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Optimizing Vocabulary Mastery Among Elementary Students Through the Baamboozle Application

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Abstract:
This study was motivated by low Arabic vocabulary (mufradat) mastery among third-grade students of SD Ar-Rafi JOY in Kiaracondong, Bandung. This research aimed to improve students' vocabulary acquisition using the interactive learning application Baamboozle. This study employed Classroom Action Research (CAR), consisting of two cycles: planning, implementation, observation, and reflection. The research subjects were 27 students. The findings showed a significant improvement in students' learning outcomes. In Cycle I, the average pre-test score was 50.59, which increased to 64.04 in the post-test. In Cycle II, the average pre-test score rose to 80.50, while the post-test reached 96.96. These results indicate that the use of Baamboozle was effective in enhancing students' mastery of Arabic vocabulary. The interactive and engaging features of the application contributed to increased student motivation and participation in the learning process. This research suggests that digital media such as Baamboozle can be valuable tools for developing more attractive and effective Arabic language instruction. Future studies are recommended to explore the use of Baamboozle in improving other Arabic language skills, including speaking (kalām), listening (istimā'), reading (qirā'ah), and writing (kitābah).

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Introduction

Mastery of vocabulary (mufradat) constitutes a fundamental component of Arabic language instruction at the elementary school level (Kusumaning et al, 2022). The ability of students to comprehend and effectively utilize vocabulary is a critical indicator of their success in learning Arabic. However, many students encounter difficulties acquiring vocabulary in practical settings due to monotonous and less engaging teaching methods. With the advancement of technology, interactive learning media have emerged as a promising alternative to enhance student motivation and academic achievement. One such medium is the Baamboozle application, which integrates game-based elements into learning. Baamboozle has been employed in various educational contexts and has demonstrated positive outcomes in increasing student motivation and engagement (Andriyani et al., 2024; Hamidatussya'diyah & Anwar, 2025). Nevertheless, research on the effectiveness of Baamboozle in supporting Arabic vocabulary acquisition at the elementary level remains limited, warranting further investigation into its potential within this specific context.

Significant challenges have been identified in Arabic vocabulary instruction at SD Ar-Rafi Kiaracondong, particularly in Class 3 JOY. Based on preliminary observations and assessment results, it was found that most students experience difficulties memorizing and understanding new vocabulary. The teaching methods employed are predominantly conventional, such as lecture-based instruction and rote memorization, which tend to be unappealing to young learners. Consequently, students demonstrate low motivation, and their learning outcomes fail to meet the expected standards. This issue necessitates adopting innovative and effective strategies to improve vocabulary mastery (Sochifatun Indriyana et al, 2024). Interactive learning tools like Baamboozle may offer a viable and engaging alternative to address these challenges. However, before its implementation, empirical research is required to evaluate its effectiveness in the context of Arabic vocabulary instruction in Class 3 JOY at SD Ar-Rafi Kiaracondong.

Several factors contribute to the limited vocabulary mastery among students in this class, including a lack of variety in instructional methods, minimal use of interactive media, and low levels of student engagement in the learning process (Ardiansyah et al, 2023; Walidain & Buhaerah, 2023).

The predominant reliance on lectures and memorization leads to boredom and diminished learning motivation. In addition, the limited integration of technology in the classroom renders the learning experience less attractive for students growing up in a digitally-oriented environment. Previous studies have indicated that interactive media can enhance student motivation and learning outcomes (Ngasmarani et al., 2024; Damawiyah et al., 2025). Accordingly, teaching methods and instructional media innovation are essential to improve students' vocabulary acquisition.

This study proposes integrating the Baamboozle interactive learning platform in Arabic vocabulary instruction in Class 3 JOY to address these challenges. Baamboozle is an educational platform that allows teachers to create interactive quizzes that can be played individually or in groups (Walidaina et al, 2024). It has been proven effective in enhancing student motivation and academic performance across various subjects (Sari et al., 2024; Kusyani & Ray, 2023). By incorporating Baamboozle into Arabic vocabulary lessons, students are expected to become more motivated and actively engaged, improving their vocabulary mastery. This study aims to evaluate the effectiveness of Baamboozle in enhancing vocabulary acquisition among students in Class 3 JOY.

Previous studies have supported the use of Baamboozle in improving student learning outcomes. Andriyani et al. (2024) found that Baamboozle increased learning motivation among elementary students. Hamidatussya'diyah and Anwar (2025) reported that Baamboozle

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improved student interest in Arabic learning at the senior high school level. Ngasmarani et al. (2024) demonstrated that it effectively enhanced learning motivation among fifth-grade students. Damawiyah et al. (2025) observed positive student perceptions of Baamboozle in Arabic instruction, while Sari et al. (2024) concluded that it significantly improved student learning outcomes in Madrasah Ibtidaiyah. Nonetheless, limited research has been conducted on applying Baamboozle in Arabic vocabulary instruction at the elementary level, highlighting the need for further study.

