A STUDY OF THE INFLUENCE OF VOCABULARY ON READING COMPREHENSION IN LEARNING ENGLISH AT THE HIGH SCHOOL LEVEL

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Abstract

The purpose of this study is to investigate whether using vocabulary exercises is effective or not in Grade Ten students' reading comprehension. The present study was an experimental study. The design adopted in this study was experimental study: the crossover repeated measure design. The study involved (100) participants who were Grade Ten students of English as a foreign language in Basic Education High School, Yathit selected using the simple random sampling technique. To measure their reading comprehension, three main tests that used only unseen passages were administered: pretest, posttest 1 and posttest 2. In the analysis of data, descriptive statistics, independent samples *t* test, analysis of covariance (ANCOVA), and paired samples *t* test were utilized. Independent samples *t* test was employed to determine whether a significant difference exists between the means of two groups. According to the result, analysis of covariance (ANCOVA) was used to ascertain there were differences in the reading achievement between researched students. The results showed that there were differences in the reading achievement between students who received vocabulary exercise and those who did not. Paired samples *t* test was used to analyze whether the improvement in the students' reading achievement by the use of vocabulary exercises exists. According to the results, each group had significant improvement in the reading achievement. It can be concluded that the application of vocabulary exercises can improve Grade Ten students' reading achievement.

Keywords: reading, reading comprehension, vocabulary

Introduction

Learning a language means mastering the four language skills of listening, speaking, reading and writing (Harmer, 2005). Among them, reading is one of the important language skills. The goal of reading is comprehension and reading comprehension means understanding what has been read. Moreover, reading comprehension is regarded as a fundamental skill necessary for educational achievement.

The successful reading is influenced by some factors. They are internal factors and external factors. Vocabulary is one of internal factors that influence on the students' reading comprehension. Vocabulary should be learned by the students. Vocabulary has an important role for all aspects language skills. In reading, the students' vocabulary affects the ability of students to understand the text and get the important information from the text. Nation (2001) held the view that the amount of familiar and unfamiliar vocabulary is one of the significant aspects in distinguishing the difficulties of a reading passage.

Nowadays, the high school students have great difficulty in reading English textbooks. They are reluctant to read English text as they do not understand the meaning of the vocabulary contained in the text. Thus, they may have low achievement of reading comprehension. Lack of vocabulary is one of the problems that the high school students deal with. So, this study focused on the influence of vocabulary on reading comprehension at the high school level.

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Purposes of the Study

The main purpose of the study is to explore the effectiveness of vocabulary on reading comprehension in learning English.

The specific objectives are as follows:

1. To investigate whether vocabulary acquisition can improve students' reading comprehension in learning English or not.
2. To give some suggestions based on the findings obtained from this study.

Research Questions

Based on the objectives of the study, the following research questions were constructed.

1. Is there any significant difference in the reading achievement between students who receive vocabulary exercises and those who do not?
2. Is there any improvement in the students' reading achievement by the use of vocabulary exercises?

Definition of Key Terms

Reading

Reading is a constructive process which the prior knowledge and experience affect the reader's comprehension of the text (McEntire, 2003, as cited in Furquo, 2013).

Reading Comprehension

Reading comprehension is the understanding, evaluating and utilizing of information and idea gained through an interaction between the reader and the author (Smith & Robinson, 1980, as cited in Nugraha, 2011).

Vocabulary

Vocabulary is a list of words with their meanings, especially in a book for learning a foreign language (Hornby, 2015).

Scope

This study was conducted at Basic Education High School, Yathit in Taungtha Township, Mandalay Region. The populations in this study were all Grade Ten students from the selected classes in the Academic Year (2018-2019). This study was only concerned with the influence of vocabulary on reading comprehension at the high school level and the duration was six weeks.

Review of Related Literature

The Importance of Teaching Reading in English

The students' achievement in all subjects depends on their ability in reading. In high school and university, reading ability becomes more important because students are more active to gain written information. That is why reading ability is an access to success in future. Having reading skill will be useful to get successful on the academic.

Harmer (2005) said that for the students, reading English text is an important role of teaching and learning process. Nunan (2003) also stated that reading is an essential skill for learners of English as a foreign language and for most of these learners; it is the most important

skill to master in order to ensure success not only in learning English, but also learning in any content class where reading in English is required.

The goal of all reading instruction is ultimately targeted at helping a reader to comprehend a given text. According to McLaughlin (2012), reading comprehension can be defined as the ability to construct meaning through spoken or written communication. Reading comprehension is the goal of reading instruction. Therefore, readers must be able to construct meaning and make connections based on what they know and what they are reading. The more knowledge readers have about a topic before reading, the more they are able to form connections between what they know and what they read. Making connections is a key element to reading comprehension.

The Importance of Vocabulary

Vocabulary is central to English language teaching because without sufficient vocabulary, students cannot understand others or express their own ideas. It is supported by Wallace (1982, as cited in Furquo, 2013) who says that vocabulary is one of the most important parts of languages. Nadell, Johnson, and Langan (1998) said that having a good vocabulary is important due to many reasons. They are as follows:

1. Knowing a lot of words makes it easier for the students to understand others and for others to understand them.
2. A good vocabulary is the key to understanding what they read.
3. A large vocabulary can help them score higher on tests.
4. A solid vocabulary will help them do better in school and at work.
5. A strong vocabulary helps them believe in themselves.

