IMPROVING STUDENTS' VOCABULARY RETENTION THROUGH USING QUIZLET: AN ACTION RESEARCH AT HIGH SCHOOL

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ARTICLE INFO		ABSTRACT
Received:	**09/3/2022**	This action research aimed to investigate the effects of using Quizlet on improving students' vocabulary retention. Thirty students of grade 11A1 at Thai Nguyen high school in Thai Nguyen province were chosen. The data was collected by vocabulary tests and questionnaire to answer the research question. The findings showed that Quizlet application had a positive effect on the students' vocabulary retention. Students used Quizlet application in learning their vocabulary at class or at home and they were interested in applying this application in learning English vocabulary. Data from the vocabulary tests scores and questionnaire demonstrated that Quizlet application helped the 11th-grade students improve their vocabulary retention. Based on the results, the researcher gave the effect of using Quizlet application in students' vocabulary retention and made some suggestions for teachers and students to apply and use Quizlet application effectively in teaching and learning English lessons in order to improve the students' word retention.
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CẢI THIỆN SỰ GHI NHỚ TỪ VỰNG CỦA HỌC SINH THÔNG QUA SỬ DỤNG QUIZLET: MỘT NGHIÊN CỨU HÀNH ĐỘNG TẠI TRƯỜNG TRUNG HỌC PHỔ THÔNG

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THÔNG TIN BÀI BÁO		TÓM TẮT
Ngày nhận bài:	**09/3/2022**	Nghiên cứu này nhằm mục đích điều tra ảnh hưởng của việc sử dụng Quizlet đối với việc cải thiện khả năng ghi nhớ vốn từ vựng của học sinh. Ba mươi học sinh lớp 11A1 trường Trung học phổ thông Thái Nguyên, tỉnh Thái Nguyên đã được chọn làm đối tượng nghiên cứu. Dữ liệu được thu thập bằng các bài kiểm tra từ vựng. Kết quả cho thấy ứng dụng Quizlet đã có tác động tích cực đến việc ghi nhớ vốn từ vựng của học sinh. Dữ liệu từ điểm các bài kiểm tra từ vựng đã chứng minh rằng ứng dụng Quizlet đã giúp học sinh lớp 11 cải thiện khả năng ghi nhớ vốn từ vựng của mình. Dựa trên kết quả đạt được, nhà nghiên cứu đã đưa ra một số gợi ý để giáo viên và học sinh áp dụng và sử dụng ứng dụng Quizlet một cách hiệu quả trong dạy và học từ vựng để nâng cao khả năng ghi nhớ từ vựng tiếng Anh của học sinh.
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1. Introduction

Vocabulary is the basis for communication and important for language proficiency processes [1]. It is as important as other skills such as listening, speaking, reading, and writing. Alqahtani [2] 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 the number of words they have memorized. When students have vocabulary limitations, they find difficulties to improve their English skills. Therefore, vocabulary should be taught directly in the classroom activity.

Teachers who design lesson plans should know the benefits of using Information Computer Technology (ICT) and integrate it into English teaching and learning activity [3]. 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 [4]. Moreover, there are mobile applications that can be implemented as the need for vocabulary learning, one of which is Quizlet application.

According to Vargas [5], teachers can increase the use of technology in vocabulary learning by using Quizlet application. This means Quizlet application is totally good to be applied in the class. Quizlet application is a fun activity to help students learn a concept or study vocabulary [6], [7]. Quizlet can be used on smartphones and also on computers.

The models of using Quizlet application are large in number; however, the researcher chose The Substitution Augmentation Modification Redefinition (SAMR) Model in teaching vocabulary with Quizlet application. The Substitution Augmentation Modification Redefinition (SAMR) Model, developed by R. R. Puentedura [8], is a useful way of assessing the integration of technology and its impact on teaching and learning. This model consists of four stages that can progressively impact on the learning activities in the classroom.

