The Effectiveness of Quizlet Application towards Students' Motivation in Learning Vocabulary

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Abstract

Increasing motivation is necessary for students in learning English vocabulary. The higher motivation the students gain, the bigger success they achieve in mastering vocabulary. However, most students in senior high schools have less motivation in learning vocabulary, especially in memorizing them. Thus, the teachers need to discover appropriate media for increasing their motivation. Some applications can be used through the smartphone as the need for vocabulary learning. The purpose of this study is to investigate the effectiveness of using Quizlet Application as the media for increasing the students' motivation in learning vocabulary. Nonequivalent control group design was used in this research. The participants were 65 students who were divided into the experimental and the control groups. The students' motivation was observed during the process of vocabulary learning by using the observation checklist. In processing the data, the Wilcoxon test was used. The results show the use of Quizlet Application is effective to increase the students' motivation in learning vocabulary. Students felt more enthusiastic, did not get bored easily, and thus showed high interest when learning vocabulary via the app. They also did the tasks provided in that application independently.

Keywords: Quizlet Application, motivation, and learning vocabulary.

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1.   INTRODUCTION

Vocabulary should be taught directly in the classroom activity. It is as important as other skills such as listening, speaking, reading, and writing. Alqahtani (2015, p. 22) said that "vocabulary knowledge is often viewed as a critical tool for a second language learner because limited vocabulary in a second language learner impedes successful communication". By mastering vocabulary, they can deliver messages to others without any miscommunication. Furthermore, students' proficiency in the English language is also measured by how many words they have memorized. Thus, a direct study of vocabulary should be conducted in the process of language learning (Nation, 2001).

Students have to master English vocabulary first before they produce it through speaking or writing. Then, teachers have an important role to introduce them to a large amount of unknown vocabulary. However, the new vocabulary is successfully introduced if they are not interested to learn them. Mastering vocabulary becomes a problem in which motivated students will try to find a solution for it while unmotivated students do not even want to learn vocabulary (Grogan et al., 2018). Moreover, motivation is considered as one of the aspects which determines students' achievement in learning vocabulary. Due to this fact, teachers must provide media that could motivate students and make them more interested in learning English vocabulary.

Based on the learning principles which are appropriate with the 2013 Curriculum, Information and Communication Technology (ICT) is used to make the learning activity more effective and efficient (Mulyasa, 2018). Moreover, teachers who design lesson plans should know the benefits of using ICT and integrate it into English teaching and learning activity (Raman & Mohammed, 2013). On the other hand, the smartphone is considered as one of the ICT tools that could increase students' motivation in learning English vocabulary. The smartphone is considered convenient and interesting to be used for studying vocabulary (Lu, 2008). Moreover, there are mobile applications that can be implemented as the need for vocabulary learning, one of which is Quizlet Application.

Quizlet Application contains the flashcard that could motivate the students in learning vocabulary (Ashcroft & Imrie, 2014). However, only a few studies have observed students' motivation after using Quizlet Application. This study is set out to investigate whether the use of Quizlet Application is effective in increasing students' motivation in learning vocabulary. In doing that, the research question is formulated as follows:
- Is the use of Quizlet Application effective in increasing students' motivation in learning vocabulary than not using it?

Hypotheses are also formulated in relation to the research question. The hypotheses are:
- Alternative hypotheses (H_a): there is a statistically significant difference in students' motivation before and after using Quizlet Application on their motivation in learning vocabulary.
- Null hypotheses (H_o): there is no significant difference in students' motivation before and after using Quizlet Application in learning vocabulary.

2.   LITERATURE REVIEW

2.1   Vocabulary

There are many different definitions of vocabulary. According to Kusrini (2012), several words applied and comprehended by learners are considered vocabulary. Moreover, vocabulary is described as a language word that includes single items, phrases, clauses, which have a definition (Clouston, 2013). On the other hand, vocabulary is defined as a word list compiled from certain alphabets with their meaning (Alizadeth, 2016).

Therefore, vocabulary can be defined as many words used to communicate with other people. Many words have also special connotations which provide different meanings. Furthermore, vocabulary is one of the most important components in the English language, which helps the learners to comprehend the text. It is argued that "vocabulary knowledge is also required for successful reading comprehension" (Sidek & Rahim, 2015, p. 51).