Relationship between Vocabulary and Reading Comprehension

The correlation between vocabulary knowledge and reading comprehension has been well discussed by many experts. Vocabulary knowledge and reading comprehension strongly correlated. The relationship between vocabulary and reading comprehension is thought to be reciprocal, meaning that a reader who knows more words is likely to have better reading comprehension, while a reader who is successful with comprehension and frequently will have more opportunity to learn more words. Consequently, a reader who struggles with vocabulary will be less likely to comprehend text, and less likely to learn new words (Hiebert & Kamil, 2005).

Most researchers believe language learners have difficulty understanding reading texts because of the limited amount of their vocabulary. Nation (2001) explained that in order to understand 95% of reading content, readers have to know at least 4000 word families, including 2000 high-frequency words, 570 general academic words, at least 1000 technical words, and proper low-frequency word families. Nation believed students' reading comprehension will improve when their known words increase. Thus, it can be concluded that vocabulary acquisition is strongly related with reading comprehension for foreign language learners.

Research Method

Population and Sample

For this study, a simple random sampling technique was used to select a basic education high school. The school for this study was Basic Education High School, Yathit in Taungtha Township. A sample of (100) students was selected from the population of (160) Grade Ten students (see Table 1).

Table 1 Population and Sample Size

Name of School	No. of Population	No. of Sample
BEHS, Yathit	160	100

Research Design

The design adopted in this study was crossover repeated measure experimental design (Shuttleworth, 2009). It is based on nonequivalent control group design which is one of the quasi-experimental designs (Gay, 1987). The research design of this study is presented in Table 2.

Table 2 Research Design

G	No. of Students	Pretest	G	Treatment	Posttest 1	G	Treatment	Posttest 2
A	50	RCT	Ex	VE	RCT	C	control	RCT
B	50	RCT	C	control	RCT	Ex	VE	RCT

Note. VE = Vocabulary Exercises   RCT = Reading Comprehension Test
      Ex = Experimental   C = Control

Instruments

In order to investigate the influence of vocabulary on reading comprehension to Grade Ten students, one pretest, two posttests and learning materials were used as instruments in this study.

Pretest

A pretest was developed to measure the previous reading comprehension of the selected samples. The pretest, a reading achievement test, contained two unseen passages. Test items were mainly based on Breaking News English developed by Banville (2018). The test was administered within one and a half hour allocated period. The students had to answer all the questions. The pretest was held in Basic Education High School, Yathit on October 29, 2018.

Posttest

Two reading achievement tests were applied as posttests for both groups to measure the students' reading achievement. Each posttest also contained two unseen passages. Test items were mainly based on Breaking News English developed by Banville (2018). The time allowed for these tests was (1:30) hours and they also needed to have to answer all questions. Then, the first posttest was held at BEHS, Yathit in Taungtha Township on November 16, 2018. After that, the second posttest was also held at BEHS, Yathit in Taungtha Township on December 7, 2018.

Learning Materials

Learning materials were selected from Vocabulary in Use (Intermediate Level), Vocabulary Levels Test revised by Webb et al. (2017), Grade Nine English Text Book and Grade Ten English Text Book. It contains the topics of (1) Nouns, (2) Verbs, and (3) Adjectives.

Procedure

First, in order of the required data, the instruments used for this study were developed under the guidance of the supervisor. The copies of the instruments were delivered to five experienced expert teachers in order to take their validation. After validation, the items were modified in accordance with the suggestions of those experienced teachers. And then, the pilot

test was administered with (55) Grade Ten students from Basic Education High School No (1), Myinmu in Myinmu Township. The crossover repeated measure design was applied to carry out an experimental study. Basic Education High School Yathit, Taungtha Township, Mandalay Region was selected by using a simple random sampling technique. The sample size was (100) Grade Ten students from the selected school. The existing Grade Ten students of two classrooms among the classrooms were randomly selected and assigned to two groups: Group A and Group B. Both groups were examined by a pretest. After that, the two groups were randomly assigned Group A as experimental group and Group B as control group. The experimental group (Group A) was given a treatment by using vocabulary exercises for three weeks while the control group was not. After the treatment, both groups were examined by a posttest 1. Then, both groups were also crossed over to ascertain the effect of treatment. Only the experimental group (Group B) was given a treatment by using vocabulary exercises for three weeks. After the treatment, both groups were examined by a posttest 2. Then, the data were entered into a computer data file and were analyzed using the Statistical Package for the Social Science (SPSS 20).

Data Analysis

In analyzing the data, descriptive statistics was used. The means of the pretest scores were compared by using the independent samples *t* test. According to Gay (1987), if the groups were essentially the same on the pretest, the posttest scores were analyzed using independent samples *t* test. If they were not, analysis of covariance (ANCOVA) would be used. Thus the posttest scores were analyzed by using analysis of covariance (ANCOVA). To determine whether the improvement in the students' reading achievement by the use of vocabulary exercises exists, paired samples *t* test was used.