In the teaching context at Thai Nguyen high school, there were some existed problems of learning vocabulary that the researcher came across. The first problem was that learning vocabulary intensively was not provided in English curriculum for high school. Thus, if the students did not learn or practice new words at home, they would easily forget the meaning of new words which they had learnt in class. The second reason was that the teachers did not have enough time for providing extended word family of new words such as synonyms or antonyms to help the students have more new words. Therefore, the students found it difficult to remember the meaning of new words and their related words.

Based on the currently existing issues, the researcher would like to assist the students in gaining a large number of words and then assist them to retain the words longer. Therefore, the researcher decided to conduct the study "Improving students' vocabulary retention through using Quizlet Application: An action research at Thai Nguyen high school".

According to [10], word retention is defined as the ability to provide the meaning of a new word after a given period of time. There are two types of word retention: short-term retention and long-term retention.

The study aimed to investigate the effects of using Quizlet Application on 11th grade students' vocabulary retention at Thai Nguyen High School. Therefore, the specific research question addressed in this study was as "*How does Quizlet Application improve the students' vocabulary retention?*".

2. Methods

2.1. Action research design

The researcher adopted the action research approach to examine the effect of using Quizlet application for teaching and learning vocabulary at Thai Nguyen high school in the second

semester of the school year 2019-2020. In this study, the researcher adopted the action research model by [9] which has four steps: (1) Planning - identifying a problem and creating a plan of action, (2) Action - putting the plan into the action (3) Observation - observing the results of the plan, (4) Reflection - reflecting and planning for further action. Because of the limitation of the time, only one cycle of this model was applied.

2.2. Subjects of the study

There were 5 classes of grade 11 at Thai Nguyen high school, and the researcher was in charge of teaching English to 2 classes (11A1, 11A2). Because of the limitation of time to conduct the research, only 30 students including 6 males and 24 females in class 11A1 were selected as the study participants. These 16-year-old students had been studying English as a compulsory school subject for at least seven years and their English levels were between the elementary and pre-intermediate levels. By the time of the study, they had had four years of learning English at secondary school. They were at the beginning of the second term. The researcher chose class 11A1 as the subjects of the study because the students in this class had more experience in learning, and all of the students had mobile phones connected with Wi-Fi or 4G, so they could use Quizlet application in the classroom.

2.3. Data collection instrument

This study took the immediate performance of 24 vocabulary tests by foreign language (FL) learners after the instruction as the short-term word retention; and the time span after finishing each unit 8 tests, one test after one week and one test every four weeks after the intervention as the long-term word retention. In this study, Test mode of Quizlet was used to create different tests to check the students' short term memery and word retention.

Test making can be a time-consuming activity for teachers but the Test mode in Quizlet had the facility to randomly generate an achievement test using a previously made flashcard set. The test included different question types like written answers, multiple choice, matching, and true/false questions. After generating and taking a test, the students immediately received their score as a percentage. In addition, the items answered incorrectly were highlighted in red and the correct responses were displayed. The test duration was from 5 to 15 minutes. These tests were described as follows.

2.3.1. Vocabulary tests to measure the students' short term memory

The vocabulary tests were administered right after the students finished learning the vocabulary of each lesson to check the students' short term memory. There were twenty-four vocabulary tests in total.

The researcher taught five lessons in each unit in the English textbook but only used 3 lessons (reading, speaking and writing) to teach vocabulary and make a test at the end of these lessons. The researcher used and applied the Quizlet test format. Each of the tests lasted five minutes and had three parts (matching, gap-filling, and choosing the correct picture with the correct word). Additionally, the students were asked to use Quizlet in its mobile version and learn the assigned units outside the school through other learning activities of Quizlet (Writing, Testing, Matching, and Spelling).

2.3.2. Vocabulary tests to measure the students' word retention

A vocabulary test that was administered after each unit had been finished. There were eight units, so the students took the eight vocabulary tests. These tests had the same format (macthing, matching, gap-filling, and choosing the correct picture with the correct word) as the tests after the lessons. The students had 10 minutes to complete these tests.