In contrast to previous studies that have primarily examined the use of Baamboozle in general subjects or at secondary education levels, this research focuses specifically on the use of Baamboozle in Arabic vocabulary instruction at the elementary level, particularly in Class 3 JOY at SD Ar-Rafi Kiaracondong. The study also seeks to assess the effectiveness of Baamboozle in enhancing vocabulary acquisition, a critical aspect of Arabic language learning. Thus, this study is expected to contribute meaningfully to developing interactive learning media for Arabic instruction at the elementary level.

This study aims to evaluate the effectiveness of the Baamboozle interactive learning platform in improving vocabulary mastery among students in Class 3 JOY at SD Ar-Rafi Kiaracondong. The scope of this study is limited to implementing Baamboozle in Arabic vocabulary instruction over one academic semester. The findings of this study are intended to offer an alternative interactive and enjoyable instructional medium to enhance students' vocabulary acquisition and to provide valuable insights for teachers and educational practitioners regarding the effectiveness of Baamboozle in Arabic language teaching at the elementary school level.

METHOD

This study applied a Classroom Action Research (CAR) design based on the model proposed by Kemmis and McTaggart (1988), which includes four stages in each cycle: planning, action, observation, and reflection. The research was conducted in two cycles on May 8 and 9, 2025, at SD Ar-Rafi, specifically in Class 3 Joy during the second semester of the 2024/2025 academic year. The research subjects were 27 third-grade students, 12 boys and 15 girls. This class was selected due to the students' low achievement in Arabic learning, particularly in reading comprehension. The research was conducted with prior approval from the school principal, and informed consent was obtained from the students' parents. All participants' identities were kept confidential throughout the study.

Several instructional actions were implemented to address the identified learning issues, such as using interactive Arabic media (Siregar et al, 2024), cooperative learning strategies, and contextual vocabulary exercises. Data were collected using quantitative and qualitative methods, including pre-tests and post-tests to measure students' learning progress, structured classroom observations to monitor student and teacher activities, and semi-structured interviews with the homeroom teacher to explore qualitative aspects of student engagement and instructional effectiveness.

The instruments included Arabic language learning materials tailored to the students' level, observation sheets, interview guidelines, and written test instruments. Two Arabic language education experts reviewed all instruments to ensure content validity, and a small-scale pilot test was conducted to assess reliability. Quantitative data were analyzed descriptively by comparing pre- and post-test scores, and the tests were evaluated using a scoring rubric that focused on vocabulary accuracy, reading fluency, and comprehension. Qualitative data were analyzed thematically. A successful outcome was defined as an average class score improvement of at least 15% and a minimum of 75% of students achieving the mastery criterion (KKM). The results of each cycle's analysis served as the basis for reflection and planning for the subsequent cycle (Arikunto, 2010).

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RESULTS AND DISCUSSION

Results

Initial Conditions

The initial condition of Arabic language learning in Class 3 Joy faced several significant challenges. Many students perceived Arabic as a complex subject to comprehend due to unfamiliar vocabulary and differences in language structure. These difficulties caused students to experience mental fatigue and gradually lose interest in actively engaging in learning. As a result, the classroom atmosphere was often filled with complaints from students who felt overwhelmed by the subject.

In addition to the linguistic challenges, student motivation toward learning Arabic was relatively low. Several students admitted little to no interest in the subject, as they did not perceive its practical benefits in daily life. This lack of interest led to minimal participation in class activities. The low motivation was further exacerbated by a monotonous teaching style that failed to engage students emotionally and intellectually. Consequently, student involvement in the learning process was severely limited, hindering the optimal achievement of learning objectives.

The teaching method employed by the teacher also became a concern. The continuous use of the Tamyiz method without variation made students feel bored and disengaged. This disinterest gave rise to off-task behaviors, such as joking around or talking during lessons, resulting in a disruptive classroom environment. The teacher encountered difficulties managing the class and maintaining the students' focus on the material. The lack of innovation in instructional approaches contributed significantly to the low effectiveness of Arabic language instruction.

Implementation of the Classroom Action Research (Cycle 1)

Cycle 1

1. **Planning**

Implementing the Classroom Action Research (CAR) in Cycle 1 began with a systematic planning phase to ensure a smooth learning process. The teacher scheduled the CAR activities for May 8, 2025, which included administering a pretest, conducting the instructional intervention, and administering a posttest. The scheduling aimed to ensure that each phase could be carried out effectively and measurably.

