

Improving Students' Vocabulary Acquisition and Engagement Through Gamified Learning using Interactive Paper Mode Quizizz

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Abstract: This classroom action research aims to improve students' vocabulary acquisition and engagement in English language learning through gamified learning using the Interactive Paper Mode of Quizizz. The research was conducted in the 9C class of SMPN 6 Mataram and focused on enhancing two primary aspects: students' vocabulary mastery and their engagement (behavioral, emotional, and cognitive). The study was designed using the Kemmis and McTaggart model and was carried out over three cycles, in which each cycle consists of four crucial stages: planning, acting, observing, and reflecting. Data were collected quantitatively through Quizizz vocabulary tests, and qualitatively from observation and teacher field notes. The research yielded a significant improvement in both vocabulary acquisition and student engagement. The data showed substantial improvement of average vocabulary score from pretest to post-test in each cycle: Cycle 1 (66 to 74), Cycle 2 (77 to 81) and Cycle 3 (85 to 90). Furthermore, observations revealed that the students became more engaged behaviorally, emotionally and cognitively in contrast to the former learning activities. Throughout the cycles, the students responded positively to the use of Quizizz gamified learning, demonstrating high level of enthusiasm, super active participation, and healthy competition during learning activities. The use of the Interactive Paper Mode allowed students to enjoy the benefits of gamification without requiring personal mobile device, making the method is nicely suited for the current "no phone" policy for junior high school students. Based on these findings, it is highly recommended that English teachers consider implementing gamified learning strategies, specifically the Paper Mode Quizizz, to support vocabulary development and enhance overall students' engagement across all dimensions: behavioral, emotional, and cognitive.

Keywords: vocabulary acquisition; student engagement; four engagement dimensions; gamified learning; Paper Mode Quizizz.

Introduction

In context of English language learning, the main ideal goal that requires to be attained is the development of students' comprehensive and active engagement throughout the learning process. The students' comprehensive and active engagement are demanded to be highlighted by the former; K13 curriculum and the current curriculum applied in Indonesia; Merdeka Curriculum. That is to say, in conducting English language learning, students are expected to be actively involved more than what the teachers used to role themselves as the main source of information. The requirement for nowadays English teaching has shifted from teacher centre-based learning to students-based

learning. Due to the vast growth of technology, for instance AI, teachers in this century are not the only viable source of information. Students are able to access any kinds of information rapidly through internet. Therefore, English teachers should dedicate themselves merely as the facilitators guiding the pupils to actively engage in learning process.

The term engagement in English language teaching consists of three distinct, yet interrelated dimensions: behavioural, emotional /affective, and cognitive engagement (Fredricks, Reschly, & Christenson, 2019). Based on this engagement learning theory proposed by Fredricks, the students who is involved actively during the learning process especially

in all three engagement dimensions tend to have higher motivation, deeper understanding, and better learning outcomes. Therefore, the students' engagement in English learning process has a vital role in supporting the success of the achieving the learning outcomes.

Unfortunately, in the real teaching practice, it is inevitable to discover the low level of students' engagement in English learning process. Based on the first teaching observation in Junior High School 6 Mataram, at 9th grade Class C, it was found that the majority of the students in the class had low level of engagement in all three dimensions; behavioural, emotional, and cognitive engagement. In addition to the low level of engagement, the students' poor vocabulary mastery was also considered as the other critical issue observed in this class. Many of them could not even comprehend nor identify the vocabularies from the text. As a result, they could not understand the passage and ended up failing the task. This vocabulary deficiency was considered a salient problem required to be resolved seriously to help the students achieve the learning outcomes.

This low level of students' vocabulary acquisition and engagement in English learning process could be a result of the lack of innovation in teaching English. The learning process was carried out in an old-fashioned way whereby the teacher dominated the process without letting the students actively involved. Furthermore, during the learning process, the teacher mostly used conventional media with lack of vocabulary acquisition teaching strategy instead of implementing modern technology as an interactive teaching media. Thus, the students considered the learning process was not fun and engaging for them.

