



# The Effectiveness of Vocabulary Learning Strategies in Developing Palestinian Students' Vocabulary, its Retention and their Attitudes towards Learning English

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**Abstract:** This study addressed teaching English vocabulary as a foreign language to students in Palestine and their attitudes towards learning English. The study problem lied in the fact that Palestinian EFL learners face a big difficulty in learning English vocabulary and in forgetting the vocabulary they are exposed to in the classroom and showing an aversion towards learning English. The study aimed at investigating the effectiveness of vocabulary learning strategies in developing vocabulary and its retention, and in enhancing the students' attitudes towards learning English. The study results concluded that vocabulary learning strategies contributed effectively in developing the students' vocabulary and enabled them to retain it for a long time. The study findings also indicated that using vocabulary learning strategies helped students possess positive attitudes towards learning English language.

**Keywords:** Vocabulary learning strategies, Vocabulary, Retention, Attitudes

## 1. INTRODUCTION

English is the language most broadly learned, read, and spoken the world has ever known (Jenkin, 2006:157). Besides, English language plays a cardinal role in economic progress, up-to-date technology and internationalization (Spolsky, 1998:128). Consequently, numerous countries emphasize the significance of teaching English to their citizens. Ardeo (2003:110) states that during the latest few decades, there has been an increasing demand to utilize the English language for the expression of knowledge within particular proficient fields. Thus, lexical knowledge is a vital part of the base of learning English as a second language and English as a foreign language (Oxford & Scarcella, 1994:231). McCarthy (2001, cited in Fan, 2003:222) clarifies that vocabulary crystallizes the biggest part of the meaning of any language, and that vocabulary is the biggest knot for most learners. Therefore, in learning any language, vocabulary appears to be a major central point of acquisition (Asgari & Mustapha, 2011:84). In the context of teaching English as a second (ESL) or a foreign language (EFL), vocabulary plays a significant role in the language learning process as it is one of the vital language

elements that can promote all of the four skills; speaking, listening, reading and writing (Boonkongsan & Intaraprasert, 2014:59). Laufer (1992:126) writes that vocabulary plays an exceedingly imperative role in learning second or foreign language while Schmitt (2008:329) argues that vocabulary as a fundamental part of mastering a second language. In this concern, Wilkins (1972:111) underlines that without grammar very little can be conveyed, without vocabulary nothing can be conveyed. Considering the significance of vocabulary in learning a foreign language, Behbahani (2015:1) maintains that language learners must learn vocabulary learning strategies for better learning of vocabularies since this knowledge enhances their process of acquisition. He also insists that making students aware of vocabulary learning strategies can be an effective way for teaching vocabularies. In discussing the benefits of vocabulary learning strategies, many researchers accentuate the importance of its use from different viewpoints. For example, Oxford (1990) suggests that language learners must be empowered to utilize strategies in their process of learning. Oxford asseverates that knowing vocabulary-learning strategies makes learners independent and helps them take responsibility of their own learning. Schmitt and Schmitt



(1995:133) confirm that vocabulary learning strategies knowledge is invaluable and that the knowledge of vocabulary learning strategies must be in educational programs and syllabuses. Thus, the researchers believe that there is a pressing need in Palestine for adopting new strategies and techniques of teaching vocabulary for the awareness of such helpful strategies is almost absent. Therefore, the researchers decided to contribute to the endeavors to cope with these difficulties, as they feel that there is a dire need to use new vocabulary learning strategies, which may solve the problems students face in vocabulary and its retention and may later positively affect their attitudes towards learning English. As a result, the researchers believe that the students' positive attitudes towards learning English will be an important factor that will make students expend more efforts and time in mastering both vocabulary learning strategies and vocabulary items.

Therefore, the researchers conducted this study to investigate the effectiveness of vocabulary learning strategies in developing Palestinian students' vocabulary, its retention and their attitudes towards learning English. For this purpose, the researchers selected the eleventh grade *English for Palestine* textbook and the pupil's book for teaching vocabulary using vocabulary learning strategies.

## 2. SIGNIFICANCE OF THE STUDY

The study may prove useful for the following reasons:

- a) Teachers of English may benefit from the work and learn how to use vocabulary learning strategies, as this will help them be more effective when teaching vocabulary to their learners.
- b) English language supervisors may find the results appealing and useful and may generalize the study findings in other school contexts.
- c) Curriculum designers may find it beneficial to employ vocabulary learning strategies investigated here when they redesign the curriculum in the future.
- d) Eleventh graders may develop their vocabulary abilities by adopting vocabulary learning strategies explored in this research. Moreover, eleventh graders are expected to realize the importance of vocabulary learning strategies in developing vocabulary and its retention, which in turn will give them the ability to be capable of achieving better academic performance.
- e) The study provides empirical evidence on the effectiveness of the vocabulary learning strategies validated in the study in the Palestinian context where English is taught as a foreign

language to students who struggle with and dislike English.

## 3. STATEMENT OF THE PROBLEM

Working in the field of teaching English language, the researchers have observed that students face a tremendous problem with learning English vocabulary and with remembering the vocabulary they are exposed to in the classroom. They also demonstrate an aversion towards learning English. This difficulty might be because of ineffective vocabulary teaching methods, which may have affected their vocabulary achievement and its retention. Thus, the students' low achievement level in vocabulary requires serious research into alternative and efficient strategies that may increase students' vocabulary achievement and motivation to learn English. In addition, the first researcher attended some classes dedicated for teaching vocabulary and noticed that vocabulary learning strategies had not been incorporated in teaching vocabulary and that most teachers and students were not aware of such strategies. Thus, it is necessary to train the students on using vocabulary learning strategies. This motivated the researchers to conduct this study since they felt that there was an urgent need to use new vocabulary learning strategies to solve the problems the students face in vocabulary.