In order to check the students' word retention in longer term, the researcher used two vocabulary tests after the intervention. One week after the intervention, the researchers used the Test mode of Quizlet application to generate one vocabulary test to check the students' ability in

retaining all the words that they had studied in the eight units. The test duration was 15 minutes. Four weeks later, the researcher used Test mode to generate another vocabulary test to check the students' ability in retaining all the words that they study in the eight units in order to examine the students' long term word retention through their mobile phones. The contents and the format of these had the same level with these tests which students took in each lesson and each unit.

2.4. Data collection procedure

The book "Tieng Anh 11" by Ministry of Education and Training was used as the teaching material during the action research. In the syllabus, there were three periods of English per week and each period lasted 45 minutes. Eight English units, from unit 8 to unit 15 were selected from the English textbook, and in vocabulary in each unit was taught through three lessons (Reading, Writing and Listening).

The procedure of the intervention was presented as follows.

Planning

The researcher planned and prepared how materials could be used, how to use Quizlet application to teach vocabulary lessons and enhance students' word retention, and how long this intervention would take. Besides, the lesson plan applying Quizlet application was designed for class. Then the envisaged process was explained to the headmaster during the research to gain his understanding and cooperation. Finally, the students were guided to do the tests in Test mode of Quizlet or Learning modes on Quizlet application to learn and remember the vocabulary.

Action

The intervention lasted 8 weeks from June 15th to August 15th, 2021. From unit 8 to unit 15, the students learnt and reviewed vocabulary through Quizlet application in the classroom. Each lesson lasted 10 minutes, and then the students could practice more at home by using Quizlet application to review the new word which they had learnt at class. They used Learning mode to learn and review all of the new words in each lesson.

Following the SAMR model, Quizlet was applied in three stages in the classroom: substitution, augmentation, and modification.

In the first phrase, Substitution, students learnt new words through flashcards before applying the next step because in this phase, they needed to learn new words by using flashcards to make their mind of these words. Therefore, the first phrase was used in all of the lessons. The teacher asked students to open their mobile phone connected with Wifi at school, and then asked them to take notes the meaning of new words. When the student opened the class "English Grade 11 2010-2021" on Quizlet application, they saw all the units and each unit had vocabulary to learn and remember. The student observed teaching procedure of the teacher to understand the meaning of each new word.

For the Augmentation phase, the researcher applied some activities in some lessons for teaching because the students learnt new words in the first phrase in each lesson. In this stage, the students studied the new words in more details with some activities like studying, spelling, writing, or flashcards. Through types of learning modes or some of learning activities on Quizlet application, student learnt new words.

In the last phrase, Modification, the researcher applied two activities in all of the lessons. The researcher applied the first activity as modifying flashcards imported from other sources to check the students' vocabulary; the students could see other flashcards to remember again the meaning of new word. However, using Test mode was applied in all of the lessons because after the students learned and practiced through some activities in the first, the researcher wanted to use the test mode again to check their understanding of each lesson and check the students' vocabulary retention for each lesson.

Observation

In this study, the vocabulary tests and questionnaire were used as the data collection instruments. So the researchers observe during students did the vocabulary tests' results for each

units, each lesson and after one week, four weeks to find the score and the effect on using Quizlet on students' word retention.

Reflection

In this stage, based on the data analysis, the researcher made reflections about the action implementation. The reflection of the actions indicated the success or the failure of the action research. Therefore, the researcher would have recommendations for teachers.

2.5. Data analysis procedure

For the statistical analyses of the results of the tests, the Statistical Package for Social Sciences (SPSS) was used. The response of the students to the questions was rated in percentage and then synthesized and presented in the form of charts and tables in specific percentage.

Besides, the results of the questionnaire were gathered by counting and calculating data. After that, the researcher analyzed the received data and described them in tables and figures for better exemplification.