To overcome this lack of students' vocabulary acquisition and engagement in English learning process, there are myriads of teaching innovations can be implemented, one of which is using gamified interactive learning platform called Quizizz. This platform offers a fun, interesting, interactive quiz game-based for students to conquer fun challenges and competitions. Implementing this gamified learning via Quizizz was expected to improve the students' engagement in all aspects; behavioural, emotional, and cognitive engagement. Aside from improving students' engagement during classroom activities, Quizizz has great potential to serve as an effective tool for enhancing students' vocabulary acquisition. Using Quizizz, the learning activities could be designed using paper mode to specifically help the students reinforce their vocabulary knowledge.

For this reason, it was alarming to note that this classroom action research needed to be conducted in order to address the current issues in 9th grade Class C at Junior High School 6 Mataram: the low level of

students' vocabulary acquisition and engagement in English learning. By integrating this modern interactive platform, Quizizz, it was expected that the students would be more knowledgeable in terms of vocabulary mastery and be more engaged, motivated, and interested in participating during the learning process. Ultimately, the findings of this research would contribute to creating a more engaging, dynamic, and interactive English learning experience involving the use of technology that benefits both students and teachers.

Method

This research is classified as classroom action research using the Kemmis and McTaggart model. Based on this model, the classroom action research undergoes several crucial stages or cycles, considered a self-reflective spiral consisting of planning, acting, observing, reflecting, and re-planning.

To implement this model, this research was conducted in the 9th Grade C class of Senior High School 6 Mataram year 2024/2025. This research would be the main focus of the PPG Prajabatan teaching practice project. The subject of this research consisted of 40 students, with 18 male students and 22 female students.

To solve the current issues in the 9th-grade C class, this classroom action research will be conducted by focusing on two variables:

- Target Variable: Improving Students' vocabulary acquisition and engagement in English language learning
- Action Variable: Implementing Gamified Learning using interactive paper mode Quizizz

This research was conducted based on the spiral self-reflective cycles proposed by the Kemmis and McTaggart action research model. For the first cycle of the research, there are several stages that were carried out: planning, action (implementation), observing, reflecting, and re-planning.

In the implementation phase, Quizizz was used as the main instructional tool. The learning activities in the classroom were incorporated by using Quizizz for several sections, such as opening for reviewing last materials and introducing a new topic, and closing for measuring and evaluating students' comprehension of the current topic. Every section was started by giving the students clear instructions on how to participate in class using Quizizz, especially how to participate using paper mode for offline mode. For the Paper Mode Quizizz game, each student was provided a piece of paper with a barcode used for the teacher to scan during the game. The students were only required to lift the barcode and select their answer by tilting the paper clockwise to match the options. After completing the vocabulary quiz, the students were allowed to see their results

immediately using the leaderboard and quiz review feature.

To evaluate the success of this classroom action research, both qualitative and quantitative data were collected. The qualitative data refers to the students' engagement covers three interrelated dimensions: behavioral, emotional, and cognitive. On the other hand, the quantitative data is the score of the students' vocabulary acquisition from formative tests using Quizizz. The instruments included multiple-choice tests designed on the Quizizz platform, including an observation sheet and teachers' field notes.

The qualitative data about the students' engagement was analyzed using the engagement theory as the main reference. The collected data was further categorized and elaborated based on the engagement dimensions: behavioral, emotional, and cognitive. The quantitative data were acquired from the students' vocabulary scores throughout the cycles and analyzed quantitatively. The data was analyzed by doing descriptive statistics, including calculating the average vocabulary score from each cycle. Additionally, each cycle will cover different kinds of topics as presented in the following table.

Table 1. Materials on each cycle				
Cycle	Vocabulary Scope			
1 st cycle	Narrative related vocabularies			
2 nd cycle	Report text related vocabularies			
3 rd cycle	Advertisement	text	related vocabularies	

The research was considered successful if the following percentage benchmarks are met: Vocabulary Mastery: the students' average score of the vocabulary acquisition test is >75 indicates the success of this research. In order to interpreted the students' vocabulary score, the following rubric was used.

Table 2. Vocabulary Score Rubric				
Students' Vocabulary Acquisition Scale				
Vocabulary Acquisition	High	Medium	Low	
	75% - 100%	60% - 74%	0% - 59%	
	The	The	The	
	students	students	students	
	show high score of vocabulary acquisition from Quizizz Paper mode Test.	show medium score of vocabulary acquisition from Quizizz Paper mode Test.	show low score of vocabulary acquisition from Quizizz Paper mode Test.	