## 4. RESEARCH QUESTION

Accordingly, the problem can be stated in the following main question:

How effective are vocabulary learning strategies in developing Palestinian eleventh graders' vocabulary, its retention, and their attitudes towards learning English?

## 5. RESEARCH HYPOTHESES

- a) There are no statistically significant differences at ( $\alpha \leq 0.05$ ) between the mean scores of the experimental group subjects, who learned vocabulary using vocabulary learning strategies, and those of the control group subjects who learned vocabulary traditionally in the post vocabulary achievement test.
- b) There are no statistically significant differences at ( $\alpha \leq 0.05$ ) between the mean scores of the experimental group subjects who learned vocabulary using vocabulary learning strategies in the post vocabulary achievement test and those of the delayed vocabulary retention test.
- c) There are no statistically significant differences at ( $\alpha \leq 0.05$ ) between the mean scores of the experimental group subjects, who learned vocabulary using vocabulary learning strategies,



and those of the control group subjects who learned vocabulary traditionally after the application of the attitude scale towards learning English.

## 6. METHODOLOGY

### 6.1. Research Design

The study employed the quasi-experimental approach with a pre and post test for both the treatment and control groups. The participants were assigned to an experimental group, and a control one. The study included three dependent variables; the first was vocabulary, the second was vocabulary retention, whereas the third was students' attitudes towards learning English. The independent variable was vocabulary learning strategies. The experimental group was taught vocabulary using vocabulary learning strategies; while, the control group was taught using the traditional method. The experiment lasted for seventeen weeks and the targeted vocabulary learning strategies were as follows:

- a) Dictionary work
- b) Grouping word families
- c) Memorization
- d) Asking the teacher or classmates for meaning
- e) Guessing from context
- f) Repetition (verbal and written repetition)

#### 6.1.1. Population of the Study

The study population involved (616) male eleventh-graders from the governmental schools in the Middle-Area Directorate of Gaza. They were registered in the first semester of the school year (2016-2017).

#### 6.1.2. Sample of the Study

The sample of the study involved (60) male students equally divided into two groups. The study sample was chosen purposively from the eleventh grade classes at Al-Manfalouti secondary School for boys in Deir el Balah, where the first researcher has been working as a teacher of English for fourteen years. The students were at the same level of general achievement according to their results in the first term of the school year (2016-2017). This equivalence of achievement was further ensured by the researchers through the administration of a pre-test on both groups.

### 6.2. Research Tools

The researchers used three instruments to fulfill the study aims, which are as follows:

- a) A pre and post vocabulary achievement test.
- b) A delayed vocabulary retention test.
- c) A pre and post attitude scale towards learning English language.

### 6.2.1 Vocabulary Achievement Test

The researchers developed the vocabulary achievement test to measure the students' achievement in vocabulary. It was used as a pre-test applied before the experiment and as a posttest, which was also applied after the experiment. The researchers also used the posttest as a delayed vocabulary test, which was administered three weeks after the posttest to vocabulary assess retention. The researchers depended on the eleventh-grade English textbook to construct the vocabulary test as well as on their experience as teachers of English. Moreover, the researchers consulted many English supervisors in the Middle-Area Directorate of Gaza in addition to some colleague teachers. The test consisted of (80) varied items. The items of the test consisted of six questions as follows:

1. *Match the words in the box with their synonyms*: This question includes six items, which evaluate the pupils' ability in matching words with their synonyms correctly by writing a word from the box given next to its meaning. One mark is given for each correctly matched word (**Matching words with their synonyms**).

2. *Fill in the blanks by using a suitable word from the box*: This question includes eight items, which evaluate the pupils' ability in choosing words according to context. One mark is given for each correct answer. Students have to read the words from the box and then use them to complete the sentences (**Choosing words according to context**).

3. *Read the given sentences to decide the best meanings of the underlined words in them*: This question includes seven items, which evaluate the pupils' ability in guessing the meaning of certain underlined words according to their context. One mark is given for each correct answer. (**Guessing from context**).

4. *Write the correct number of the word next to its definition*: This question includes twenty-four items, which evaluate the pupils' ability in matching words with their definitions. For each item, students need to choose from among six English definitions to match three target words. One mark is given for each correct answer. (**Word-definition matching**).

5. *Translate the given English words (L2 words) into Arabic (L1 words)*: This question includes twenty-three items, which evaluate the pupils' ability in translating L2 words into L1 words. One mark is given for each correct answer. (**Translating L2 words into L1 words**).

6. *Complete the given sentences with a suitable word from the same word family*: This question includes ten items, which evaluate the pupils' ability in using the appropriate form of words. One mark is given for each correct answer. Students have to read the words between



brackets then derive a word from the same word family to complete the sentences (**Grouping word families**).

### 6.2.1.1. The Pilot Study

A pilot study of the vocabulary test was conducted on a random sample of (30) Palestinian eleventh graders from Al Manfalouti Secondary School for Boys, who have the same characteristics of the study sample. The researchers recorded the results and statistically analyzed them to assess the validity and reliability of the test as well as the time needed for completing the test. The researchers modified the items of the test in light of these statistical results.

### 6.2.1.2. Validity of the Vocabulary Achievement Test

The study used the referee validity and the internal consistency validity, to assess the validity of the vocabulary achievement test. With respect to the referee validity, the test was submitted to a jury of specialists. The researchers considered their valuable comments and feedback. As for internal consistency validity, Al Agha & Al Ostaz (2004:121) assert that the internal consistency validity indicates the correlation of the score of every item with the total average of the test. It also indicates the correlation of the average of each item with the total average of the domain to which it belongs. Table (1) below shows the correlation coefficient of the vocabulary test calculated by using Pearson Formula.