During this phase, the teacher prepared various instructional tools. Teaching materials were developed in modules aligned with Arabic instruction's basic competencies and objectives, specifically focusing on vocabulary acquisition (mufradat). In addition, the teacher prepared interactive learning media using the Baamboozle application a web-based quiz platform intended to boost student motivation and participation (Walidaina et al, 2024). Classroom administration tools, such as attendance sheets and assessment forms, were also prepared to support the learning process.

To support the evaluation process, the teacher developed relevant assessment instruments. Written pretest and posttest questions were designed to assess students' vocabulary mastery before and after the intervention. Observation sheets were also prepared to monitor teacher and student activities throughout the learning process, including student engagement with the Baamboozle media.

The instructional plan was designed to integrate the Baamboozle application into Arabic language learning activities. In this scenario, students participated in interactive quizzes to strengthen vocabulary mastery. Using Baamboozle was expected to create a more enjoyable learning environment and enhance student motivation.

Previous studies have demonstrated that Baamboozle significantly increases student motivation. For instance, Damawiyah et al. (2025) found that using Baamboozle improved

student motivation by 51%. Similarly, research by Andriyani et al. (2025) showed that using interactive media like Baamboozle significantly enhanced elementary school students' motivation.

With this well-prepared plan, the implementation of Cycle 1 of the CAR was expected to identify the existing problems and test the effectiveness of using the Baamboozle application in improving students' vocabulary mastery.

2. Implementation

The implementation of Cycle 1 began with integrating the Baamboozle interactive learning media into Arabic language instruction for Class III JOY at SD Ar-Rafi Kiaracondong, Bandung. This medium was chosen for its gamified and interactive nature, aiming to enhance vocabulary acquisition in a fun and participatory manner.

Figure 1. Implementation of Cycle 1

Before the lesson began, the teacher conditioned the classroom environment by arranging students' seating to facilitate small group interactions and communicating the rules and expectations for classroom conduct. This step was essential in creating a conducive learning atmosphere and encouraging active student engagement.

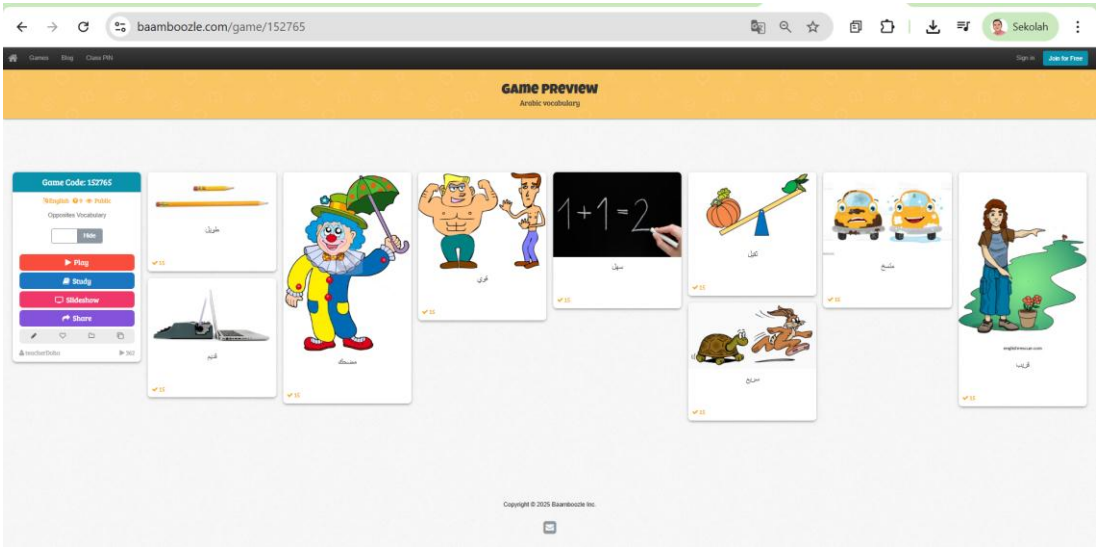

Figure 2. Mufradat Baamboozle learning media

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To measure the effectiveness of Baamboozle in improving vocabulary acquisition, the teacher prepared and distributed a pretest before implementing the media and a posttest after the learning activities concluded. These tests assessed students' understanding of Arabic vocabulary before and after using Baamboozle. The results of both tests would later be compared to determine the extent of vocabulary improvement (Adolph, 2016).

Previous studies have demonstrated that using Baamboozle can significantly enhance student motivation and learning outcomes. For example, a survey by Khoiro et al. (2023) revealed that Baamboozle significantly improved students' performance in Arabic language learning, with a significance value (2-tailed) of 0.000 < 0.05, indicating its effectiveness in boosting learning outcomes.

With a well-structured implementation and the integration of interactive media like Baamboozle, it was expected that the vocabulary acquisition of Class III JOY students at SD Ar-Rafi Kiaracondong, Bandung, would improve significantly. These efforts also aimed to create an enjoyable and motivating learning experience for students learning Arabic (Aceh, n.d.).