Research Findings

Findings of Pretest

For this study, the existing two classrooms were randomly selected and assigned to two groups: Group A and Group B. Both groups were examined by a pretest. The pretest scores were analyzed by using the independent samples *t* test in order to measure whether the two groups had the same initial ability in the reading achievement. The results are shown in Table (3).

Table 3 The Results of t test for Independent Samples on the Pretest Scores

School	Group	*N*	*M*	*SD*	*MD*	*t*	*df*	*p*
BEHS,	Group A	50	27.68	7.25	9.8	7.75	98	.000***
Yathit	Group B	50	17.88	5.23				

Note. ***$p < .001$.

As clearly seen in Table (3), the mean of group A was (27.68), and the mean of group B was (17.88). These two groups had a significant difference at .001 level before the treatment period. This means that Group A and Group B did not possess the same initial ability (see Figure 1).
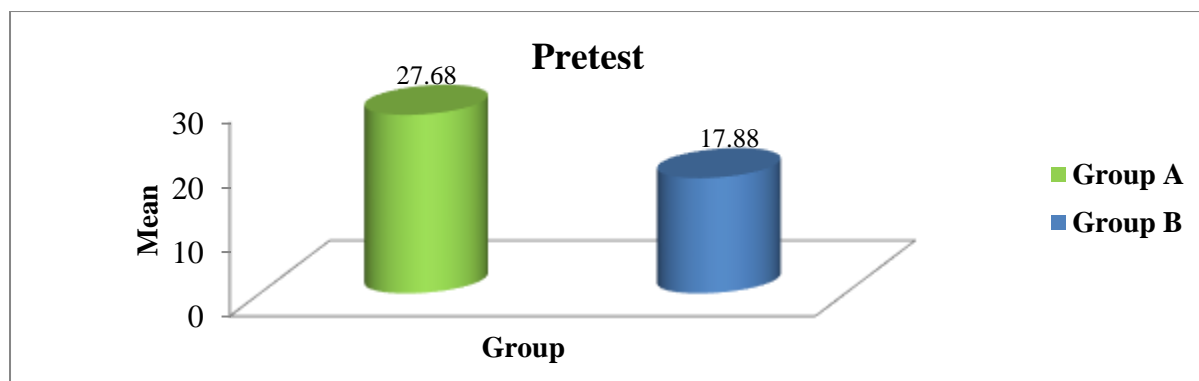
Figure 1. Comparison of means for pretest.

According to the results of Table (3) and Figure (1), the mean of group A was higher than that of group B in taking the pretest question. Therefore, it can be interpreted that the two groups' initial levels were not equivalent.

Findings of Research Question (1)

Research Question (1): Is there any significant difference in the reading achievement between students who receive vocabulary exercises and those who do not?

To examine this question, the two posttests scores of the experimental group and the control group were analyzed.

The analysis of pretest scores showed that the means of Group A and Group B were not the same. According to this finding, the posttests scores were analyzed by using the analysis of covariance (ANCOVA). In this way, the initial inequality could be adjusted and posttests scores could be compared. First, the data of the posttest 1 were analyzed, and then, the posttest 2 scores were analyzed.

Findings of the Posttest 1 Scores

At this period, Group A was the experimental group and Group B was the control group. In analyzing the performance of each question on the posttest 1, for Question number (I), a reading comprehension test of (25) items for (25) marks, it was found that the experimental group performed better on the reading comprehension test items than the control group. Most students from the control group left the question unanswered.

Question number (II) was also a reading comprehension test which consisted of (25) items for (25) marks. The experimental group also performed better on the reading comprehension test items than the control group. Most students from both control and experimental groups did not use enough effort in answering the questions. The overall performance of both groups can be seen in the following tables.

Table 4 Means and Standard Deviations for Posttest 1

School	Group	*N*	*M*	*SD*	*MD*
BEHS, Yathit	Experimental Group (A)	50	30.12	7.00	11.46
	Control Group (B)	50	18.66	5.55	

Table (4) shows the means and standard deviations of two groups which they acquired after the treatment for three weeks. And the mean of the control group was (18.66) and the mean of the experimental group was (30.12). It was found that the mean of experimental group was higher than the mean of control group.

Table 5 The ANCOVA Source Table for Posttest 1

Dependent Variable: posttest 1

Source	*Type III Sum of Squares*	*df*	**Mean Squares**	*F*	*p*
Corrected Model	3982.117	2	1991.058	60.097	.000
Intercept	1528.948	1	1528.984	46.149	.000
Pretest	698.823	1	698.827	21.093	.000
Group	830.067	1	830.067	25.054	.000***
Error	3213.673	97	33.131		
Total	66683.000	100			
Corrected Total	7195.790	99			

Note. ***$p < .001$.