**Table 1. Pearson correlation coefficient of every item of the vocabulary test**

Question	No.	Pearson Correlation
<b>Question No.1</b> Matching words with their synonyms	1.	**0.587
	2.	**0.636
	3.	**0.548
	4.	**0.675
	5.	**0.740
	6.	**0.574
	7.	**0.613
	8.	**0.495
<b>Question No. 2</b> Choosing words according to context	1.	**0.707
	2.	**0.824
	3.	**0.502
	4.	**0.915
	5.	**0.535
	6.	**0.862
	7.	**0.691
	8.	**0.915
<b>Question No. 3</b> Guessing from context	1.	**0.976
	2.	**0.915
	3.	**0.904
	4.	**0.878
	5.	**0.932
	6.	**0.947
	7.	**0.942

<b>Question No. 4</b> Word-definition matching	1.	**0.702
	2.	**0.723
	3.	**0.812
	4.	*0.337
	5.	**0.616
	6.	**0.437
	7.	**0.519
	8.	**0.623
	9.	**0.523
	10.	**0.789
	11.	**0.812
	12.	**0.845
	13.	**0.530
	14.	**0.954
	15.	**0.699
	16.	**0.735
	17.	**0.887
	18.	*0.376
	19.	**0.954
	20.	**0.932
	21.	**0.845
	22.	**0.723
	23.	**0.879
	24.	**0.746
<b>Question No. 5</b> Translating L2 words into L1 words	1.	**0.746
	2.	**0.425
	3.	*0.316
	4.	**0.640
	5.	**0.437
	6.	*0.356
	7.	**0.483
	8.	**0.814
	9.	**0.647
	10.	**0.819
	11.	**0.855
	12.	**0.650
	13.	**0.607
	14.	**0.810
	15.	**0.659
	16.	**0.724
	17.	**0.571
	18.	**0.849
	19.	**0.587
	20.	**0.788
	21.	**0.443
	22.	**0.569
	23.	**0.583
<b>Question No. 6</b> Grouping word families	1.	**0.752
	2.	*0.346
	3.	*0.371
	4.	**0.456
	5.	**0.912



	6.	**0.900
	7.	**0.903
	8.	**0.891
	9.	*0.349
	10.	**0.882

\*r table value at df (33) and sig. level (0.05) = 0.325

\*\*r table value at df (33) and sig. level (0.01) = 0.418

The results of table (1) above show that the value of these items was suitable and highly consistent. The results demonstrate that the correlations of the test items were significant at (0.05, 0.01) which indicates that there was a consistency between the items and this means that the test was highly valid for the study. The researchers also made sure of the correlation coefficient between items with the total score of the test as shown in table (2) below.

**Table 2. Pearson correlation coefficient for every question in the vocabulary test**

Question	Pearson Correlation	Sig. level
Question No. 1: Matching words with their synonyms	0.574**	sig. at 0.01
Question No. 2: Choosing words according to context	0.637**	sig. at 0.01
Question No. 3: Guessing from context	0.645**	sig. at 0.01
Question No. 4: Word-definition matching	0.855**	sig. at 0.01
Question No. 5: Translating L2 words into L1 words	0.865**	sig. at 0.01
Question No. 6: Grouping word families	0.338*	sig. at 0.01

\*r table value at df (33) and sig. level (0.05) = 0.325

\*\*r table value at df (33) and sig. level (0.01) = 0.418

As shown in Table (2) above, Pearson correlation of the test questions was significant at sig. level (0.01), which indicates a high internal consistency between the test questions and thus reinforces the validity of the test.

**6.2.1.3. Reliability of the Vocabulary Achievement Test**

A test is regarded reliable when it gives the same results when replicated for the same purpose in the same conditions (Al Agha & Al Ostaz, 2004:120). To determine the reliability of the vocabulary achievement test, the researchers applied the Kuder Richardson formula (KR20) and the Split-half technique to find out the extent of test reliability. Table (3) below shows the results of using (KR20) and Split-half coefficients of the vocabulary test questions.

**Table 3. (KR20) and Split-half coefficients of the vocabulary test domains**

Question	No. of items	KR20	Split half coefficients of the test domains
Question No. 1: Matching words with their synonyms	8	0.756	0.734
Question No. 2: Choosing words according to context	8	0.863	0.889
Question No. 3: Guessing from context	7	0.975	0.981
Question No. 4: Word-definition matching	24	0.958	0.965
Question No. 5: Translating L2 words into L1 words	23	0.900	0.887
Question No. 6: Grouping word families	10	0.769	0.783
<b>Total</b>	<b>80</b>	<b>0.948</b>	<b>0.765</b>

The results above show that the Split-half coefficient was (0.765), and KR20 was (0.948). These results indicate that the reliability of the test was high and strong.

**6.2.1.4. Difficulty Coefficient of the Vocabulary Achievement Test**

Difficulty coefficient of a test is measured by finding out the percentage of the wrong answers of each item made by the students (Abu Nahia, 1994:308). The difficulty coefficient of each item of the vocabulary achievement test was calculated during the pilot study according to the following formula:

$$\frac{\text{No. of students with wrong answers}}{\text{Total No. of Ss. who took the test}} \times 100$$

Table (4) below shows the difficulty coefficient for each item of the vocabulary test.