On the other hand, knowing the techniques of teaching vocabulary is important. Some techniques of teaching vocabulary (Elyas & Alfaki, 2014) are as follows:
1. Translation – it is a simple and quick way used by teachers to reach the goal of English language learning. When students want to change their native language into the target language, sometimes translating some words is difficult because they have no structural equivalent in the two languages.
2. Giving examples – in this technique, the sentences should have clear meanings so that they can be used to teach the meaning of the new vocabulary.
3. Realia – in this technique, teachers can teach new items of vocabulary through the real object in the classroom activity. This technique is also considered able to give students more advantages to understand the words. However, this technique has a limitation, in which some objects are not able to be brought into the class. For instance, they cannot bring the object of a plane into the class. They may bring small objects such as a pen, notebook, clothes, etc.
4. Pictures and mime – teachers can use both pictures and mimes to teach the meaning of new words. The object of pictures could be photos, wall pictures, flashcards, etc. When teachers want to teach vocabulary items such as home, room, fruit, or markets to students, it is very much recommended they use pictures because they are very hard to explain. Moreover, the use of mime is also regarded as a useful medium to explain action verbs such as swimming, sitting, walking, etc. These concepts are not difficult to explain. They can pretend to do them in front of the class.

Besides, there are several vocabulary mastery standards for each level, they are as follows (Department of National Education, 2004):
- Mastering 500 to 1500 words including the beginner level reader category at the level of elementary school education through junior high school.
- Mastering 1500 to 3000 words including the secondary level reader category at the level of secondary school education (high school).
- Mastering more than 3000 words including the category of advanced readers at the level of higher education.

According to these standards, the students at senior high school level should master vocabulary more than 1500 words before entering the higher level of education. This is because the 2000-word level is considered the limitation of high-frequency

words (Nation, 2001). It is further said that these words would help students to use language in both spoken and written. Therefore, the teacher should teach them a lot of vocabulary in the classroom activity.

2.2   Motivation

Motivation is considered as one of the most words or terms employed in psychology. In general, it is stated that "to psychologists, a motivation is a need or desire that energizes behavior and directs it toward a goal" (Myers, 2010, p. 443). In line with this theory, motivation is defined as the decision made by people about purposes and the effort done to achieve those goals (Brown, 2001). Moreover, it is also considered as the reasons why people do something intentionally (Mclean, 2009). On the other hand, based on the behavioral theory, instincts or emotions are also related to actions in which motivation can arise (Mclean, 2003).

Besides, according to Wentzel and Brophy (2009, p. 3), "in the classroom context, the concept of student motivation is used to explain the degree to which students invest attention and effort in various pursuits, which may or may not be the ones desired by the teachers". It can be concluded that, in terminology, motivation is considered as a desire or intention that could trigger someone to do something. Therefore, motivation becomes one of the most important aspects that will influence students' performance or achievement in learning English.

Motivation is divided into two types, i.e. intrinsic motivation and extrinsic motivation. In general, intrinsic motivation (IM) could be defined as an engagement in behavior that is inherently satisfying or enjoyable (Legault, 2016). For example, a child plays with friends or alone outdoors for no other reason than because it is fun and innately satisfying. Meanwhile, extrinsic motivation (EM) is a performance influenced by an achievement separated from the action itself (Legault, 2016). For instance, a child helps her mother at home to receive some candies. It is supported by Brown (2001), who stated that extrinsic motivation is triggered by positive feedback such as money, prizes, grade, etc. Moreover, he asserted that avoiding punishment is included in extrinsic motivation.

In the educational aspect, IM is considered as the motivation to get involved or participate in the learning activity based on its desire (Schunk et al., 2014). Students who have intrinsic motivation will feel enjoyable when working on tasks. On the other hand, EM is a motivation to participate in learning activity as a means to achieve a goal (Schunk et al., 2014). Students who have extrinsic motivation believe that they will gain the outcomes desired such as a reward, teacher praise, or avoidance punishment if they participate in the classroom activity. Through the explanation before, it can be understood that students' motivation in learning activity may appear because it is triggered by their internal or external factors.

