The Use of Quizlet as a Vocabulary Acquisition Learning Media for Eleventh Grade Students

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ABSTRACT

Language learners tend to have a limited amount of vocabulary. This problem limits them from using and understanding a broad coverage of speech or text in a foreign language. One of the reasons causing this matter is the lack of teachers' awareness of how to teach vocabulary for language learners. Quizlet is one of many applications used for vocabulary learning. This study focused on analyzing the use of Quizlet as a learning media for improving students' vocabulary. It also aimed to find out the students' perceptions of the use of Quizlet for learning new vocabulary. This research is using a one-group quasi-experimental research design. The data were collected using tests, field notes, and questionnaires. The results show that the students' acquisition of both productive and receptive vocabulary has increased after the treatment. The students' receptive vocabulary shows a greater increase compared to the productive one. The students' responses to the use of Quizlet as learning media are positive. They agree that the application is beneficial and easy to use. The results of this study provide additional insights on how Quizlet should be utilized so that it can be used as a learning media for vocabulary learning effectively.

Keywords: English Vocabulary, Productive Vocabulary, Quizlet Learning Media, Receptive Vocabulary

1. INTRODUCTION

Vocabularies are a basic tool in communication. It is the main thing someone should acquire to produce and comprehend a language for EFL students. Lack of vocabulary can affect other language skills. Vocabulary is needed both in listening and speaking activities. Language learners can understand, produce, and use the language effectively if they have adequate vocabulary.

Vocabulary knowledge is a prediction of the extent to which language learners have mastered vocabulary. It is classified into receptive and productive vocabulary [1] [2] [3]. Based on language acquisition theories, language learners tend to have a greater increase in acquisition of receptive vocabulary than the productive ones [4].

Brown [5] suggested that to find out whether a word has become learners' productive vocabulary, they can be asked to define the word and use it in a sentence. Learners' productive vocabulary knowledge can be seen through the use of this vocabulary in their writing [1]. Besides, the quality of writing, in general, is influenced by the vocabulary of the writer. Therefore, paying attention to the use of vocabulary through writing can determine how good the learners are at using a new language [6].

Regarding the development of vocabulary acquisition, Barr [7] stated that language learners tend to have a limited amount of vocabulary knowledge. The limitations in vocabulary also limit their understanding of a language. The learners' understanding depends on how much of the vocabulary they have and understand. However, building students' vocabulary often becomes the last objective of the teacher. For that reason, teachers play an important role in building their learners' vocabulary.

Vocabulary teaching strategies are helpful for language learners not only to understand the meaning of vocabulary but also to comprehend how to use them properly. Teachers can apply vocabulary teaching strategies according to the learning needs because there is no single teaching strategy that can cover all aspects of vocabulary knowledge required in learning vocabulary [8]. Besides, in teaching new vocabularies to the learners, teachers are expected to combine more than one teaching strategy [9].

One interesting way of learning new vocabulary is by integrating technology as a learning media into the classroom. Utilizing advanced technology in learning a new language has replaced conventional learning approaches. It also makes teaching and learning activities more interesting. Technology is also a vital element in teaching new vocabulary, for it has numerous advantages. It also makes vocabulary learning common and easy [10]. Technology tends to be able to support the process of acquiring vocabulary for learners. Several research results have proven that the use of technology can be integrated into vocabulary learning for language learners [2] [11] [12] [13] [10] [14]. Nurmukhamedov [11] explains that the integration of technology in learning vocabulary makes learners more exposed to the

vocabulary of the language being learned. Technology is also proven to be effective in increasing learners' vocabulary acquisition [12]. Dolan [15] stated that utilizing technology in language learning can build an attractive learning environment for foreign language learners, develop learners' knowledge and comprehension of vocabulary, and boost learner participation in the classroom. Besides, the learning media itself has so many benefits. It attracts learners' attention, increases their positive attitudes, and maintains students' focus during the learning process [16]. Thus, the implementation of technology is beneficial in helping to create a learner-centered environment and improve their vocabulary.

One of the many applications for vocabulary learning is Quizlet. Quizlet is an online application that allows learners to learn vocabulary through a variety of stimulating games and activities. Unlike other vocabulary applications, such as Duolingo and Kahoot, the vocabulary learning activities in Quizlet are more varied. In this application, eight language learning features can be used, namely flashcards, test, matching, gravity, writing, spelling, learning, and live [17]. Quizlet allows learners to interact, collaborate, and also create a learning environment that can help them master new vocabulary.