**Table 4. Difficulty coefficient for every item of the vocabulary test**

No.	Difficulty coefficient	No.	Difficulty coefficient
1	0.56	41	0.33
2	0.28	42	0.61
3	0.50	43	0.61
4	0.33	44	0.56
5	0.39	45	0.39
6	0.61	46	0.56
7	0.28	47	0.39
8	0.50	48	0.44
9	0.56	49	0.61
10	0.28	50	0.39



No.	Difficulty coefficient	No.	Difficulty coefficient
11	0.33	51	0.33
12	0.28	52	0.39
13	0.50	53	0.50
14	0.33	54	0.39
15	0.28	55	0.44
16	0.28	56	0.28
17	0.28	57	0.39
18	0.39	58	0.44
19	0.28	59	0.39
20	0.44	60	0.33
21	0.28	61	0.33
22	0.50	62	0.39
23	0.28	63	0.44
24	0.50	64	0.33
25	0.44	65	0.50
26	0.39	66	0.39
27	0.39	67	0.44
28	0.61	68	0.56
29	0.78	69	0.56
30	0.61	70	0.39
31	0.61	71	0.67
32	0.67	72	0.44
33	0.33	73	0.61
34	0.39	74	0.44
35	0.50	75	0.28
36	0.33	76	0.28
37	0.61	77	0.33
38	0.61	78	0.39
39	0.28	79	0.56
40	0.50	80	0.39
<b>Total Difficulty Coefficient</b>		<b>0.43</b>	

Table (4) above shows that the difficulty coefficient ranges between (0.28 – 0.67) with a total average of (0.43), which means that each item is acceptable or is in the normal level of difficulty according to the view point of assessment and evaluation specialists.

#### 6.2.1.5. Discrimination Coefficient of the Vocabulary Achievement Test

Discrimination coefficient means that the test is able to differentiate between the high achievers and the low achievers. Table (5) below shows the discrimination coefficient for each item of the test.

No. of Ss. with correct  
answer from the high  
achievers

No. of high achieving  
students

No. of Ss. with correct answer  
from the low achievers

No. of low achieving students

**Table 5. Discrimination coefficient for each item of the vocabulary test**

No.	Discrimination coefficient	No.	Discrimination coefficient
1	0.67	41	0.67
2	0.33	42	0.78
3	0.33	43	0.78
4	0.44	44	0.67
5	0.78	45	0.78
6	0.56	46	0.67
7	0.33	47	0.78
8	0.33	48	0.67
9	0.67	49	0.78
10	0.56	50	0.56
11	0.44	51	0.67
12	0.56	52	0.56
13	0.56	53	0.78
14	0.67	54	0.56
15	0.33	55	0.67
16	0.56	56	0.56
17	0.33	57	0.78
18	0.33	58	0.67
19	0.33	59	0.56
20	0.67	60	0.44
21	0.56	61	0.67
22	0.56	62	0.56
23	0.33	63	0.67
24	0.78	64	0.67
25	0.67	65	0.78
26	0.78	66	0.78
27	0.33	67	0.67
28	0.78	68	0.44
29	0.44	69	0.67
30	0.56	70	0.78
31	0.78	71	0.44
32	0.67	72	0.67
33	0.67	73	0.33
34	0.78	74	0.67
35	0.78	75	0.33
36	0.67	76	0.33
37	0.78	77	0.44
38	0.78	78	0.33
39	0.56	79	0.44
40	0.78	80	0.33
<b>Total Discrimination Coefficient</b>		<b>0.59</b>	



Table (5) above shows that the discrimination coefficient ranges between (0.33 – 0.78) with a total average of (0.59), which means that every item is acceptable and in the normal level of discrimination according to the viewpoint of assessment and evaluation specialists.

### 6.2.2. The Attitude Scale towards Learning English

The researchers designed the attitude scale towards learning English to measure the effectiveness of vocabulary learning strategies in enhancing Palestinian eleventh graders' attitudes towards learning English. This scale was used before and after the experiment for both the control and the experimental groups. The attitude scale was composed of three domains, involving twenty-four items as shown in table (6) below. The attitude scale items were developed by the researchers taking into account English supervisors' and experts' opinions.

**Table 6. The attitude scale towards learning English domains**

Domain	No. of items
Behavioral aspect of language attitude	8
Cognitive aspect of language attitude	8
Emotional aspect of language attitude	8
<b>Total</b>	<b>24</b>

The attitude scale aimed at measuring the students' attitudes towards learning English language before and after the experiment for both the control and the experimental groups.

The researchers developed the scale based on the following:

- a) Consulting specialists about attitudes in general.
- b) Reviewing the related literature, such as Abidin et al.'s (2012) study, which divided the attitude scale into three domains: behavioral, cognitive, and emotional and adopting these domains for formulating the statements of the current study's scale. The scale includes (24) positive and negative items distributed in three domains. Each domain has (8) items.
- c) Presenting the scale to a referee committee to assess the following:
  - Suitability of the number of the items for eleventh graders.
  - Clarity of the meaning of the statements to the respondents.

- Language used in the attitude scale.
- Extent to which each item of the attitude scale represents the intended domain.

#### 6.2.2.1. Description of the Attitude Scale

The scale involved three domains: (1) behavioral aspect of language attitude, (2) cognitive aspect of language attitude, and (3) emotional aspect of language attitude. The attitude scale items were constructed to measure the students' attitudes towards learning English language. The researchers took into consideration that the attitude scale items were specific and included one idea in order to express a specific attitude; were related to scale domains and attitude subject; and were simple, easy and suitable for the students' level. The five-point Likert scale (1932) was used to measure the students' responses. The levels of the attitude scale responses varied between strongly disagree, disagree, neutral, agree and strongly agree. Scores from 5 to 1 were assigned for positive responses and from 1 to 5 for the negative ones. To avoid ambiguity, the statements of the scale were translated into Arabic, in order to get students to understand the scale items easily and accurately. The attitude scale was first applied on a random pilot sample of (30) eleventh graders from Al Manfalouti Secondary School for Boys in Deir el Balah, to ensure its clarity and identify its validity and reliability.