Besides, there are several characteristics of motivated students such as diligently facing in tasks, resilient to face difficulties, showing interest in various problems, preferring to work independently, not getting bored easily on routine tasks, able to defend his opinion, not easy to let go of things that are believed, and feeling the enjoyment of solving problems (Sardiman, 2010). It is further said that students who have these characteristics can be regarded as having high motivation. Therefore, teachers should recognize and understand those characteristics so that they can interact well with their students and motivate them while teaching English materials.

2.3   Quizlet Application

Quizlet Application is known as the digital flashcard which can be used through both computers and smartphone (Wright, 2016). In the Merriam-Webster dictionary, flashcard is defined as a card that probably contains a picture, number, and words used by teachers in the class a learning media. Moreover, Nation (2001) states that through flashcards, learners can easily get the connections between form and meaning of the words. Quizlet Application is considered as the digital flashcard that provides the picture cards used through electronic devices such as smartphone, online or offline, to help learners memorize the form and meaning of the words together.

Table 1. The description of learning modes in Quizlet Apps.

Learning mode	Description	Website	Mobile Apps
Learn	Words and their meanings can be learned through multiple choice and writing questions. Questions are sorted from easy to difficult.	Available	Available
Flashcard	Digital flashcards demonstrate terms in which the students can flip them by using mouse clicks or touching the screens to show definitions or pictures that explain the term.	Available	Available
Write	Students are asked to write the definitions for the terms or the pictures exposed. They can retake this module if they make an error.	Available	Available
Spell	Students are asked to type what they hear from the audio prompt. If they misspell the word, they will hear it dictated letter by letter while the correct answer is being typed in the screen.	Available	Non-Available
Test	A test consists of four types of questions: written, multiple choices, matching, and True or False. The questions are based on the study set. The scores gained and the correct answers for the mistaken ones can be checked.	Available	Available
Match	A game in which learners are asked to match terms to their definitions (or the corresponding pictures) as quickly as possible. After finishing it, the app shows them their scores and ranks among other learners.	Available	Available
Gravity	In this game, students are asked to type the term which is corresponded with its definition before the asteroid falls and crashes onto the planet.	Available	Non-Available
Live	There are 4 or more students required to play this module in which they are connected to http://Quizlet.com/live and they are asked to enter the unique session code. After that, multiple-choice questions based on the study sets should be answered by the students in each group through their computers. They have to collaborate to get the correct answers because the answers are randomly scattered among the devices. The winner is the first group that finishes the game.	Available	Non-Available

In this application, as shown in Table 1, the users design their learning modules or study sets. They can select any words for certain reasons and put them into the modules (Chien, 2013). Moreover, learning modes, such as flashcards, games

(matching game and gravity game), quizzes, and collaborative activities are provided in each module created. In the flashcard mode, the users can see the words, along with their meaning and their picture, which is one of the techniques in teaching vocabulary. Furthermore, it is possible for them to hear the pronunciation of words in that learning mode. Therefore, it is believed that through the Quizlet Application, students will be helped to memorize and master any learning materials, especially new vocabulary items.

2.4   Using Quizlet Application for the Students

It has been discussed that motivation is one of the important indicators which decides the students' vocabulary achievement. Using Quizlet Application through the smartphone is good media to motivate students in learning vocabulary. According to Rezaei et al. (2014), mobile applications are appropriate media to make students enjoy learning the words. It is indicated that students are motivated to learn vocabulary when applying it. Moreover, Quizlet has been regarded as a useful tool so that students want to study vocabulary through that application (Dizon, 2016). It means that they have a positive attitude toward the Quizlet Application, and their willingness to apply it in the future shows how it influences their motivation in language learning.

The learning modes provided in Quizlet are also believed to make students enjoy and feel interested in learning vocabulary. For example, in the matching game, students can see their score and rank and are able to try again to get a better score. Then, students do not get bored easily when learning vocabulary. On the other hand, they can enjoy learning the English language when using technology, in which the Quizlet Application can be used. This is because students can be more engaged in the process of language learning (Golonka et al., 2014). Therefore, the students will be more focused on the target words learned when using the Quizlet Application.