3. **Observation**

The observation results from Cycle I indicated that most students began to show increased interest and engagement in Arabic language learning, particularly in vocabulary-related content. Although not optimal, the Baamboozle application created a more enjoyable and interactive learning environment than conventional methods. The teacher implemented a game-based digital learning approach where students answered questions using a point system, effectively encouraging participation.

However, the observation also revealed that some students remained passive and lacked confidence when responding to questions. This was primarily due to limited vocabulary mastery and their unfamiliarity with digital learning methods. Nevertheless, the enthusiastic response from most students indicated that the use of Baamboozle was being positively received and had begun to increase learning motivation.

Quantitatively, the average student score increased from 50.59 in the pretest to 64.04 in the posttest. Although the improvement was not yet substantial, the result indicated a positive impact from using this media. Observations of student behavior also recorded an increase in learning activities such as asking questions, answering, and collaborating in small teams during the lesson (Ummah, 2019).

The teacher noted several technical challenges, including internet connectivity issues and student adaptation to the digital game format. However, these challenges served as reflection points for improvement in the next cycle. This observation provided a critical foundation for developing a more effective instructional strategy in Cycle II to enhance students' vocabulary acquisition further.

4. **Reflection**

The Classroom Action Research (CAR) reflection stage in Cycle I was conducted after completing all instructional activities, including administering the pretest, implementing the Baamboozle-based intervention, and the posttest. This reflection aimed to evaluate the effectiveness of the intervention and identify areas for improvement in the subsequent cycle (Mufid et al., 2024). The reflective approach aligns with the fundamental principles of CAR, which emphasize ongoing cyclical improvement (Kemmis & McTaggart, 1988; Ahsan & Hidayat, 2023).

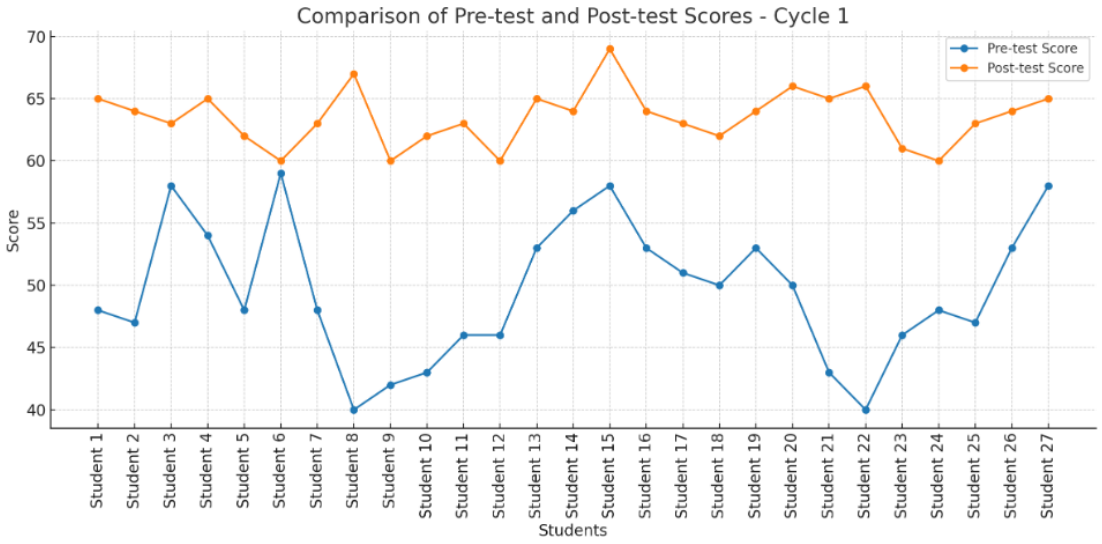
Based on the results obtained, there was an increase in the average student score from 50.59 (pretest) to 64.04 (posttest). This improvement suggests that using the Baamboozle application positively impacted students' vocabulary mastery. Students appeared more enthusiastic about learning, particularly due to the quiz and game-based format of the

media, which successfully captured their attention. This format also contributed to increased active participation in class (Ummah, 2019). Empirical studies support that game-based learning can significantly enhance learners' motivation and cognitive outcomes (Yilmaz & Baydas, 2017; Al-Azzam, 2022).

Nonetheless, the reflection also identified several issues that needed attention. For instance, some students could still not fully comprehend all the vocabulary presented in a single session. This may have been due to differences in students' learning capacities or the limited instructional time. Furthermore, the teacher recognized the need for greater variation in material presentation, rather than relying on a single medium. This finding is consistent with expert views that instructional media should be adaptable to the diverse characteristics of learners (Suherdi et al., 2021).