#### 6.2.2.2. The Attitude Scale Validity and Reliability

To measure the validity of the attitude scale, the researchers used the referee validity and the internal consistency validity. As for referee validity, the attitude scale was introduced to a jury of specialists in English language, methodology and psychology university professors in Gaza universities, Ministry of Education and experienced supervisors. The items of the attitude scale were modified according to their recommendations. After applying the attitude scale on a pilot sample of (30) students, the results were recorded and statistically analyzed. After this, the internal consistency validity of the scale was assessed based on Al Agha and Al Ostaz's (2004:121) explanation that the internal consistency validity indicates the correlation of the score of every item with the total score of the domain to which it belongs by using Pearson Formula. Table (7) below shows the correlation coefficient of each scope with the whole attitude scale.



Table 7. Pearson correlation coefficient of each item of the attitude scale domains

Domain	Items	Pearson correlation	Domain	Items	Pearson correlation	Domain	Items	Pearson correlation
Behavioral aspect of language attitude	1.	**0.920	Cognitive aspect of language attitude	9.	**0.858	Emotional aspect of language attitude	17.	**0.438
	2.	**0.508		10.	**0.932		18.	*0.379
	3.	**0.422		11.	**0.834		19.	**0.662
	4.	**0.812		12.	**0.555		20.	**0.742
	5.	**0.942		13.	**0.919		21.	**0.695
	6.	**0.907		14.	**0.912		22.	**0.583
	7.	**0.941		15.	*0.407		23.	**0.711
	8.	**0.515		16.	**0.439		24.	**0.728

\*r table value at  $df(33)$  and sig. level (0.05) = 0.325

\*\*r table value at  $df(33)$  and sig. level (0.01) = 0.418

The results of table (7) show that the value of these items were suitable and highly consistent and valid for conducting this study. The correlation coefficient of each item within its scope was significant at levels (0.01) and (0.05). The researchers also made sure of the correlation between items with the total score of the scale as shown in table (8) below.

Table 8. Pearson correlation coefficient for every domain of the attitudes scale

Domain	Pearson correlation	Sig. level
Behavioral aspect of language attitude	**0.667	sig. at 0.01
Cognitive aspect of language attitude	**0.778	sig. at 0.01
Emotional aspect of language attitude	**0.447	sig. at 0.01

\*r table value at  $df(33)$  and sig. level (0.05) = 0.325

\*\*r table value at  $df(33)$  and sig. level (0.01) = 0.418

Table (8) shows that all the domains of the scale achieved statistical significant correlation with the total score of the scale, which indicates a high internal consistency of the scale, which reinforces its validity.

An attitude scale is reliable when it gives the same results when replicated in the same conditions (Al Agha & Al Ostaz, 2004:120). The researchers used the pilot study to calculate the reliability of the attitude scale, which was measured by the Alpha Cronbach and Split-half techniques. The researchers calculated the correlation between the first, second, and third domains and the whole of the attitude scale. According to Table (9) and Table (10), the attitude scale is reliable with an Alpha Cronbach coefficient of (0.846) and a Split-half coefficient of (0.796).

Table 9. Alpha Cronbach Coefficient for the attitude scale domains

Domain	Total	Alpha Cronbach Coefficient
Behavioral aspect of language attitude	8	0.887
Cognitive aspect of language attitude	8	0.885
Emotional aspect of language attitude	8	0.765
<b>Total</b>	<b>24</b>	<b>0.846</b>

Table 10. Reliability coefficient by Split-half technique

Domain	Total	Before	After
Behavioral aspect of language attitude	8	0.788	0.881
Cognitive aspect of language attitude	8	0.806	0.892
Emotional aspect of language attitude	8	0.624	0.768
<b>Total</b>	<b>24</b>	<b>0.662</b>	<b>0.796</b>

## 7. RESULTS AND ANALYSIS

The researchers examined the first null hypothesis:

*There are no statistically significant differences at ( $\alpha \leq 0.05$ ) between the mean scores of the experimental group subjects who learned vocabulary using vocabulary learning strategies and that of the control group subjects who learned vocabulary traditionally in the post vocabulary achievement test.*

In this examination, means and standard deviation of both groups' results on the post vocabulary test were computed. Independent Sample T-test was used to measure the significant differences. Table (11) below describes these results.





**Table 11. Independent samples t-test of differences between the experimental and the control group in the post vocabulary achievement test**

Question	Group	No.	Mean	Std. Deviation	T	Sig. value	sig. level
SUM	Experimental	30	70.133	3.192	15.461	0.000	sig. at 0.01
	Control	30	27.367	14.810			

"t" table value at (58) df at (0.05) sig. level equal 2.00  
 "t" table value at (58) df at (0.01) sig. level equal 2.66

The results of the post vocabulary achievement test in Table (11) show that the experimental group participants outperformed the control group. Despite the similarity in the proficiency level for both groups on the pre vocabulary achievement test (with mean score of 29.433 for the experimental group and 31.333 for the control group was), the scores in the post vocabulary achievement test were in favor of the experimental group. As shown in Table (11) above, T. computed value is larger than T. table value in the test, which means that there are statistically significant differences at ( $\alpha \leq 0.01$ ) in the total mean scores of the experimental group and that of the control group in the post vocabulary achievement test, in favor of the experimental group. The researchers here believe that using vocabulary learning strategies lead to autonomous learning which, in turn, leads to better learning and achievement. The results here support this claim since employing vocabulary learning strategies contributed to enhancing the learners' vocabulary achievement. The mean scores of the experimental group and the control group in the post vocabulary test reached (70.133) and (27.367) respectively. This finding proves that the null hypothesis cannot be accepted.

