 7)*.
- Kothari, C. R. (2004). *Research methodology: methods & techniques*. New Age International (P) Ltd.
- Lestari, F., Hidayani, S., & Oktaviana, F. (2024). Gamified Learning Environment by Utilizing Bamboozle for EFL: Secondary Teacher & Students' Voice. *LEARNING: Jurnal Inovasi Penelitian Pendidikan Dan Pembelajaran*, 4(4), 999-1006.
- Pika Marselina, Ayu, C., & Hardi, V. A. (2024). An Analysis on Students' Difficulties in Mastering Vocabulary. *Print) Journal of English Language and Education*, 9, 2024. <https://doi.org/10.31004/jele.v9i2.279>
- Rao, C. S., Satya, M. V., & Durga, S. (2018). Developing Students' Writing Skills in English- A Process Approach. *Issue*, 6. <http://www.jrspelt.com>
- Rifda Arini, A., & Suwarso, N. (2024). EFL STUDENTS' PERCEPTION TOWARDS THE USE OF BAAMBOOZLE FOR VOCABULARY LEARNING.
- Sa'D, S. H. T., & Rajabi, F. (2018). Teaching and learning vocabulary: What English language learners perceive to be effective and ineffective strategies. *Center for Educational Policy Studies Journal*, 8(1), 139–163. <https://doi.org/10.26529/cepsj.492>
- Wardani, I. (2015). Improving Students' Vocabulary Mastery Using Word Mapping Strategy. *OKARA: Jurnal Bahasa Dan Sastra*, 9(1), 131-140.
- Sinhaneti, K., & Kyaw, E. K. (2012). A Study of the Role of Rote Learning in Vocabulary Learning Strategies of Burmese Students Introduction . *Education Review A*, 12.
- Susanto, A., Binti, F., & Halim, A. (2017). English Vocabulary Acquisition through Vocabulary Learning Strategy and Socio-Educational Factors: A Review. In *Applied Science and Technology (Vol. 1, Issue 1)*. <http://www.estech.org>
- Vygotsky, L. (1994). Tool and symbol in child development. *The vygotsky reader*.
- Wulandari, W., Andris Susanto, D., & Hawa, F. (2024). Exploring Bamboozle as Games-Based Learning Media to Support Students' Vocabulary: Its application in the classroom. *INNOVATIVE: Journal Of Social Science Research*, 4(2), 3-4.

Yudha, H. T., & Mandasari, B. (2021). The Analysis of Game Usage for Senior High School Students to Improve Their Vocabulary Mastery. In *Journal of English Language Teaching and Learning (JELTL)* (Vol. 2, Issue 2). <http://jim.teknokrat.ac.id/index.php/english-language-teaching/index>