According to Table 5, ANCOVA results mentioned that there was a significant difference between control and experimental groups, at $F(1, 97) = 25.054$, ***$p < .001$. Hence, it can be interpreted that using vocabulary exercises had a positive effect on the students' reading achievement. This result can be clearly seen in Figure (2).
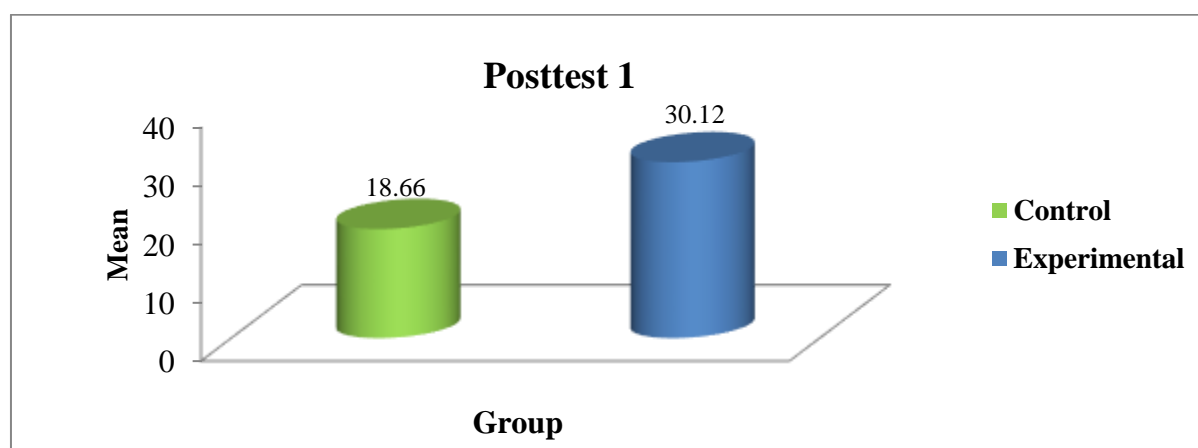
Figure 2. Comparison of means for posttest 1.

Findings of the Posttest 2 Scores

At this period, Group B was the experimental group and Group A was the control group. In analyzing the performance of each question on the posttest 2, Question number (I) consisted of (25) items for (25) marks. It was a reading comprehension test. Both control and experimental groups showed the same pattern of performance, but the control group did better on the test.

Question number (II) was also a reading comprehension test of (25) items for (25) marks. It was found that the control group performed better on the test than the experimental group. The following tables and figure are the overall performance of both groups on the posttest 2 questions.

Table 6 Means and Standard Deviations for Posttest 2

School	Group	*N*	*M*	*SD*	*MD*
BEHS, Yathit	Experimental Group (B)	50	23.78	4.04	-11.00
	Control Group (A)	50	34.78	5.82	

Table (6) presents the means and standard deviations of control and experimental groups on the reading comprehension questions. The mean of control group was (34.78) and standard deviation was (5.82). And, the mean of experimental group was (23.78) and standard deviation was (4.04). Thus, the results showed that the mean of control group was higher than that of experimental group.

Table 7 The ANCOVA Source Table for Posttest 2

Dependent Variable: posttest 2

Source	Type III Sum of Squares	*df*	Mean Squares	*F*	*p*
Corrected Model	3609.194	2	1804.597	93.062	.000
Intercept	2941.601	1	2941.601	151.696	.000
Pretest	584.194	1	584.194	30.126	.000
Group	806.384	1	806.384	41.585	.000***
Error	1880.966	97	19.391		
Total	91222.000	100			
Corrected Total	5490.160	99			

Note. ***$p < .001$.

The ANCOVA results on the reading comprehension questions stated that there is a significant difference between the control and experimental groups at $F(1, 97) = 41.585$, ***$p < .001$ (see Table 7). According to this finding, it can be interpreted that the control group, Group A, performed better on the posttest 2 than the experimental group, Group B. The comparison of means between the two groups on the posttest 2 is also presented in Figure (3).
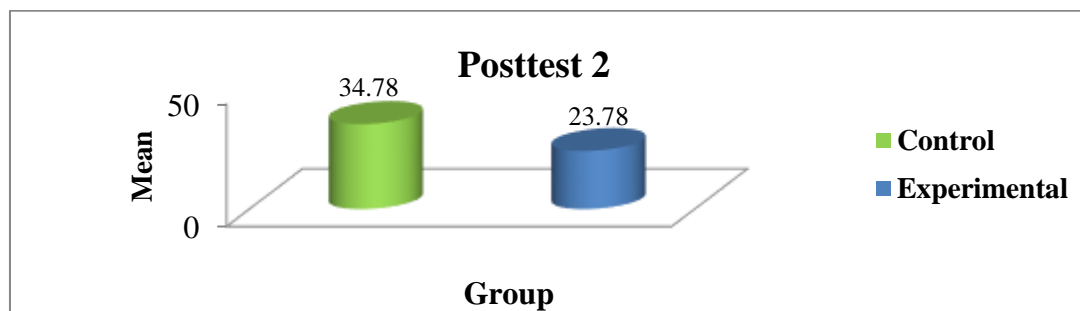
Figure 3. Comparison of means for posttest 2.

Findings of Research Question (2)

Research Question (2): Is there any improvement in the students' reading achievement by the use of vocabulary exercises? To examine this question, the means of pretest, posttest 1 and posttest 2 for both groups: Group A and Group B were calculated by using the paired samples *t* test separately.