To show the effect size of vocabulary learning strategies on the experimental group achievement in the post vocabulary achievement test, the Effect Size technique (Affana, 2000:42) was applied in this study. The researchers computed " $\eta^2$ " using the following formula,

$$\eta^2 = \frac{t^2}{t^2 + df}$$

and "d" value using the following formula,

$$D = \frac{2\sqrt{\eta^2}}{\sqrt{1 - \eta^2}}$$

**Table 12. The table references to determine the effect size level ( $\eta^2$ ) and (d)**

Test	Effect Size		
	Small	Medium	Large
$\eta^2$	0.01	0.06	0.14
D	0.2	0.5	0.8

Table (12) above demonstrates the table references to determine the effect size level " $\eta^2$ " and "d" values. While, Table (13) below shows the effect size of vocabulary learning strategies of the post vocabulary achievement test questions.

**Table 13. The effect size of vocabulary learning strategies on the experimental group in the post vocabulary achievement test questions**

Question / Skill	t value	$\eta^2$	D	Effect Size
Question No. 1 Matching words with their synonyms	7.911	0.519	2.077	Large
Question No. 2 Choosing words according to context	12.425	0.727	3.263	Large
Question No. 3 Guessing from context	7.597	0.499	1.995	Large
Question No. 4 Word-definition matching	10.917	0.673	2.867	Large
Question No. 5 Translating L2 words into L1 words	16.535	0.825	4.342	Large
Question No. 6 Grouping word families	34.564	0.954	9.077	Large
<b>Total</b>	<b>15.461</b>	<b>0.805</b>	<b>4.060</b>	<b>Large</b>



Table (13) above shows that the effect size of vocabulary learning strategies is large on students' vocabulary achievement. This means that the effect of vocabulary learning strategies is significant. This large effect may be due to the activities and techniques, which were used to develop the students' vocabulary achievement.

The researchers examined the second null hypothesis:

*There are no statistically significant differences at ( $\alpha \leq 0.05$ ) between the mean scores of the experimental group subjects*

*who learned vocabulary using vocabulary learning strategies in the post vocabulary achievement test and that of the delayed vocabulary retention test.*

To test this hypothesis, means and standard deviation of both the post vocabulary achievement test and that of the delayed vocabulary retention test results were computed. Paired sample t-test was used to measure the significant differences. Table (14) below describes these results.

**Table 14. Paired sample t-test results of the differences between the post vocabulary test and that of delayed vocabulary retention test of the experimental group mean scores**

Question	Group	No.	Mean	Std. Deviation	T	Sig. value	sig. level
<b>Question No. 1 Matching words with their synonyms</b>	Post test	30	7.900	0.403	0.902	0.375	not sig.
	Delayed test	30	7.800	0.407			
<b>Question No. 2 Choosing words according to context</b>	Post test	30	8.000	0.000	1.439	0.161	not sig.
	Delayed test	30	7.933	0.254			
<b>Question No. 3 Guessing from context</b>	Post test	30	6.767	0.568	0.494	0.625	not sig.
	Delayed test	30	6.700	0.466			
<b>Question No. 4 word-definition matching</b>	Post test	30	23.733	0.868	1.246	0.223	not sig.
	Delayed test	30	23.467	0.776			
<b>Question No. 5 Translating L2 words into L1 words</b>	Post test	30	16.267	2.196	1.019	0.317	not sig.
	Delayed test	30	15.833	0.699			
<b>Question No. 6 Grouping word families</b>	Post test	30	7.467	0.507	1.159	0.256	not sig.
	Delayed test	30	7.167	1.177			
<b>SUM</b>	<b>Post test</b>	<b>30</b>	<b>70.133</b>	<b>3.192</b>	<b>1.858</b>	<b>0.073</b>	<b>not sig.</b>
	<b>Delayed test</b>	<b>30</b>	<b>68.900</b>	<b>1.749</b>			

"t" table value at (29) df at (0.05) sig. level equal 2.05

"t" table value at (29) df at (0.01) sig. level equal 2.76

Table (14) above shows that T. computed value is less than T. table value in the delayed vocabulary retention test, which means that there are no statistically significant differences at ( $\alpha \leq 0.05$ ) between the total mean score of the experimental group subjects in the post vocabulary achievement test and that of the delayed vocabulary retention test. The total mean score of the post-vocabulary achievement test was (70.133), while the total mean score of the delayed vocabulary retention

test was (68.900). This finding proves that the null hypothesis can be accepted and its alternative hypothesis rejected. Therefore, it is safe to say that there were no statistically significant differences between the experimental group students in the post vocabulary test, on the one hand, and in the delayed vocabulary retention test on the other.



The researchers tested the third null hypothesis:  
*There are no statistically significant differences at ( $\alpha \leq 0.05$ ) between the mean scores of the experimental group subjects who learned vocabulary using vocabulary learning strategies and that of the control group subjects who learned vocabulary*

*traditionally in the post application of the attitude scale towards learning English.*

In testing this hypothesis, means and standard deviations of both groups' results on the post application of the attitude scale were computed. The Independent Sample T-test was used to measure the significant differences. Table (15) below describes these results.

**Table 15. Independent samples t-test of differences between the experimental and the control group in the post application of the attitude scale**

Domain	Group	No.	Mean	Std. Deviation	t	Sig. value	sig. level
Behavioral aspect of language attitude	experimental	30	30.300	4.750	4.377	0.000	sig. at 0.01
	control	30	25.233	4.199			
Cognitive aspect of language attitude	experimental	30	28.600	3.962	4.262	0.000	sig. at 0.01
	control	30	24.600	3.276			
Emotional aspect of language attitude	experimental	30	26.267	9.366	4.044	0.000	sig. at 0.01
	control	30	18.967	3.168			
SUM	experimental	30	85.167	10.346	6.861	0.000	sig. at 0.01
	control	30	68.800	7.980			

"t" table value at (58) df at (0.05) sig. level equal 2.00

"t" table value at (58) df at (0.01) sig. level equal 2.66

As shown in table (15), T. computed value is larger than T. table value in the test, which means that there are statistically significant differences at ( $\alpha \leq 0.01$ ) between the mean scores of the experimental group and the control group in the post application of the attitude scale towards learning English in favor of the experimental group. The total mean score of the experimental group reached (85.167), whereas the mean score of the control group was (68.800). This finding proves that the null hypothesis cannot be accepted. and

indicates that using vocabulary learning strategies positively affected the attitudes of the experimental group participants' whereas the attitudes of their counterparts in the control group were not positive enough.