In the reflection notes, the teacher also observed that some students were less focused when activities were delivered in a game-based format. Thus, reinforcement strategies needed to be developed in the next cycle, such as more balanced group arrangements, assigning homework focused on vocabulary review, and improving classroom control during digital media use. These strategies ensure that all students receive equal learning opportunities and that learning outcomes are more evenly distributed. Such reinforcement strategies are fundamental, as consistency and reinforcement in language learning have improved vocabulary retention (Alqahtani, 2015).

Overall, the reflection for Cycle I concluded that the intervention was on the right track and produced positive outcomes. However, further optimization in instructional strategy and material reinforcement was needed to achieve more significant and evenly distributed improvements in student learning. This reflection formed the basis for designing subsequent actions in Cycle II with a more structured approach, tailored to the actual classroom conditions. Moreover, pedagogical interventions combined with educational technology have produced more sustainable long-term impacts in language learning (Rahmatiah et al., 2020; Alfadda & Mahdi, 2021).



The comparison in graph 1 clearly illustrates the difference in the average pretest and posttest scores of Class 3 Joy students at SD Ar-Rafi during Cycle I. The average pretest score was 50.59, while the average posttest score increased to 64.04. This graph indicates a gain of 13.45 points, reflecting a positive impact following the implementation of the instructional intervention through the use of the Baamboozle application in Arabic vocabulary (*mufradat*) learning.

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This increase indicates that the instructional strategy began to influence students' comprehension. Before the intervention, students could grasp only a small portion of the vocabulary taught, as reflected in the low pretest scores. This may have been due to the previously conventional teaching model lacking active student engagement.

After introducing Baamboozle, the classroom environment became more interactive and enjoyable, as students were engaged in educational games that stimulated their motivation to learn (Zanuar et al, 2023). The quizzes in Baamboozle helped students recognize and remember vocabulary more visually and engagingly, allowing for a more natural learning process. This is evident from the improved posttest scores, which suggest that students were beginning to understand and retain the vocabulary that had been taught.

Although the improvement had not reached the target maximum, the posttest results in Cycle I already demonstrated a significant shift. This suggests that the implemented learning model was appropriate, though further refinement was still needed. For instance, there was a need to strengthen understanding through material repetition, additional supporting media, or adjustments to the game strategy to ensure that all students could benefit equally.

Thus, the data presented in the graph supports the assumption that interactive digital media such as Baamboozle can serve as an effective alternative in Arabic language learning at the elementary school level. This learning improvement forms the foundation for continuing to Cycle II, expecting to achieve more substantial and evenly distributed gains. The evaluation of Cycle I also provides a basis for improving the weaknesses identified in the instructional process.

Implementation of Classroom Action Research (Cycle II)

1. Planning

   The planning stage for Cycle II was carried out in response to the reflection results from the previous cycle. Although there was an improvement from the pretest to the posttest in Cycle I, observations showed that some students remained passive and did not fully engage with the Baamboozle activities. Additionally, minor technical issues such as difficulties in independently understanding game instructions were identified. Therefore, in this stage, the teacher made several revisions to optimize the instructional intervention and significantly improve student outcomes.

   The teacher developed more varied instructional materials, including revised Baamboozle questions that were more challenging yet appropriate for the students' proficiency levels. The questions were more interactive, incorporating visual images and audio components to support multimodal vocabulary understanding. The teaching module was also updated, emphasizing vocabulary usage in simple sentences that reflect real-life contexts relevant to students' daily experiences.

   Furthermore, the teacher refined the group formation strategy by combining more active students with those who were still passive, to promote balanced learning interactions. The lesson schedule was adjusted to ensure a more conducive time for implementation, with students in an optimal state for learning. Technical preparations, such as digital device readiness and internet connectivity, were also addressed to avoid disruptions when using the Baamboozle application.

   Assessment and observation instruments were likewise revised. The teacher designed a more detailed observation sheet to evaluate students' cognitive, affective, and psychomotor domains during the learning process. Additionally, the pretest and posttest questions were aligned more closely with the learning objectives to provide a more accurate measure of vocabulary acquisition.

2. Implementation

The implementation of the instructional intervention in Cycle II proceeded according to the revised plan. Arabic language instruction focused on vocabulary mastery through the Baamboozle application, employing a more interactive and structured approach. The teacher began the lesson by activating prior knowledge and connecting it to the new material. The learning objectives were then communicated, and students were encouraged to engage actively in the learning-through-play activities.

Before utilizing the media, the teacher reviewed the rules of the Baamboozle game and explained how to answer the presented questions. The core activity began with students divided into pre-determined small learning groups based on prior observations, aiming to foster equitable participation. Each group took turns answering vocabulary questions displayed in Baamboozle, which had been enhanced with greater variation and included visual and audio components. The activity was conducted in a fun and competitive atmosphere, with the teacher actively facilitating the session by providing guidance and reinforcement.