Findings of Means on the Tests for Group A

The pretest, posttest 1 and posttest 2 means of Group A were analyzed by using the paired samples *t* test in terms of Pair 1, Pair 2 and Pair 3 in order to measure whether Group A had improvement in the reading achievement by the use of vocabulary exercises. The results are shown as follows:

(A) Pair 1

Table 8 t Value for Pretest and Posttest 1 Scores of Group A

Group	Test	*N*	*M*	*SD*	*MD*	*t*	*df*	*p*
Group A	Pretest	50	27.68	7.25	-2.44	-2.29	49	.026*
	Posttest1	50	30.12	7.00				

Note. *p < .05.

In comparing the means of two tests on the reading comprehension questions, the results indicated that the mean of posttest 1 (*M* =30.12, *SD* = 7.00) was greater than the mean of pretest (*M* =27.68, *SD* = 7.25), *t* (49) = -2.29, *p* < .05. So, Group A had improvement in the reading achievement after the treatment. Therefore, it can be interpreted that the use of vocabulary exercises can enhance the students' reading achievement. The results of Pair 1 can be clearly viewed in Figure (4).
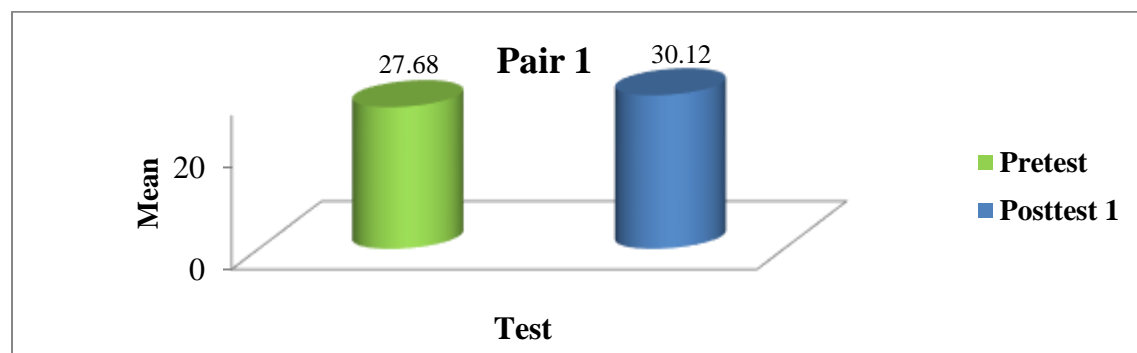
Figure 4. Comparison of means on pretest and posttest 1for Group A.

(B) Pair 2
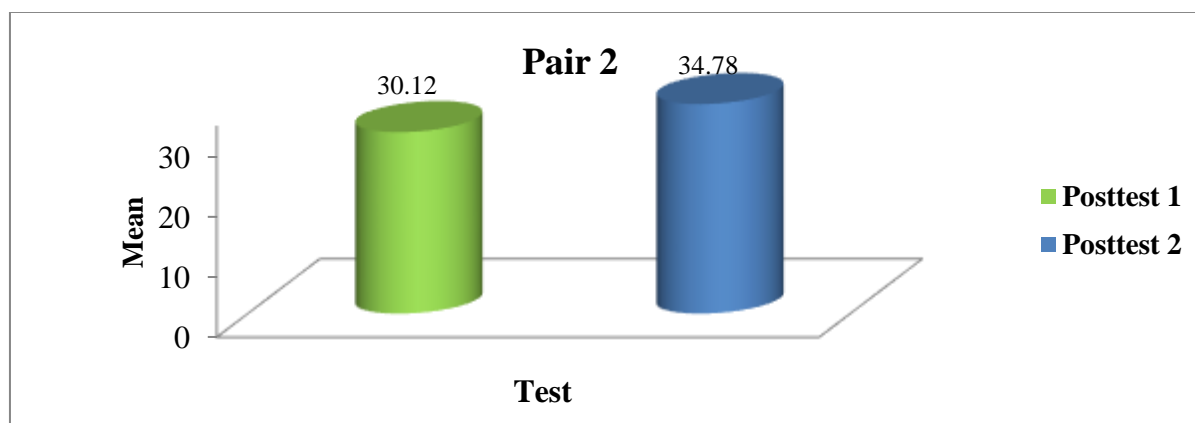
Table 9 t Value for Posttest 1 and Posttest 2 Scores of Group A

Group	Test	*N*	*M*	*SD*	*MD*	*t*	*df*	*p*
Group A	Posttest 1	50	30.12	7.00	-4.66	-5.69	49	.000***
	Posttest 2	50	34.78	5.83				

Note. ***p < .001.

According to Table (9), the results showed that the mean of posttest 2 (*M* = 34.78, *SD* = 5.83) was significantly greater than the mean of posttest 1 (*M* = 30.12, *SD* = 7.00), *t* (49) = -5.69,

p < .001. There is a significant difference between these two tests although Group A did not receive the treatment at this period. This is because of three reasons: effect of treatment, the students' mixed abilities and the instruction to keep on learning vocabulary. Figure (5) illustrates comparison of means between two tests of Group A.

Figure 5. Comparison of means on posttest 1 and posttest 2 for Group A.