There have been numbers of research investigating the effectiveness of Quizlet and its significance for vocabulary learning. One of them is to see its effect on the acquisition of receptive vocabulary [18] [7] [17]. Another research focuses on finding out language learners' perceptions about the use of Quizlet was done by Kose T., et. al. [19] and Anjaniputra and Salsabila [20]. These studies have shown evidence that there is a close relationship between the use of Quizlet and vocabulary acquisition. Moreover, Chiu [21] conducted research on the effectiveness of digital game-based learning on the acquisition of English vocabulary. The digital-based games used in this study have similar options to Quizlet. Vocabulary learning is designed with the concept of typing games for English vocabulary on icons or definitions displayed on the screen. However, the finding in Chiu's study [21] indicates that digital game-based learning is not effective in helping learners acquiring new vocabulary. It shows that [21] this finding on the impact of game-based learning on students' vocabulary acquisition is different from the other research findings mentioned above.

There are no previous studies that investigated the impact of using Quizlet on the acquisition of productive vocabulary, especially in writing. Thus, the focus of this research is to investigate the impact of using Quizlet on the acquisition of productive and receptive vocabulary. Besides, it also aimed to find out the students' perceptions of the use of Quizlet for learning new vocabulary. It is hoped that this research can provide new alternatives and more knowledge that is beneficial for language teachers, learners, and schools. Therefore,

based on the theoretical background above, this study seeks to answer the following questions:

1) How does the use of Quizlet as vocabulary learning media impact the acquisition of productive vocabulary?

2) How does the use of Quizlet as vocabulary learning media impact the acquisition of receptive vocabulary?

3) How are students' perceptions of the use of Quizlet as a vocabulary learning media?

2. METHODS

This study used a combination of quantitative and qualitative data or a mixed-method to collect and analyze the data obtained from all the participants. The type of method design used in this study is explanatory sequential. This method design starts with the analysis of quantitative data and continued by the analysis of qualitative data. This study was a quasi-experimental design using one group pretest-posttest.

2.1. Participants

The population of this study was 11th graders of Senior High School X in Bengkulu. The total participants in this study were 30 students, 22 of them were female, and 8 were male students. This research was conducted during the 2019/2020 academic year.

2.2. Data Collection Techniques

The data collected in this study are test results, field notes, and questionnaires. This study tests the learners' productive and receptive vocabulary. The learners' productive vocabulary test is in the form of writing tests. The tests, in this study, are a pretest before the treatment and a posttest after the treatment. The scoring rubric was adapted from the aspect of knowing a word by Read [1] and Nation [2], and the aspect of vocabulary used in writing by Lee and Muncie [22] [23]. The aspects that are analyzed are word choice, meaning, and use. The main objective of the receptive vocabulary test is to obtain data about the students' improvement after the treatment. The receptive vocabulary test is divided into two types of questions. First, students have to match the words with their definitions and synonyms. Then, students have to fill in the blank with the correct words given in the box. This test has 30 items, the items have some options. One of them is a distractor.

This study utilized questionnaires and field notes to obtain students' perceptions of Quizlet. The questionnaire has sixteen items distributed to the students to capture the students' perceptions. Those items are divided into two categories. The categories include perceived usefulness (11 items) and perceived ease of use (5 items). These points are adapted from the technology acceptance model by Davis [24]. This questionnaire is a

4-point Likert scale ranging from 4 (strongly agree) to 1 (strongly disagree). The students rate how strongly they agree with each statement. The scale does not provide a 'neutral' option since the middle value can reduce the number of evaluative reactions. Field notes are a data-gathering technique that collects data by observing the process of studying.

2.3. Procedure

This research took ten weeks to complete. In the first week, the students did a pretest. In the test, students were instructed to write a paragraph with a minimum of six sentences using the words given in the test. The following eight weeks were used to build the students' vocabulary by using Quizlet. In the seven initial meeting sessions, learning activities are carried out in their classroom. In the last meeting sessions, learning activities were carried out remotely due to the COVID-19 pandemic.

At the beginning of each treatment session, students were instructed to read a text. The texts are explanation texts with six different themes. After students finish reading the text, each student was instructed to access Quizlet on the computer. The students learned the new vocabulary they found in the text through an exercise on Quizlet. This activity aimed to help students comprehend new vocabulary. In this study, students used the eight features in Quizlet (see Table 1). They used different Quizlet features at each meeting. During the eight meetings, students did the progress tests twice. They aimed to observe and determine the progress of students' vocabulary acquisition during the treatment process. The data from the progress tests were used to support the observation data.