By using the Quizlet Application via a smartphone, students may learn the vocabulary independently. This is because the design of Quizlet Application is appropriate for autonomous learners (Sanosi, 2018). Moreover, the Quizlet Application is considered enjoyable by students in learning vocabulary (Lander, 2016). On the other hand, according to Cinar and Ari (2019), the level of education achieved by students' fathers would give an impact on vocabulary learning. He further states that the Quizlet Application can be used successfully if the students' fathers have higher education. However, the use of Quizlet would be considered costly high for students because internet access is required to apply it (Dizon, 2016). Therefore, it is suggested to provide devices such as a modem, Wi-Fi portable, etc., in which students can freely access the Internet to use that application.

A recent study by Christanti (2018) has shown that the Quizlet is effective to increase the students' motivation in learning vocabulary. Besides, another study found that the Quizlet Application could increase the students' positive attitude toward the English course (Cinar & Ari, 2019). On the other hand, according to the study conducted by Hikmah (2019), most students give positive responses on the Quizlet Application and regard it as an interesting media. Accordingly, these successful findings prove that the Quizlet Application is appropriate to be used to increase students' motivation in learning vocabulary.

3.   METHODS

This study was a quasi-experimental method. The participants were divided into two groups: experimental group and control group. In the experimental group, the participants should study the vocabulary materials through the Quizlet Application via a smartphone, while the other group learned them without using it (i.e. paper-based vocabulary). Moreover, the design of the research used in this study was the non-equivalent control group design. In this kind of design, the participant in the experimental group and control were not chosen randomly (Sugiyono, 2015).

The participants in this research were the tenth-grade students in SMAN 1 Sambungmacan, located in Sragen, Central Java. The number of participants was 65 students. Some participants were included in the experimental group and others were included in the control group. Both groups would be observed during the classroom activity, and the researcher used the observation checklist to record data.

The observation checklist functioned as the tool of the instrument. In this kind of instrument, the researcher made some items based on the indicators of motivated students. The indicators are diligently facing the task, resilient in facing difficulties, showing interest in learning vocabulary, preferring to work independently, not getting bored with learning routines, and happy to answer the questions. The value of each item would be determined by the scores arranged in the form of a rating scale. Table 2 and Table 3 present the observation guidelines and the observation checklist sheet.

Table 2. The observation guidelines of motivated student in learning vocabulary.

Aspect 1. Students focus on answering the questions given.	
Score 4	Students answer 76-100% of questions.
Score 3	Students answer 51-75% of the questions.
Score 2	Students answer 26-51% of the questions.
Score 1	Students answer 0-25% of questions.
Aspect 2. Students ask or discuss when encountering difficulties.	
Score 4	Students ask or discuss with friends or teachers to get answers
Score 3	Students just ask a friend or teacher.
Score 2	Students just keep quiet and do not pose questions or discuss.
Score 1	Students do not try to get an answer at all.
Aspect 3. Students prepare the learning tools or stationery.	
Score 4	Students immediately prepare the learning tools or stationery without being instructed by the teacher.
Score 3	Students prepare the learning tools or stationery without being instructed by the teacher.
Score 2	Students prepare the learning tools or stationery after being instructed by the teacher.
Score 1	Students do not prepare the learning tools or stationery even if instructed by the teacher.
Aspect 4. Students work on assignments independently.	
Score 4	Students work on the assignments independently.
Score 3	Students work on the assignments independently then match them with friends.
Score 2	Students work on the assignments then cheat on friends.
Score 1	Students do not work on the assignments but cheat on friends.
Aspect 5. Students are enthusiastic about learning new vocabulary.	
Score 4	Students are excited and immediately position themselves.
Score 3	Students are excited but slowly position themselves.
Score 2	Students are enthusiastic but do not position themselves.
Score 1	Students are not enthusiastic and do not position themselves.
Score 4	Students immediately work on tasks provided in the Quizlet App.
Score 3	Students are somewhat late to begin working on a task.
Score 2	Students procrastinate on tasks.
Score 1	Students do not work the tasks at all.

Table 3. The observation checklist sheet.