According to Figure (5), it is noted that Group A performed better on the posttest 2 than on the posttest 1. Thus, it can be interpreted that the students' reading achievement had progressed.
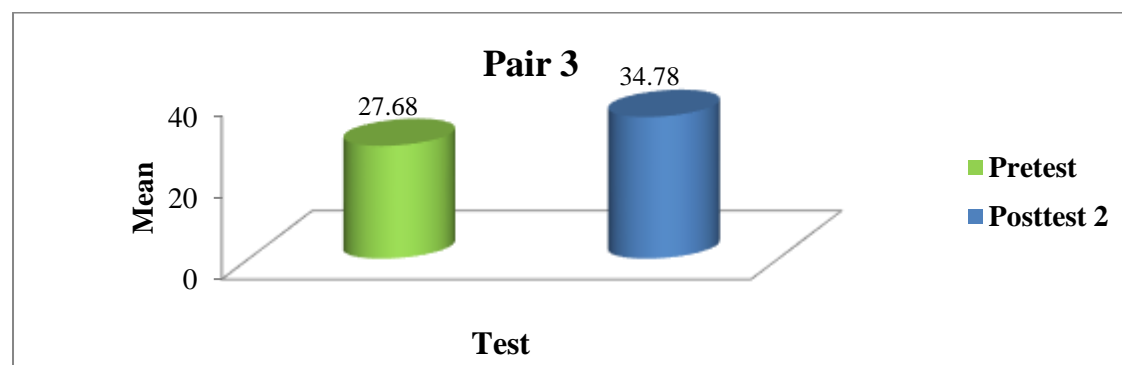
(C) Pair 3

Table 10 t Value for Pretest and Posttest 2 Scores of Group A

Group	Test	N	M	SD	MD	t	df	p
Group A	Pretest	50	27.68	7.25	-7.10	-8.10	49	.000***
	Posttest2	50	34.78	5.83				

Note. ***$p < .001$.

As clearly seen in Table (10), the mean of pretest was (27.68) before the treatment, and the mean of posttest 2 was (34.78) after the study. It showed that the posttest 2 mean (*M* = 34.78, *SD* = 5.83) was significantly higher than the pretest mean (*M* = 27.68, *SD* = 7.25), *t* (49) = -8.10, *p* < .001. According to Table (10), the means of Group A had progress in the range from (27.68) to (34.78). Hence, these results positively contributed to the students' reading achievement. These results can be clearly seen in Figure (6).

Figure 6. Comparison of means on pretest and posttest 2 for Group A.

According to the results of Pair 1, Pair 2 and Pair 3, it means that Group A had improvement in the reading achievement by the use of vocabulary exercises. Then the means of Group B were continued to analyze in order to investigate whether Group B had improvement in the reading achievement by the use of vocabulary exercises.

Findings of Means on the Tests for Group B

The pretest, posttest 1 and posttest 2 means of Group B were analyzed by using the paired samples *t* test in terms of Pair 1, Pair 2 and Pair 3. The results are shown as follows:
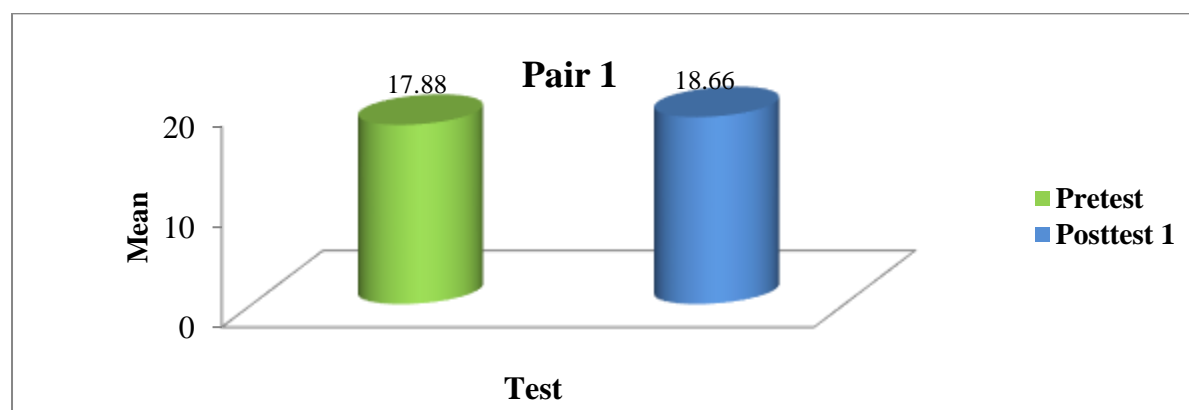
(A) Pair 1

Table 11 t Value for Pretest and Posttest 1 Scores of Group B

Group	Test	*N*	*M*	*SD*	*MD*	*t*	*df*	*p*
Group B	Pretest	50	17.88	5.23	-.78	-.93	49	.359 (ns)
	Posttest1	50	18.66	5.55				

Note. ns = not significant.

Table (11) showed that the mean of pretest was (17.88), and the mean of posttest 1 was (18.66). The results showed that the mean of posttest 1 ($M = 18.66$, $SD = 5.55$) was not significantly higher than the mean of pretest ($M = 17.88$, $SD = 5.23$), $t (49) = -.93$, $p > .05$. Thus, it can be said that the means of these two tests had nearly the same ability in taking the test questions before they were treated. Therefore, Group B did not have improvement in the reading achievement before the treatment.