Figure 3. Implementation of Cycle 2

During the activity, students demonstrated a noticeable increase in enthusiasm and engagement. Many students who had been hesitant or passive during Cycle I began actively participating by answering questions, engaging in discussions, and collaborating within their groups. The teacher also provided a brief reflection period following the game session, during which students recalled vocabulary (*mufradat*) they had learned and practiced using the words in simple oral sentences.

After the core learning activity concluded, the teacher administered the posttest that had been prepared in advance. As in Cycle I, students completed the posttest individually to measure their learning outcomes after the intervention. The posttest consisted of 20 multiple-choice items designed to assess students' understanding and mastery of the vocabulary taught. The results of this posttest would later be compared with the pretest scores collected before the intervention to evaluate the effectiveness of the Cycle II implementation.

3. **Observation**

Observation during Cycle II was conducted to monitor the implementation of the intervention and assess students' progress in vocabulary acquisition through the use of the Baamboozle application. Based on data collected from 27 students in Class 3 Joy at SD Ar-Rafi Kiaracondong, a significant improvement in Arabic language learning outcomes was evident. The average pretest score for this cycle was 80.50, while the average posttest score increased to 96.96.

This increase indicates that nearly all students experienced enhanced comprehension of the vocabulary material. Most students achieved posttest scores above 90, with some students—such as Abyan Putra Darmawan, Avicena Rafif Zalni, and Syakila Najwa

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Rahman—achieving perfect scores of 100. This suggests that the students not only understood the material passively but were also able to recall and apply the vocabulary actively.

Throughout the observation process, both the teacher and collaborator documented a noticeable increase in student participation. While in the previous cycle some students were still passive or lacked confidence, in Cycle II they began to exhibit greater confidence in answering questions, participating in group work, and showing more interest in the learning activities. This was primarily due to the competitive yet enjoyable environment fostered by the Baamboozle game format, which encouraged students to learn through play in a motivating and engaging manner.

In addition to cognitive development, students also showed growth in affective and psychomotor domains. They were more active, communicative, and cooperative during the learning activities. The teacher observed notable improvements in teamwork, attention to detail, and students' response speed when answering questions. These findings were corroborated by observation sheets, which indicated that nearly all indicators of student and teacher activities were successfully implemented as planned.

Thus, it can be concluded that the intervention in Cycle II successfully improved student learning outcomes regarding academic performance and student engagement in the learning process. The observation results provide a strong foundation for moving forward to the reflection stage and drawing conclusions for this classroom action research.