3. Results and Discussion

3.1. Results

3.1.1. Comparison of the results of the three tests in each unit and the tests after the units

As can be seen from figure 1 that compares the scores which the students got in the three tests in each unit and the test after the units, these vocabulary tests shows that the students' scores of the tests after each unit with higher mean scores (16.7% in Excellent scores and 63.3% in very good scores); the students got excellent scores from 9.0 to 10.0. In contrast, for three tests in each unit, the students who got an excellent scores was 0% (no one got an excellent score), and 60% in very good scores, the students got a good scores from 8.0 to 8.9. Besides, the students' results of three tests in each unit with 20% in Good scores but the students' results of the tests after each unit with 40% in Good scores. It reveals that the use of Quizlet application seemed to be useful because it helped the students learn and remember vocabulary better. Especially, the students' word retention would be improved and they remembered new words longer and longer.

The students' word retention had been improved. This considerable improvement could be attributed to the effectiveness of Quizlet application for improving the students' vocabulary retention applied in the study.
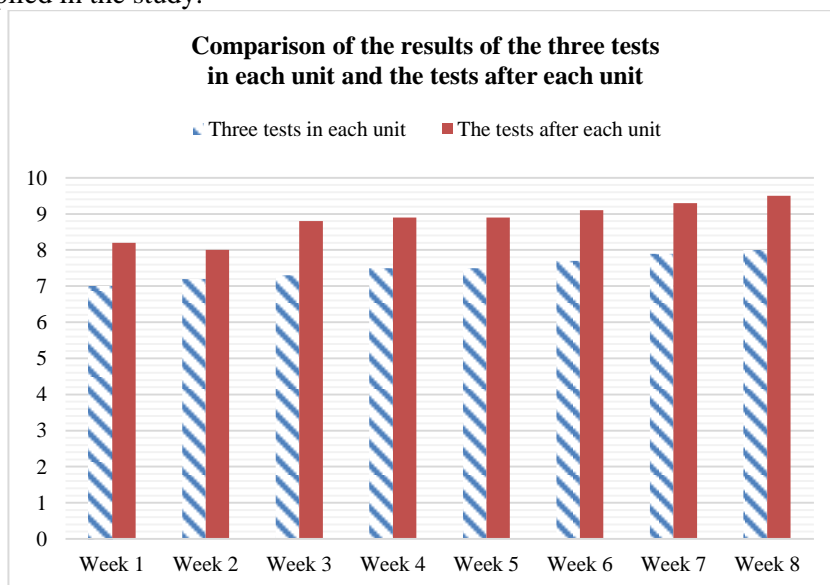

Figure 1. *Comparison of the results of the vocabulary tests scores*

3.1.2. Comparison of the results of the vocabulary test one week and four weeks after the intervention

Figure 2 shows the results of the vocabulary test after one week (the first test) and four weeks after the intervention (the second test). The results of the vocabulary test after one week were compared with the ones after four weeks to evaluate students' word retention in long-term.
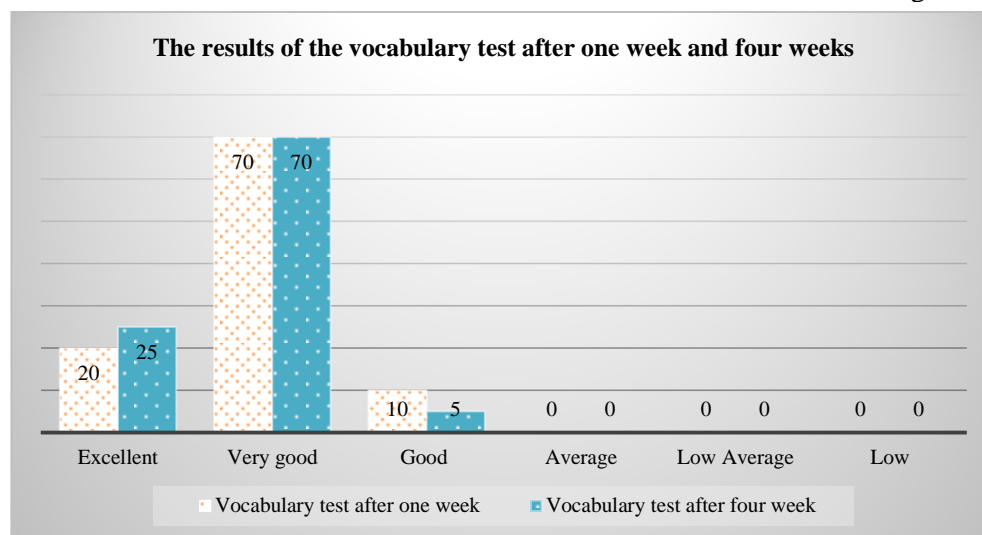