Table (16) below shows the effect size of vocabulary learning strategies on the experimental group subjects' attitudes towards learning English.

**Table 16. The effect size of vocabulary learning strategies on the experimental group in the post application of the attitude scale**

Domain	t value	$\eta^2$	d	Effect size
Behavioral aspect of language attitude	4.377	0.248	1.150	Large
Cognitive aspect of language attitude	4.262	0.238	1.119	Large
Emotional aspect of language attitude	4.044	0.220	1.062	Large
<b>Total</b>	<b>6.861</b>	<b>0.448</b>	<b>1.802</b>	<b>Large</b>

Table (16) shows that the effect size of vocabulary learning strategies is large on the students' attitudes towards learning English. This means that the effect of vocabulary learning strategies is significant. This large effect may be due to the activities and techniques that were used during teaching the students vocabulary.

### 8. DISCUSSION

In general, the results and data analysis section above indicated that the use of vocabulary learning strategies contributed effectively to developing the students' vocabulary achievement, retaining their vocabulary for a long time, and helped them develop a



positive attitude towards learning the English language. This in turn positively affected their vocabulary achievement and increased their desire to learning English. The researchers' findings are consistent with Al-Nammoura 's (2011) study, which assumed that using vocabulary learning strategies leads to autonomous learning, which in turn leads to better learning and achievement. The testing of the first null hypothesis uncovered that the significant differences between the experimental and the control groups was due to the effective use of the five-target vocabulary learning strategies in developing students' vocabulary achievement. This result is natural because matching words with definitions provided for them in the form of a list, which is relatively an easy task, is not demanding for the participants who got both training and guidance in learning vocabulary. The second highest mean score was in the case of translating L2 words into Arabic, which scored 16.267. Again, this is not a difficult task as what students were required to do was to give an L1 equivalent. Besides, this teaching and learning practice of learning vocabulary is not new for them and they expect to be tested in this skill. Choosing words according to context yielded a mean score of 8.000, which is relatively low compared with the two previously mentioned skills. The researcher believes that this is a very demanding task, as it requires students to change the part of speech of an item given to them, which demands deep knowledge of grammar. Besides, dictionary-using strategy is of little help here. Matching words with their synonyms yielded a mean score of 7.900, which is also relatively low compared with the three previously mentioned skills. These findings are consistent with Rahimy and Shams's (2012) study, which revealed a significant effect of vocabulary learning strategies on EFL learners' performance in a vocabulary.

Therefore, it can be concluded from all this that the use of vocabulary learning strategies is more effective than the use of traditional methods in developing students' vocabulary achievement. This means that the effect of vocabulary learning strategies is significant. This large effect indicates that when learners are well-trained and encouraged to utilize vocabulary learning strategies, their vocabulary knowledge is developed as a result. Thus, it is anticipated that including vocabulary learning strategies in the teaching and learning process ensures a better learning outcome. This result also demonstrates that using vocabulary learning strategies in the teaching-learning process encourages students to be dynamic and motivated when doing activities. With respect to the results yielded by testing the second null hypothesis, they demonstrated that the experimental group participants were good strategy users in both the post-vocabulary achievement test and the delayed

vocabulary retention test, with no statistically significant differences between the total mean scores of both tests. Based on this, the researchers are of the view that the experimental group participants' ability to recall or remember the vocabulary items they were taught inside the class, depended on the quality of teaching, the interests of the learners, and the use of innovative strategies such as vocabulary learning strategies, which were used in the teaching. The researchers also confirm that using vocabulary learning strategies by the experimental group subjects helped students retain and store vocabulary in their short-term memory and later in their long-term memory. The results also revealed that repetition as a vocabulary learning strategy was a very effective technique of transferring information into long-term memory and insuring retention of newly learned vocabulary items for a longer period. These results are consistent with Naeimi and Voon Foo's (2014) study, which revealed that repeating as a direct vocabulary learning strategy can cause to higher accomplishments of word storage.

The results of this investigation also indicated that retention depends on the amount of mental and emotional energy used in processing a word, and such meta-cognitive strategies assist emotional and mental processing of students. Thus, effective strategies such as vocabulary learning ones facilitated learning by actively involving learners in conscious efforts and deep mental processing to remember new words and retain them. It can be concluded, as a result, that using vocabulary learning strategies is effective in developing students' long term memory and that strategy training can significantly enhance long-term retention of vocabulary items. This indicates the long-term effect of using vocabulary learning strategies on vocabulary retention.

Finally, the results of testing the third null hypothesis showed that the experimental group participants did well on the post application of the attitude scale towards learning English and got the highest score in the total mean scores, which proves that there is a positive relationship between students' attitudes and achievement. These results confirmed that high motivation and positive attitude of students towards English language facilitated their English vocabulary achievement as a result of the effect of using vocabulary learning strategies. The results also highlight that using vocabulary learning strategies by the experimental group subjects helped them to have the interest and tendency in acquiring the target language, which in turn made students possess a positive attitude, be motivated and enthusiastic in language learning. Therefore, the experimental group participants' positive attitudes incorporated in language learning because it influenced their performance in acquiring the target language.