To implement this model This research was conducted in the 9th Grade C class of Senior High School

6 Mataram year 2024/2025. This research would be performed as the main focus of PPG Calon Guru teaching practice project. The subject of this research consisted of 40 students, with 18 male students and 22 female students.

Result and Discussion

The result and discussion of this research are presented as follows.

Results

This classroom action research was conducted in three cycles, highlighting on improving students' vocabulary acquisition and engagement through gamified learning using paper mode Quizizz. The students' vocabulary scores were collected through pre-tests and post-tests in each cycle, on the other hand, the students' engagement was observed qualitatively. The vocabulary acquisition data collected is presented in the following table.

Table 3. The Students' Average Vocabulary Score				
Cycle	Topic	Pre-	Post-	Gain
Cycle 1	Narrative Text	66	74	+8
Cycle 2	Report Text	77	81	+4
Cycle 3	Advertisement text	85.5	90	+4.5

As can be seen from the students' average vocabulary score table above, there was a significant improvement recorded across the three cycles. From the Cycle 1 of Narrative Text, the average vocabulary score in the pre-test was 66, which later increased to 74 in the post-test. In cycle 2 with report text topic, the pre-test average was 77, and the post-test increased to 81. Finally, in cycle 3 with advertisement topic, the average vocabulary score improved from 85.5 in the pre-test to 90 in the post-test. This remarkable increase in scores demonstrates a positive impact of the implemented gamified learning strategy using paper mode Quizizz on students' vocabulary acquisition.

Furthermore, the majority of the students achieved significant score improvements from cycle to cycle. To illustrate, in cycle 1, a number of students such as Dewa Ayu Maheswari and Galang Yasser Al Muzakky improved their scores by more than 30 points from Narrative text. In cycle 2 and 3, a higher number of students maintained consistent performance, with many achieving scores of 100. The number of students who scored below 60 in the post-tests consistently decreased throughout the cycles. In order to demonstrate the distribution of students' vocabulary score in each cycle, the following table is presented.

Table 4. Distribution of Students’ Vocabulary Scores per Category in Each Cycle

Cycle	Score Category	Number of Students	Percentage (%)
Cycle 1 - Pre test	High (75-100)	12	30%
	Medium (60-74)	28	70%
	Low (0-59)	-	
Cycle 1 - Post test	High (75-100)	23	58%
	Medium (60-74)	13	32%
	Low (0-59)	4	10%
Cycle 2 - Pre	High (75-100)	22	55%
	Medium (60-74)	18	45%
	Low (0-59)		
Cycle 2 - Post	High (75-100)	30	75%
	Medium (60-74)	10	25%
	Low (0-59)		
Cycle 3 - Pre	High (75-100)	34	85%
	Medium (60-74)	6	15%
	Low (0-59)		
Cycle 3 - Post	High (75-100)	35	88%
	Medium (60-74)	5	13%
	Low (0-59)		

Based on this finding, it could be interpreted that the number of students who significantly improve their vocabulary score, was increasing throughout the cycles. From cycle 1, there were only 12 students (30%) categorized as high vocabulary achiever which later drastically increased into 35 students (88%) in the last cycle.

In addition, in terms of engagement, based on the field observations, the students' behavioral, emotional, and cognitive engagement levels increased significantly across all cycles. During cycle 1, many students participated actively and were enthusiastic in answering questions using Quizizz Paper Mode. In the following cycles, this engagement intensified. The classroom atmosphere became very enchanting, with students responding to the game-based format with excitement. The enthusiastic reaction toward the used of Paper Mode Quizizz activities could even be heard from adjacent classrooms. This indicates that the game-based learning platform successfully triggered emotional and behavioral engagement in a nicely observable way

Discussion

The implementation of gamified learning using Paper Mode Quizizz proved to be effective in improving both students’ vocabulary acquisition and engagement. As can be seen from the results, this gamified learning successfully improved the students’ average vocabulary score from 66 to 90 from cycle 1 to cycle 3. This consistent improvement really indicates the positive impact of paper mode Quizizz in teaching vocabulary. The high final score serves as the evidence of the success of this research in improving the students’ vocabulary mastery along with their engagement.