Table 1 The distribution of quizlet features

Week	Theme	Quizlet Features
1	Pretest	
2	How Snow Forms	Flashcard, spell dan write
3	How to Build Confidence	Flashcard, write dan gravity
4	-	Live
5	How Corruption Occurs	Flashcard, spell dan matching
6	Rainbow	Flashcard, learn dan gravity
7	-	Live
8	Dark Chocolate	Flashcard dan test
9	How Global Warming Happens	Flashcard dan matching
10	Posttest	

After eight weeks, a post-test was given to the students. In both pretest and posttest, the students need to write a paragraph with a minimum of six sentences using the words given in the test. However, the list of words used in the pretest and posttest is different. Besides the productive vocabulary test, the researcher also gave a receptive vocabulary test at the end of the study. After the test, students answered a questionnaire about perceptions of using Quizlet as a vocabulary acquisition learning media. In the end, analytical scoring was conducted to evaluate the students' pretest and posttest.

2.4. Analysis

The analysis of this study combines quantitative and qualitative analysis. Data collected from tests were analyzed using the SPSS program. The scores of the productive vocabulary test before and after the treatment were analyzed using a nonparametric test with the Wilcoxon Signed-Rank test. This analysis is to see whether there were any notable differences. The scores of the receptive vocabulary test were analyzed using descriptive statistics. Data from questionnaires and field notes were analyzed using descriptive analysis. The students' perspectives on the implementation of Quizlet as a vocabulary acquisition learning media mostly depend on the percentage of the questionnaire answers.

3. DISCUSSION

The results of the research findings have to answer the research questions. Thus, the findings must be in three categories: the impact of using Quizlet on the productive vocabulary acquisition, the impact of using Quizlet on the receptive vocabulary acquisition, and the students' perceptions about the use of Quizlet as a media for vocabulary learning.

3.1. Results and Discussion of the Students' Acquisition of Productive Vocabulary

The first analysis is to answer question number one, the impact of using Quizlet on productive vocabulary acquisition. The test results indicated that the students' acquisition of productive vocabulary had increased after the treatment. Table 2 shows the mean scores of the productive vocabulary test.

Table 2 Mean scores of productive vocabulary test

	N	Mean
Pretest	30	50.83
Progress test 1	30	58.6
Progress test 2	30	68.6
Posttest	30	73.36
N-Gain (pretest-posttest)		0.42

From Table 2, we can see that 30 students did the tests. The mean score of the pretest is 50.83. After the treatment, the mean score of the progress test 1 increased to 58.6, and then in progress test 2 the mean score increased to 68.6. In the posttest, the mean score is 73.36. Comparing the score of pretest and posttest, the students have improved their score 22.53 points on average after learning by using Quizlet. It proves that the students have done better in the posttest compared to the pretest. In the N-Gain column, an average score of 0.42 is obtained. This score is categorized as moderate. All in all, the result indicates that the use of Quizlet as vocabulary acquisition

learning media has helped students improve their productive vocabulary acquisition.

Furthermore, t-test was conducted to investigate the impact of Quizlet on productive vocabulary acquisition. T-test helps to decide whether there is a statistical difference between pretest and posttest results. One of the conditions that must be done before conducting a t-test is a normality test. The normality test aims to test whether the data of pretest and posttest are distributed normally or not. This research used the Shapiro-Wilk test. Table 3 shows the result of the normality of the pretest and posttest.

Table 3 Normality of pretest and posttest

	Shapiro-Wilk		
	Statistic	**df**	**Sig.***
Pretest	0.939	30	0.088
Posttest	0.910	30	0.015
*Significant Level 0.05			

As seen in Table 3, the significance value for the pretest is 0.088. This score is greater than 0.05. It means that the data from the pretest is distributed normally. Meanwhile, the significance value for the posttest is 0.015, the result is less than 0.05. It can be concluded that the data of the posttest is not distributed normally. In other words, the posttest has multiple data intervals outside of the other values in the data set, which caused the normality test to fail. Thus, this study cannot use a statistical parametric test requiring normality.

Given the fact that the data from the posttest was not normally distributed according to the Shapiro-Wilk test of normality, we used a nonparametric test with the Wilcoxon Signed-Rank Test. Wilcoxon Signed-Rank Test helps decide whether there is a statistical difference between the pretest and posttest results. There is a significant effect of using Quizlet on productive vocabulary acquisition if the Asymp.Sig. (2-tailed) is less than <0.05. On the other hand, there is no significant effect of using Quizlet on productive vocabulary acquisition if the Asymp.Sig. (2-tailed) is greater than> 0.05. We can see the data in Table 4 below.

Table 4 Wilcoxon signed-rank test

	Posttest – Pretest
Asymp. Sig. (2-tailed)	0.000

According to the results of the Wilcoxon Signed-Rank Test calculation above, the value of Asymp Sig. (2-tailed) is 0.000. This score is less than 0.05. Therefore, it can be concluded that there is a significant effect of using Quizlet on productive vocabulary acquisition.