The results of the vocabulary test after one week and four weeks

Figure 2. *Comparison of the results of the vocabulary tests scores*

As can be seen from the figure above, when applying Quizlet application to evaluate the students' word retention, the students' vocabulary retention was not at below average and low levels. While 70 percent of the students got good and very good score, 25 percent had an excellent score in the second vocabulary test in contrast to 20 percent in the first vocabulary test. Moreover, the collected data showed that the number of the students with excellent score increased in the vocabulary test after four weeks. Specially, the number of students who got average, low average and low scores was 0% at these vocabulary tests which mentioned above in total of students.

Compared with the first vocabulary test, there was a rather significant difference in the students' word retention at good score in the second vocabulary test. 10 percent of the students got good scores in the first vocabulary test and 5 percent in the second vocabulary test.

This proved that there was a significant difference between the mean scores of these vocabulary tests. The students' word retention had been improved considerably. This considerable improvement could be attributed to the effectiveness of using Quizlet application for vocabulary learning and word retention applied in the study.

In summary, this study's findings reveal that using Quizlet improved students' word retention. Based on the results of the vocabulary tests, the next section focused on the discussion of the significant findings related to the research question.

3.2. Discussion

Through analyzing the data collected from the tests, it can be seen that using Quizlet application had positive effects on the students' vocabulary retention. It was clearly shown in the collected data from the tests that there was a significant difference in the distribution of points in the tests. This proved that there was a great improvement in the Quizlet application after they had learned English vocabulary and had remembered new words by applying Quizlet application.

There were some reasons for the positive effects of using Quizlet application on the students' vocabulary retention. Firstly, the use of the Quizlet application was effective to increase the students' motivation. The students had smart phones, and they were allowed to bring them to the

school for the purpose of learning even before this study was conducted. They could learn and remembered new words at the end of each lesson more and more easily. They absorbed the lessons faster and more efficiently. Learning new words and memorizing new words was also more convenient than the traditional way of learning new words. Most of the English lessons which applied Quizlet motivated the students to learn a lot because of the diversity of the application.

Secondly, most students felt more enthusiastic and did not get bored with learning vocabulary when using this application. The researcher found that the students using Quizlet application 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 word with their meanings as fast as possible.

According to the results of the study findings by [11] and [12] who considered that using Quizlet application with flashcard software, the students' vocabulary retention improved. The vocabulary learning tools (Quizlet and vocabulary notebook) had an effect on vocabulary learning and retention. Therefore, the finding of the present study had the same results as findings by Sanoni [13].

Moreover, in comparison with the results of the study by [14], the finding of the present study was more meaningful and clearable because the researcher focused on the results of different vocabulary tests to evaluate effect of using Quizlet appication on the students' vocabulary retention.

In summary, by using Quizlet application in vocabulary learning and vocabulary retention, the students were able to demonstrate higher scores, which were related to their statistically significant gain in applying Quizlet application. This claimed that Quizlet application approach could improve the students' vocabulary retention.

4. Conclusion

It was undeniable that using Quizlet application had positive effect on the students' word retention. Data from the score of the vocabulary tests of the participants demonstrated that Quizlet application was beneficial to improve the 11th grade students' word retention. Based on the results, some suggestions were made for teachers to apply the Quizlet application in teaching English vocabulary effectively.

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