Figure (7) clearly illustrates to present comparison of means on pretest and posttest 1 for Group B.

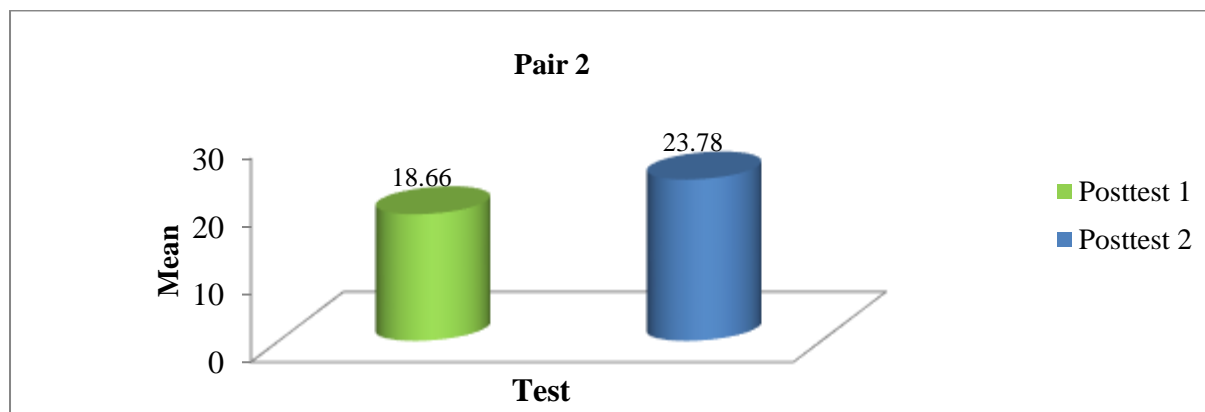**Figure 7**. Comparison of means on pretest and posttest 1 for Group B.

(B) Pair 2

Table 12 t Value for Posttest 1 and Posttest 2 Scores of Group B

Group	Test	*N*	*M*	*SD*	*MD*	*t*	*df*	*p*
Group B	Posttest1	50	18.66	5.55	-5.12	-6.30	49	.000***
	Posttest2	50	23.78	4.04				

Note. ***$p < .001$.

As shown in Table (12), the mean of posttest 2 (*M* = 23.78, *SD* = 4.04) was significantly greater than that of posttest 1 (*M* = 18.66, *SD* = 5.55), *t* (49) = -6.30, *p* < .001. So Group B had a significant improvement after the treatment period. Thus, it can be interpreted that the use of vocabulary exercises had positive effect on improving the students' reading comprehension. The comparison of means on posttest 1 and posttest 2 for Group B is illustrated in Figure (8).

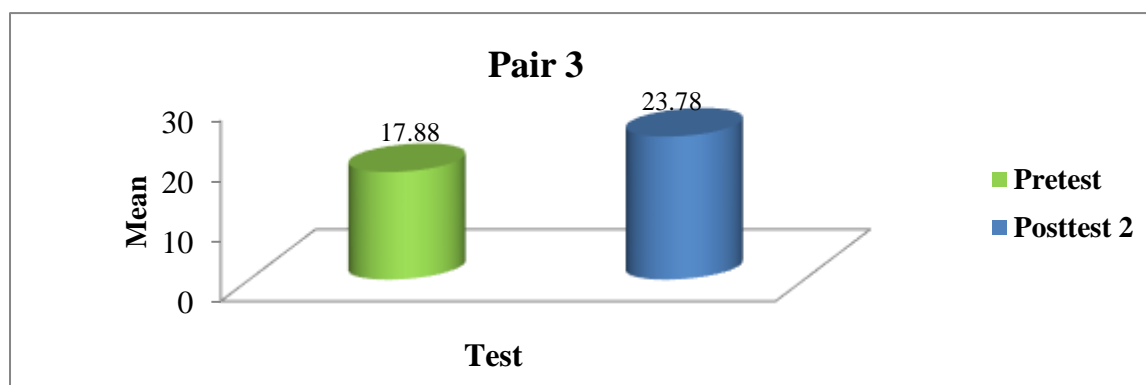**Figure 8.** Comparison of means on posttest 1 and posttest 2 for Group B.

(C) Pair 3

Table 13 t Value for Pretest and Posttest 2 Scores of Group B

Group	Test	*N*	*M*	*SD*	*MD*	*t*	*df*	*p*
Group B	Pretest	50	17.88	5.23	-5.90	-7.61	49	.000***
	Posttest2	50	23.78	4.04				

Note. ***p* < .001.

The results showed that the mean of pretest was (17.88) before the treatment, and the mean of posttest 2 was (23.78) after the treatment (see Table 13). It is stated that the mean of posttest 2 (*M* = 23.78, *SD* = 4.04) was significantly greater than the mean of pretest (*M* = 17.88, *SD* = 5.23), *t* (49) = -7.61, *p* < .001. Thus, Group B had progress in the reading achievement after the treatment period. The results can be clearly viewed in Figure (9).

Figure 9. Comparison of means on pretest and posttest 2 for Group B.

According to Figure (9), the means of Group B had significant improvement in the range from (17.88) to (23.78). Therefore, it is obvious that the use of vocabulary exercises can improve the students' reading achievement.