Based on the test result, the score of students' productive vocabulary increased to 73.36 in the posttest. Therefore, the answer to the first research question is that the use of Quizlet application had a positive effect to improve students' productive vocabulary acquisition. This result also confirms the previous study that Quizlet as a vocabulary acquisition learning media can significantly improve students' vocabulary acquisition [17]. Although these two studies produce the same findings, the type of test used in this research is different from Sanosi's [17] research.

The use of writing tests in this study is following Brown [5], Read [1], Nation [2], and Muncie [6] recommendations. They stated that writing tests are possible ways to determine the students' vocabulary acquisition. According to them, the quality of writing is strongly influenced by the vocabulary mastery. It was proven in this study, by having a good mastery of vocabulary, the students were able to convey their ideas in writing.

Several previous studies [18] [7] mostly used the flashcard feature in Quizlet. However, this study provides new information about the use of eight features in Quizlet. These features in Quizlet can effectively improve students' vocabulary acquisition. It allows students to have a wide range of vocabulary learning experiences. The more learning experiences provided to students, the more they can understand the vocabulary. It also helps them maintain the words in their memory.

3.2. Results and Discussion of the Students' Acquisition of Receptive Vocabulary

This study uses descriptive statistics to investigate the impact of Quizlet on receptive vocabulary acquisition. The result is illustrated in Table 5 below.

Table 5 Descriptive statistics of receptive vocabulary test

	N	**Min**	**Max**	**Mean**	**Std. Deviation**
Receptive vocabulary test	30	18	28	23.7	3.053

The result of descriptive statistics in Table 5 above shows that the students with the lowest score can answer eighteen vocabularies correctly. It shows that the students have at least understood 60% of all the tested vocabulary. The student with the highest score can answer 28 vocabularies correctly. It means that the student has comprehended 93.33% of the tested vocabulary. The mean value obtained from this test is 23.7. This score indicates that the students have acquired 79% of the tested vocabulary on average.

Based on Table 2 and Table 5, we can see that students obtained higher scores in the receptive test than in the productive test. The mean of receptive test scores is 79%. This is higher than is the productive test which only obtained 73.36 after the Quizlet treatment. These findings support Webb [4] statement regarding the students' vocabulary acquisition. Webb [4] stated that the acquisition of receptive vocabulary tended to have a greater increase than the acquisition of productive

vocabulary. In the productive vocabulary test, even though the students' vocabulary acquisition increased after the treatment, the students had to adjust the words to the ideas they wanted to convey in the sentences. Therefore, obtaining productive vocabulary is more difficult than is receptive vocabulary.

3.3. Results and Discussion of Students' Perceptions about the Use of Quizlet as a Media for Vocabulary Learning

To answer the third research question on how students' perceptions of Quizlet as a vocabulary acquisition learning media are, the analysis results indicate that the students have a positive response of Quizlet as learning media. The results of the research questionnaire can be seen in Figure 1 below.
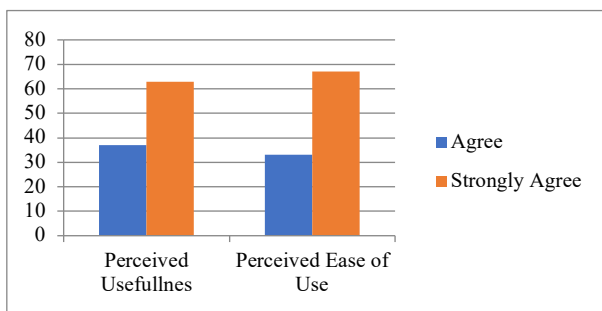

Figure 1 Results of Students' Perceptions

The graph in Figure 1 shows that the students gave positive responses to the use of Quizlet in learning. They thought this application was useful since the application was beneficial and easy to use. Students agreed that Quizlet as learning media provided various benefits in the language learning process. The benefits of Quizlet made the students enjoy the learning process, improve their self-confidence, increase their interest in learning, and build their vocabulary acquisition. Students also agreed that Quizlet could be easily understood and operated. Overall, these findings support [16] statement, which stated that the use of appropriate learning media could foster students' positive attitudes towards the learning process. Therefore, Quizlet is considered suitable for learning English vocabulary.

The findings of this research on students' perceptions are in line with the experts' ideas regarding the benefits of technology in learning vocabulary. The benefits of the technology include the following ideas, 1) the integration of technology into vocabulary learning can improve students' acquisition and understanding of vocabulary, 2) technology supports an attractive learning environment for students, and 3) technology increases the participation of students in the classroom [15] [11] [12].