No.	Indicators	Observed aspects	Score			
			1	2	3	4
1.	Diligently facing the task	Students focus on answering questions given.				
2.	Resilient in facing difficulties	Students ask or discuss when encountering difficulties.				
3.	Show interest in learning vocabulary	Students prepare the learning tools or stationery.				
4.	Prefer to work independently	Students work on assignments independently				
5.	Do not get bored with learning routines	Students are enthusiastic about learning new vocabulary.				
6.	Happy to answer the questions	Students work on assignments given.				

In this study, the researchers participated in the classroom activity and one of them acted as the teacher as the need for the observation. The researcher would observe the students' motivations in learning vocabulary based on the indicators provided in the observation sheets. The observation was conducted two times: before the treatment and after the treatment. The data that was obtained from the item provided in the observation sheet would show the scores of items accumulated. Then, the total scores of items were calculated into percentages by using the following formula (Sugiyono, 2015, p. 137):

$$\text{Indicator score} = \frac{\text{Number of items scored} \times 100\%}{\text{Maximum score}}$$

The researchers also analyzed the data inferentially. It was aimed to prove the hypotheses formulated before. The SPSS 20 was used for that purpose.

4. RESULTS

In this section, the data obtained are provided in response to the research questions. Some tables provide the results followed by the interpretation of data. Table 4 is the results of students' motivation presented in percentages.

Table 4. The results of students' motivation shown in percentages.

Observation checklist	Experimental group	Control group
Pre-observation checklist	64%	61%
Post-observation checklist	89%	68%

Table 4 shows the percentages of students' motivation calculated from the total score in both groups. In the results of the pre-observation checklist, the percentage obtained by the experimental group was 64%, while the control group was 61%. Hence, the difference in percentages between the two groups was only 3%. This means that the levels of motivation of both groups were the same before the treatment. Moreover, after the treatment was given for twelve times, the students' motivation in both groups increased. The experimental group obtained 89%, and the control group gained 68% in the post-observation checklist. There was a big difference in motivation

between those two groups, in which their difference in percentage is 21%. On the other hand, it also meant that the students who used the Quizlet Application had higher motivation in learning vocabulary than those who did not use it.

Besides, the experimental group has different results in both observation checklists. In the pre-observation checklist, the percentage of students' motivation is 64%. After the treatment was given, the students' motivation increased quite high, reaching 89%. Then, the difference in percentage between the pre-observation and post-observation is 25%. On the other hand, in the control group, the results of students' motivation in the two observation checklists were different. The percentage of students' motivation before they were controlled is 61%. After that, it increased by 68% in the post-observation checklist. Then, the difference in percentage between them is 7%. In conclusion, the difference between the two observations in the experimental group is higher than that in the control group.

In the observation checklist, there were some indicators observed. These indicators were applied to find the students' motivation. In this study, the results of each indicator are presented in Table 5.

Table 5. The results of aspects of motivation observed on students of experimental group.

| No. | Indicators | Percentage (%) | |
		Pre-Observation Checklist	Post-Observation Checklist
1.	Diligently facing the task	78%	100%
2.	Resilient Faces Difficulties	46%	66%
3.	Show interest in learning vocabulary	62%	91%
4.	Prefer to work independently	59%	97%
5.	Not bored with learning routines	69%	94%
6.	Happy to answer the questions	66%	84%

From Table 5, it can be seen that the percentages of indicators increased in the post-observation checklists. The differences of percentages between two observation checklists in each indicator are 22% (first indicator), 20% (second indicator), 29% (third indicator), 38% (fourth indicator), 25% (fifth indicator), and 18% (fifth indicator). The indicator that has the highest percentage increase is the fourth indicator. Meanwhile, the lowest increase is found in the fifth indicator. Furthermore, the indicator with the highest percentage is the first indicator while the lowest indicator is the second one. In conclusion, the results showed that the Quizlet Application has increased the indicators of students' motivation in learning vocabulary.

In this research, the Wilcoxon test was included as the non-parametric test applied to find out the result of comparing means between the pre-observation checklist and the post-observation checklist. This was because the data were not normally distributed and also not homogenous. The test result for the experimental group is shown in Table 6.

Table 6. The results of the Wilcoxon Test for experimental group.