By comparing the means of pretest, posttest 1 and posttest 2 in terms of Pair 1, Pair 2 and Pair 3, Group B also had improvement in the reading achievement by the use of vocabulary exercises. After analyzing the data of Group, A and Group B, it can be interpreted that the use of vocabulary exercises had a positive improvement in the performances of the researched students.

Discussion and Suggestions

Discussion

Vocabulary and reading comprehension cannot be separated. According to Rivers (1983, as cited in Nunan, 1991), the acquisition of an adequate vocabulary is essential for successful second language or foreign language use. This study was conducted to investigate the influence of vocabulary on reading comprehension at the high school level.

Discussion for Research Question (1)

The scores of posttests 1 and posttest 2 were analyzed in detail for the purpose of measuring students' proficiency in the reading comprehension. From the results of the posttest 1 scores on the reading comprehension questions, the means of students who received vocabulary exercises for three weeks were significantly higher than those who did not. Thus, it can be interpreted that using vocabulary exercises had a positive effect on the students' reading achievement.

The findings of the posttest 2 scores showed that the means of Group A students who did not receive vocabulary exercises were significantly greater than those of Group B students who received for three weeks. It can be interpreted that Group A performed better on the posttest 2 than Group B. According to this finding, there may be some reasons. This may be because the mean of Group A was already higher than Group B's mean on the pretest. Moreover, Group A may have the effect of treatment, carryover effect. Another reason found on the test is that some Group B students did not make enough effort to answer the test because of the lack of motivation in taking the test and they know that the scores will not be counted in passing their examination.

The significant levels in both tests were high. Generally, the use of vocabulary exercises has had some effects on the reading achievement of the students. The findings also indicated that foreign language learners' vocabulary acquisition greatly impacts on their reading comprehension. These findings were found to be consistent with the finding of Thanda Soe (2013) who found that there is a strong correlation between students' vocabulary acquisition and their reading comprehension of Myanmar EFL students. It is also confirmed with the finding of Bahri (2018) who claimed that although strategy of reading and experience of students help in comprehend a text, but vocabulary is more important in helping the students to comprehend the text. Farran (2016) also argued that vocabulary is foundational in foreign language and second language reading comprehension success.

Discussion for Research Question (2)

The scores of pretests, posttest 1 and posttest 2 questions were also analyzed by using the paired samples *t t*est in detail for the purpose of measuring the students' improvements in their reading achievement by the use of vocabulary exercises. For Group A, the means of pretest, posttest 1 and posttest 2 were compared in terms of Pair 1, Pair 2 and Pair 3. According to Pair 1, Pair 2 and Pair 3, the finding showed that Group A had improvement in the reading achievement by the use of vocabulary exercises.

For Group B, in order to measure whether Group B had improvement in the reading achievement by the use of vocabulary exercises, the means were compared according to Pair 1, Pair 2 and Pair 3. By comparing the means of pretest, posttest 1 and posttest 2, the findings

showed that Group B also had improvement in the reading achievement by the use of vocabulary exercises. Nonetheless, after analyzing the data of Group A and Group B, it is obvious that reading achievement was significantly improved among the researched students. The findings indicated that the role of vocabulary in reading comprehension is directly in line with findings of the studies conducted by Chen, 2011 and Choi, 2013. Liu (2016) also said that vocabulary has always been crucial for foreign language learners in the reading comprehension since a learner must know most of the words in a running text so as to comprehend a certain text.

Some of the major limitations of the research can be identified as (1) the lack of enthusiasm of the students in the research, (2) some students did not make enough effort in answering the tests, and (3) some students were likely to pay more attention to their regular examination held in their schools.

Suggestions

Based on the results of this study, some suggestions for English teachers are offered.

(1)   The teachers should make students aware of the importance of vocabulary in learning English, especially in reading.

(2)   Teachers should pay attention to the students' vocabulary learning while they train the students for reading comprehension.

(3)   Teachers should not only make good use of the textbook but also find some suitable extra materials from newspapers and magazines for enlarging the students' vocabulary.

(4)   The teacher should encourage students to read extensive books as reading will increase the students' vocabulary.

(5)   Teachers should recognize that understanding students' average vocabulary knowledge and reading ability are important to develop appropriate English tests that can actually assess students' reading comprehension.

Although some students paid their attention to pass their regular examination, they should be encouraged to enlarge their vocabulary as well as to recognize the influence of vocabulary on their reading achievement. Moreover, this study was conducted only the Grade Ten students within 2018-2019 Academic Year as cross-sectional survey, the longitudinal survey should be conducted to ensure data are representative and generalizable.

Conclusion

The data of this study showed that the researched students had a positive improvement in their reading achievement by the use of vocabulary exercises. The results support the research purpose; using vocabulary exercises can improve Grade Ten's students reading comprehension in learning English. The results also demonstrate the need for teachers to know their learners' vocabulary knowledge and reading comprehension abilities. In turn, this would help English teachers and curriculum developers design more appropriate learning tasks that widen learners' academic vocabulary knowledge and to improve reading achievement. Thus, this research can give a contribution for teachers and curriculum designers to assist learners to promote the growth of learners' vocabulary knowledge and reading comprehension.

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