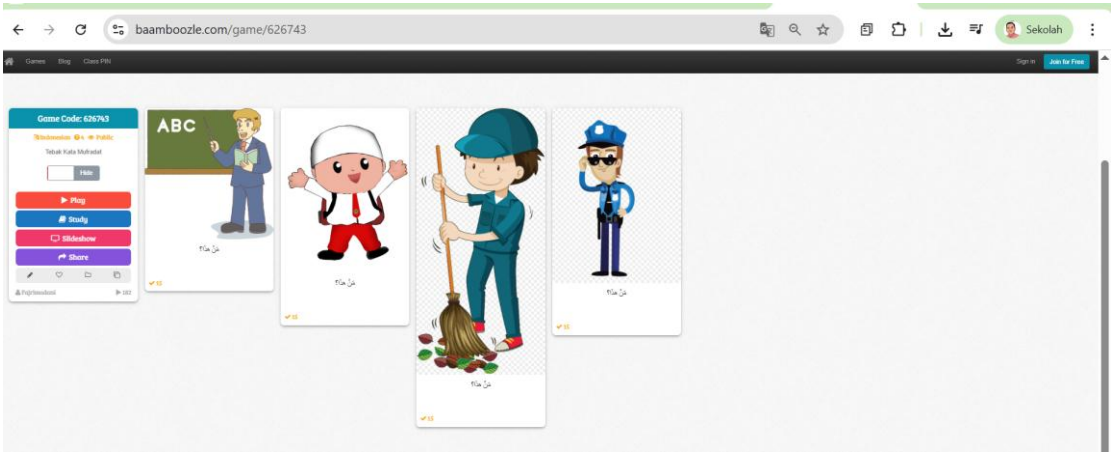


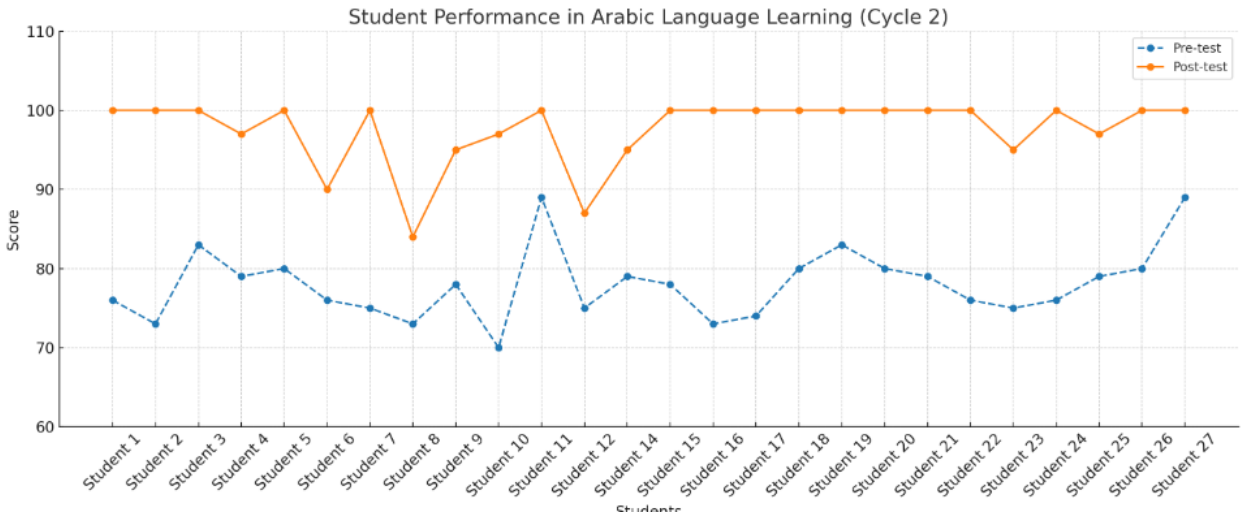
Figure 4. Bamboozle Learning Media

4. Reflection

In Cycle 2, the pretest results showed an average score of 78.00**,** while the posttest scores significantly increased to 97.58**.** This improvement indicates a very positive development in the students' mastery of Arabic vocabulary among third-grade students of SD Ar-Rafi Kiaracondong after the implementation of the interactive Baamboozle media.

Among the 27 students who participated in the learning process, most showed consistent improvement between the pretest and posttest. Some students even achieved perfect scores (100) in the posttest, indicating excellent comprehension of the material.

Compared to the results in Cycle 1, the improvement in Cycle 2 was much more significant, both in terms of average score and consistency across students. This suggests that the refinements in the teaching strategy and the use of interactive Baamboozle media in this cycle successfully addressed the obstacles faced in the previous cycle.



Based on the data presented in the graph above, there was a significant improvement between the pre-test and post-test scores of Class 3 Joy students at SD Ar-Rafi following the implementation of the Baamboozle learning media. The average pre-test score was 80.50, while the average post-test score increased to 96.90. This indicates that the use of Baamboozle had a positive impact on enhancing students' mastery of Arabic vocabulary (*mufradat*).

Out of 27 students, all showed improvement in their learning outcomes, with none experiencing a decline in scores. This increase occurred across all performance levels—both high-achieving and low-achieving students. For example, Naira Ayudhita Farzana, who initially scored 69 on the pre-test, improved to 91 on the post-test. Similarly, a student with a moderate pre-test score, such as Radeva Yashvir Sherard (72), also experienced a significant increase, reaching 92 in the post-test. These results demonstrate that Baamboozle effectively reaches students of various ability levels.

Baamboozle, as an interactive, game-based learning platform, encouraged active student participation in an enjoyable way. Using this media created a competitive and collaborative learning atmosphere that motivated students to engage more enthusiastically in vocabulary acquisition. The improvement in test scores reflects that students were more motivated and achieved better comprehension of the material through this engaging alternative to conventional teaching methods.

Beyond improving academic scores, another essential factor observed was the change in students' attitudes and participation during the learning process. Observations showed that students appeared more enthusiastic, asked more questions, and supported one another during group-based Baamboozle quizzes. These behaviors contributed to their academic performance, as evidenced by the post-test results. The media also supported teachers in fostering a positive and enjoyable learning environment without compromising the quality of the instructional content.

In conclusion, using Baamboozle media in Cycle II improved student learning outcomes, particularly vocabulary mastery. This technology- and game-based approach comprehensively enhanced students’ cognitive achievements. Therefore, it is recommended that this media be continuously used or further developed in future learning activities to sustain and even strengthen student achievement.