The researchers find that these positive attitudes of the experimental group participants resulted in an enthusiasm to study and learn the English language, which in turn affected their achievement and the desire to study English, whereas those students of the control group who possessed negative beliefs about learning English tended to develop class anxiety and negative attitudes. Consequently, these results prove that motivation is an important factor influencing students' success or failure in learning language and that students with higher levels of motivation do better than students with lower motivation levels. These results agree with Wu's (2013) study which suggested that teachers' encouragement of students for adopting the most useful and effective vocabulary learning approaches will definitely have a positive effect on their learning motivation and language performance.

It can be concluded that the use of vocabulary learning strategies is more effective than the traditional methods in developing the students' positive attitudes towards learning English. This large effect may be due to the activities and techniques, which were used during teaching the students using vocabulary learning strategies, which in turn affected their attitudes positively towards learning English language. In addition, using vocabulary learning strategies enables students to enhance their attitudes towards learning, in general, and towards learning English language in particular.

## 9. CONCLUSIONS & IMPLICATIONS

Based on the study results, the following conclusions and implications can be made:

The use of vocabulary learning strategies has a positive effect on the development of the vocabulary achievement of Palestinian students because when learners are aware of vocabulary learning strategies, they become more motivated to learn and actively participate in the learning process. Learners using vocabulary learning strategies feel secure and take their own responsibility for learning and they tend to take risks. Similarly, employing vocabulary learning strategies on the part of English language teachers gives them an opportunity to meet their learners' feelings, needs, and interests when teaching vocabulary. More importantly, vocabulary learning strategies reduce the gap between teachers and learners when interacting together. Integrating vocabulary learning strategies into language courses provides learners with a greater opportunity to make language learning an autonomous process as they enable students to develop positive attitudes towards learning the English language, which in turn fruitfully affects their vocabulary achievement and increases their desire to learn English.

## 10. RECOMMENDATIONS

In light of the study results, the study provides several recommendations for curriculum designers and decision-makers, school administrators and supervisors, teachers of English, and to students. These are as follows:

### 10.1. Recommendations for Curriculum Designers and Decision-Makers

- a) Curriculum designers and decision-makers should: Consider strategies such as vocabulary learning strategies when designing activities in the curricular textbooks.
- b) Limit the students' number inside the classroom to enable teachers to cater to individual differences of students and to implement modern strategies of teaching, such as vocabulary learning strategies.
- c) Incorporate within the Teacher's Guide, and enrich it with, activities and modern strategies such as vocabulary learning strategies.
- d) Train students on how to use vocabulary learning strategies and regard this training as a needed aspect of lexical learning that deserves future consideration by all parties involved in English language teaching.
- e) Embed explicit vocabulary strategy instruction within the regular English language classes.

### 10.2. Recommendations for School Administrators and Supervisors

- a) School administrators and supervisors should: Hold training and capacity-building courses and workshops to empower and motivate teachers to use innovative strategies, such as vocabulary learning strategies in the teaching of English, and to integrate vocabulary learning strategies in regular language lessons.
- b) Encourage teachers to participate in exchange visits and convene periodical meetings to discuss new strategies of teaching such as the vocabulary learning strategies.

### 10.3. Recommendations for Teachers of English

Teachers of English should:

- a) Provide support for learners to enable them to learn on their own through using new strategies such as the vocabulary learning strategies.
- b) Hold training sessions on how to use vocabulary learning strategies in teaching.
- c) Be committed to raise the awareness of the low achievers about the importance of learning English vocabulary.



- d) Facilitate the teaching and learning process, in which the high-achievers can help the low-achievers within mixed-abilities groups, to practice different vocabulary learning strategies, so as to learn and consolidate new English words. As explained by Nosidlak (2013:55), "Using advanced students' experience and expertise in the field of vocabulary learning may save a lot of time and effort for their younger and less proficient colleagues".
- e) Share vocabulary learning experiences of high achievers with low achievers in order to encourage them learn and study new words, as well as, to enhance their English language achievement.
- f) Be aware of vocabulary teaching strategies and think of ways to improve students' vocabulary learning through upgrading their own theoretical knowledge about vocabulary learning.
- g) Develop and improve new vocabulary teaching strategies that suit their students and help them accept the idea of changing their practices.
- h) Train students on using effective vocabulary learning strategies to make them independent vocabulary learners.
- i) Raise their students' awareness of the importance of using vocabulary learning strategies in enhancing their vocabulary knowledge and autonomous learning.
- c) This study investigated the correlation between vocabulary learning strategies and the students' vocabulary achievement level. However, further research could investigate how other variables like learners' motivations and gender differences correlate with learners' use of vocabulary learning strategies.
- d) Conducting studies to investigate the most and least frequent vocabulary learning strategies of secondary school English language learners.
- e) Carrying out studies to investigate the impact of vocabulary learning strategies and their contribution to developing reading comprehension.
- f) Designing studies to investigate the impact of using vocabulary learning strategies of good and poor English language learners.
- g) Conducting studies to investigate gender differences regarding using vocabulary learning strategies.

#### 10.4. Recommendations for Students

Students are recommended to:

- a) Practice and use the vocabulary learning strategies to be independent vocabulary learners.
- b) Learn how to develop positive attitudes towards English because such attitudes motivate students and help them exert the necessary effort needed to learn English.

#### 11. SUGGESTIONS FOR FURTHER RESEARCH

In light of the study findings, the following areas of research can be explored:

- a) Conducting studies to investigate the impact of vocabulary learning strategies on other variables such as creative thinking, critical thinking, and self-esteem.
- b) The current study investigates effectiveness of vocabulary learning strategies taking five vocabulary learning strategies as examples. Further research could target a greater variety of vocabulary learning strategies.

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