The steady gain in vocabulary scores across the three cycles indicates consistent progress in students' vocabulary mastery. However, there was a notable jump occurred in first cycle where the students’ average score drastically increased from 66 to 74. This spike of improvement could be caused due to the students’ high enthusiasm upon experiencing a new learning method. In contrast, from the rest of the cycles, the vocabulary score improvement was relatively steady around 4 points increase. This steady gain could be caused due to the students’ adaptation towards the gamified learning design. The students were already familiar with the game. However, from the rest of the cycles, the number of students categorized as high achievers rose significantly from 12 (30%) to 35 (88%), demonstrating the success of implementing gamified learning with Paper Mode Quizizz.

In terms of engagement, classroom observations revealed a substantial improvement in behavioral, emotional, and cognitive engagement. From the first cycle, the students responded with positive and excited

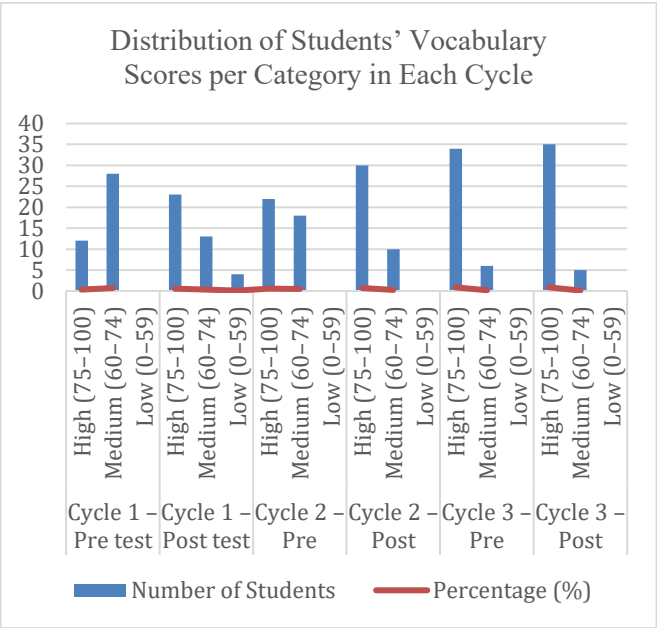


Figure 1. Distribution of Students’ Vocabulary Scores per Category in Each Cycle

attitude. They were eager to lift their team's barcode and took turns responsibly without causing disruption which indicated stronger behavioral engagement.

Furthermore, they were so happy and cheered so loudly when they got the right answers. They always clapped their hands and raised their fists to the air when they won the game. This turned the whole teaching and learning atmosphere from a boring class to a super fun and exciting learning experience. Their exciting cheering could even be heard from other classes. This really shows there was a nice improvement of emotional engagement involved during the entire cycles. Not only that, the majority of the students were also creating their own strategy to win the game. They started to cooperate with their own team mate by discussing their answers, deciding the timing, and analysing the given questions together. This indicates how well their cognitive engagement was improved along the way.

The increased engagement positively contributed to the students' vocabulary improvement throughout the cycles. Greater interest in the learning design led to better mastery. Repeated use of Paper Mode Quizizz helped reinforce their vocabulary. This positive outcome was supported by the instant feedback from the Quizizz Platform. After finishing one session, the students immediately received their scores, corrections, and the right answer. This way, the students can get a fast and accurate reflection without waiting for teacher explanations.

Furthermore, the results of this research support the adoption of student-centred and technology-integrated approaches in English language teaching. As stated in the current curriculum applied in Indonesia; Merdeka Curriculum, technology-based learning should be introduced and implemented in learning activities to adjust to the vast growth of technology.

Conclusion

Based on the results and discussion, it could be concluded that the implementation of gamified learning using paper mode Quizizz significantly improved the students' vocabulary acquisition and engagement in English language learning. The consistent increase of the students' vocabulary from cycle to cycle indicated the teaching strategy was really effective in enhancing the students' vocabulary mastery. Not only limited to the vocabulary acquisition, implementing this strategy also beneficial to enhance the students' engagement in all dimensions: behavioral, emotional and cognitive. As observed, the students become more active in participating and collaborating during the implementation. Besides that, this gamified learning really highlights the essential of the current curriculum which emphasizes student-centered learning.

That is to say, it is recommended for other teachers to also implement this gamified learning strategy. For future studies, the teacher may explore more on the depth of the remarkable benefit of paper mode Quizizz and its contribution to students' motivation internally and externally.

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