Discussion

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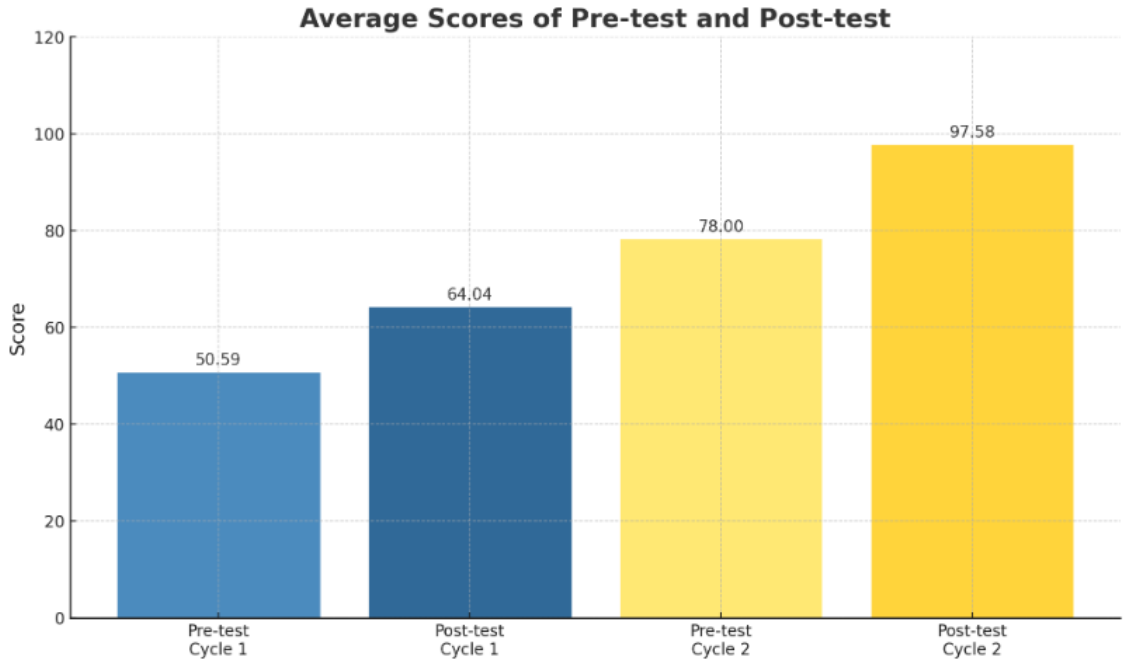
This study demonstrates improved vocabulary mastery among Grade 3 JOY students at SD Ar-Rafi Kiaracondong, Bandung, following the implementation of the Baamboozle application as a learning medium. In Cycle I, students' average pre-test score was 50.59, which increased to 64.04 in the post-test. In Cycle II, the average pre-test score rose to 80.50, and the post-test score reached 96.96. These score improvements indicate that the use of Baamboozle was effective in enhancing students' Arabic vocabulary acquisition.



The findings of this study are consistent with previous research, which has shown that using Baamboozle can significantly improve students' vocabulary mastery. For instance, a survey by Zulbani and Syafryadin (2025) revealed that applying Baamboozle significantly enhanced students' vocabulary acquisition, with the experimental group scoring an average of 78 compared to 69.83 in the control group. Similarly, Sakdiyah et al. (2024) found that using Baamboozle in English language learning improved students' grammar skills, with the average score increasing from 72.8 in Cycle I to 91.9 in Cycle II.

From a theoretical perspective, these results support the constructivist theory proposed by Piaget and Vygotsky, which emphasizes the importance of social interaction and direct experience in learning. Using Baamboozle as a learning medium enables students to engage in interactive and collaborative game-based learning, increasing their motivation and active participation in the classroom.

Despite the significant improvements observed, several challenges emerged during implementation. Some students reported difficulties using the Baamboozle application, including technical issues and a lack of understanding of game rules. These findings highlight the need for more intensive training and assistance for students in utilizing technology-based learning tools effectively.

Overall, integrating the Baamboozle application in Arabic language learning for Grade 3 JOY students at SD Ar-Rafi Kiaracondong proved effective in improving vocabulary mastery. However, thorough preparation, student training, and continuous evaluation of media usage are essential to achieve optimal outcomes.

Conclusion

Based on the classroom action research conducted in Grade 3 JOY at SD Ar-Rafi Kiaracondong, Bandung, it can be concluded that the use of the Baamboozle application as a learning medium is efficacious in improving students' vocabulary (mufradat) mastery. This effectiveness is evident from increased pre-test and post-test scores across cycles. In Cycle I, the average pre-test score of 50.59 rose to 64.04 in the post-test, while in Cycle II, the pre-test score increased significantly to 80.50 and the post-test reached 96.96. These results demonstrate that interactive learning media such as Baamboozle can motivate students, create a fun learning environment, and facilitate better understanding and retention of Arabic vocabulary.

Nevertheless, this study has some limitations. First, it was conducted in a single class within a specific school environment, limiting the generalizability of the findings. Second, the short implementation period may have affected the depth of students' understanding of the material. Therefore, further studies should include larger samples across different grade levels and school contexts to produce more representative results. Additionally, exploring other digital media or combining several instructional tools could be a promising direction for future research to examine their effectiveness in broader educational settings.

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