Based on the results of the analysis, the teacher and the students can obtain three advantages of using Quizlet in vocabulary teaching and learning. These benefits include: 1) the increase in students' vocabulary acquisition, 2) the opportunities for teachers to apply various vocabulary teaching strategies, and 3) the opportunities for teachers to encourage students to participate in the classroom.

The features in Quizlet help students improve their vocabulary acquisition. Quizlet has games and learning features that are attractive and help students to improve their vocabulary acquisition. This finding is different from Chiu's finding [21] regarding the use of digital game-based learning on students' vocabulary acquisition. Chiu [21] stated that the conventional vocabulary learning was more effective than was the use of digital game-based learning. He stated that digital game-based learning media was not effective for increasing students' vocabulary acquisition. However, based on the analysis in this study, the game features in Quizlet obtained positive responses from the students and resulted in significant gains in the acquisition of students' vocabulary.

The second advantage relates to teaching strategies. Various types of Quizlet features can be attractive teaching strategies to assist teachers in creating more effective vocabulary teaching. The teacher also needs to allow the students to practice more to ensure that students understand the vocabulary easily, remember the vocabulary, and adapt it to the students' needs. The use of more than one teaching strategy is indeed a practice recommended by some experts, such as Pinter [9] and Schmitt [8].

The last advantage of Quizlet is that it generates students' participation in the classroom. Most of the students participated actively when they used the game features in Quizlet, especially the live feature. In this activity, students discussed in a small group and shared information about the vocabulary they knew to other group members. If students are fully involved in this learning process, students can easily comprehend the vocabulary. The learning which is carried out either in groups or individually allows students to have control and responsibility for their learning process [25].

The field notes data during the research process explained that students seemed very interested in learning vocabulary using the Quizlet application. It could be observed from the students' attention when they used the application during the learning process. There were hardly any students having a conversation in the classroom. These findings support Kemp and Dayton's [16] statement regarding the function of learning media, the use of appropriate learning media can attract students' attention and maintain their focus during the learning process.

4. CONCLUSION

This study aims to reveal the impact of using Quizlet as a vocabulary acquisition learning media. Based on the analysis, there are three conclusions. First, using Quizlet as a vocabulary learning media can develop the students' acquisition of productive vocabulary. Defining the

productive vocabulary can be seen from the students' ability to use them in writing. Second, the students' acquisition of receptive vocabulary shows a greater increase compared to their acquisition of productive vocabulary. These findings confirm Webb's [4] statement that the acquisition of receptive vocabulary generally has a higher increase than the acquisition of productive vocabulary. Third, the students' responses to the use of Quizlet learning media are positive, in terms of its benefits and the ease of using the application. These findings are in line with some experts' ideas about the benefits of technology in learning vocabulary, 1) the integration of technology into vocabulary learning can increase students' understanding of vocabulary, 2) the use of technology can create an attractive learning environment for students, and 3) the use of technology can increase students' participation in the classroom [15] [11] [12].

Based on the research implementation and results, this study provides information on how to utilize Quizlet effectively as a learning media for vocabulary learning. First, teachers must prepare themselves with sufficient knowledge about the Quizlet application. Quizlet gives teachers the flexibility to organize a set of activities and adjust them to the students' needs. To take an advantage of this application, teachers must be able to prepare the activity sets using the Quizlet feature to make it accessible for the students. Second, teachers must pay attention to supporting facilities and infrastructure such as computers and internet connection to help students access this application. People acknowledge that technology-based language learning is not easy to implement. Constraints such as the unavailability of computers or internet connections are often a problem in its implementation. Therefore, teachers must pay attention to the preparation of the supporting facilities. Third, teachers also need to pay attention to the suitability of the learning tools used to access Quizlet. Although this application gives users the freedom to access Quizlet via a computer or mobile device, not all features contained in Quizlet can be accessed via a mobile device. Therefore, teachers need to carefully consider the most appropriate learning tools to achieve the objectives of implementing Quizlet.

If we look at the scope and findings of this research, several features have the potential to be explored further in future research. In future research, we can further explore the implementation of Quizlet as a learning media. The bigger number of students and longer learning time can also provide more accurate information about the benefits of using Quizlet as a medium in learning vocabulary.

AUTHORS' CONTRIBUTIONS

All authors contributed to the study conception and design. Material preparation and data collection were performed by Rofika Tiara Avisteva and analysis was performed by both authors. The first draft of the manuscript was written by Rofika Tiara Avisteva and Sisilia Setiawati Halimi provided feedback for the improvement of previous versions of the manuscript. All authors read and approved the final manuscript.

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