Mean rank	Sum of ranks	Z	Sig.
3.50	21.00	-2.201	.028

It is apparent from Table 6 that the value of sig (p) is 0.28. It meant that p= 0.028 is lower than 0.050 or p<0.05. Accordingly, we can infer that there is a statistically

significant difference in students' motivation before and after the use of the Quizlet Application in learning vocabulary, or that H_a (alternative hypothesis) is accepted and H_o (null hypothesis) is rejected.

5.   DISCUSSION

The results of this study reveal that the use of the Quizlet Application is effective to increase the students' motivation compared with the motivation of students who do not use that application. The findings of the current study are consistent with Christanti (2018) who suggested that the Quizlet Application can be used to increase students' motivation. On the other hand, the total score or percentage of calculated items obtained by the user of that application is much higher than the non-user. It means that the students who use the Quizlet Application have a higher motivation than those who do not use it. These results are in agreement with those obtained by Lees and Mcnee (2015) who found that most students are more interested to use the digital flashcard than using paper-based for learning vocabulary.

Several factors made this experiment successful. First, the students have smartphones, and they were allowed to bring them to the school for the purpose of learning even before this study was conducted. The second factor was the ease of getting internet access. Here, the researchers provided Mini-Wi-Fi for the students who did not have an internet quota. Third, the Quizlet Application was not difficult to be used. At last, there were no problems that occurred in the application at the time of use.

Most students felt more enthusiastic and did not get bored easily with learning vocabulary when using this application. This is supported by the research conducted by Anjaniputra and Salsabila (2018) who found that the students using Quizlet Applications seemed excited and that the application even reduced their boredom in learning vocabulary. Through this game, they competed with each other to achieve the best results. They tried to match the words with their meanings as fast as possible. Moreover, most of them played the game more than once. This was because they wanted to finish that game quickly so that they could obtain better scores. According to the study conducted by Leis et al. (2015), the students who were encouraged to use the smartphone have a high tendency to learn English outside the classroom. It was similar to what happened in this research, in which some students played the matching game through their smartphone at home.

In doing the assignments provided in the Quizlet Application, most students prefer to work independently without cheating on their friends. This is supported by Korlu and Mede (2018) who found that the Quizlet Application positively influences the students' performance and makes them more autonomous in learning vocabulary. However, it is contrary to the previous study which had suggested that the use of the Quizlet Application does not make students autonomously learn vocabulary (Kalecky, 2016).

In this study, the students seemed highly interested to learn vocabulary by using the Quizlet Application. It was observed from their action to prepare their learning tools. The students immediately provided their smartphone and began opening the Quizlet Application without being instructed by the teacher. This statement is in

agreement with other research that found that the students were interested to use Quizlet Application in learning vocabulary (Hikmah, 2019).

Hence, there were some problems faced by the researchers in this study. First, a few students did not seem to focus on learning vocabulary through their smartphone and were even doing other activities. It was found that some of them were opening other applications such as Instagram and Facebook, etc., while other students were using the Quizlet Application. The researchers tried to control this situation by walking around the class and took their attention to focus back on the app. When they were caught using another application, they would immediately close it and continue to study vocabulary via the Quizlet Application. Besides, there were two students, not more, who forgot to bring their smartphones to the classroom in the first and second meetings. Fortunately, the researcher who acted as the teacher had two smartphones and lent them to the students.

6. CONCLUSION

Based on the results, it can be concluded that the use of Quizlet Application is effective to increase the motivation of students in learning vocabulary. It can be seen by comparing the results between the two observation checklists. Moreover, the students who used the Quizlet Application had higher motivation than those who did not use it. On the other hand, most students felt more enthusiastic, did not get bored, had high interest when learning vocabulary via the Quizlet Application. They also did the tasks provided in that application independently. Therefore, it is recommended that English teachers use the Quizlet Applications in teaching vocabulary that is incorporated with other materials.

A limitation of this study is that the researcher did not use another instrument such as an interview or questionnaire to strengthen the results of the study. Moreover, this study was also limited by the absence of some students in the classroom so that they were removed from being the participants of research. On the other hand, it is highly suggested or recommended that other researchers conducting similar research to do in-depth studies on the use of the Quizlet Application that attempts to investigate its effect on students' motivation by using more than one instrument. They may also use other dependent variables that can be influenced by that application.

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