

The Effect of Using Semantic Maps on Vocabulary Learning among Jordanian EFL 8th Grade Students

Bassmah Fraihat^{1*}.

Ministry of Education, Amman, Jordan

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*Corresponding author:

Ministry of Education, Amman, Jordan

Email: bassmahf@yahoo.com.

Abstract

This study investigated the effect of using semantic maps on vocabulary retention among Jordanian EFL 8th-grade students. The participants were 83 female eighth-grade students from two intact sections at Balleh Secondary School for Girls. One group was assigned as the control group, which was taught according to the guidelines of the teacher's book, while the other group served as the experimental group and was taught using a semantic map-based instructional program. The instructional program lasted for eight weeks during the first semester of the 2018-2019 academic year. Data were collected using pre- and post-vocabulary tests. The findings showed statistically significant differences (at $\alpha \leq 0.05$) between the two groups' performance on the vocabulary tests, favoring the experimental group. The improvement in students' vocabulary items is likely attributed to the use of semantic maps in teaching vocabulary. As a result, students expanded their vocabulary. Several recommendations were proposed for EFL researchers and the Ministry of Education.

Keywords: Semantic Maps; Vocabulary Learning, EFL Learners.

1. Introduction

Learning vocabulary items is crucial for EFL Eighth grade students in Jordan since it helps them improve themselves in various skills such as reading comprehension, writing, speaking and listening. Vocabulary learning enables students communicate effectively and express their own ideas. Therefore, it supports learning the four skills of the language. According to Sedita (2005), vocabulary is one of the five essential components of reading instruction; the others are phonemic awareness, phonics and word study, fluency, and comprehension.

It is worth mentioning that in Jordan English is taught as a foreign language in basic and secondary stages. However, Jordanian students face most of their problems in having sufficient vocabulary items. Because of this problem, teachers need to use appropriate strategies that respond to students' styles such as semantic mapping (Hedgcock & Ferris, 2009). Semantic mapping is a visual strategy that is used to display the connection between words. It may be beneficial for weak students. Jonassen; Beissne, and Yacci (1993) state that using semantic mapping facilitates learning vocabulary and improves the ability to recall words. According to Omaggio (2001)

semantic mapping includes building a graphic organization of associated clusters of a key word. It can be considered as a motivation since it may encourage the learner to search for meaning of the vocabulary items by classifying words in categories to show the connection between them.

1.1 Review of the Related Literature

This section is divided into two parts. The first part concerns with the theoretical literature of the study, and the second part sheds light upon the empirical studies conducted in the field and is relevant to the current study.

1.1.1 Empirical Studies

On the practical level, some research has been done on using semantic mapping in teaching vocabulary to explore the effects of using this strategy. Nilforoushan (2012) investigated the effect of semantic mapping (as a post-reading strategy) on sixty EFL intermediate female learners' awareness of two affective dimensions, evaluation and potency dimensions of deep vocabulary knowledge. The study revealed that students in the experimental group were aware of the affective domains due to using semantic mapping.

Raiziene and Grigaite (2005) examined the effect of using semantic mapping strategies on developing child's thinking skills. They described semantic mapping as a strategy in which information is categorically structured in a visual representation. They examined the cognitive outcomes stimulated by the teachers' use of semantic mapping as a strategy for accelerating two cognitive operations: classification and seriation in a child's seventh year. The study revealed that the experimental group who participated in the training was creative. It also revealed that the semantic mapping training is suitable for stimulation of classification and seriation operations' development.

Thuy (2006) conducted a study on Grade 11 students at Tran QuocToan High School to explore the effects of semantic mapping on students' memorizing and students' attitudes towards this method. Three instruments were employed to collect both quantitative and qualitative data: the tests on vocabulary knowledge, the questionnaire on the students' perceptions towards semantic mapping, and the interview on the students' attitude towards semantic mapping. The findings indicated that the students in the experimental group outperformed those in the control condition in retaining word meanings. The results also proved that the students had positive attitudes towards semantic mapping.

Abdollahzadeh and Amiri (2009) investigated the effectiveness of vocabulary instruction via semantic mapping on two hundred and sixty-four intermediate adult Iranian EFL learners from different language institutes in Orumieh in Iran. The study revealed using semantic maps to teach vocabulary items had a positive effect on the vocabulary learning of adult Iranian EFL learners.

Bani Salameh (2009) explored the effects of a program based on semantic mapping and questioning reading strategies on Hashemite University students' reading comprehension. The findings of the study revealed that the students who studied the redesigned reading comprehension texts based on semantic mapping performed better than the students who studied the material following the instruction in the New Head Way Plus textbook.

In general, the literature on using semantic mapping has been very encouraging in improving readers' vocabulary learning. Moreover, there seems to be no experimental studies at

all (to the best knowledge of the researcher) on the effect of semantic mapping as a strategy conducted among Jordanian EFL learners.

1.1.2 Theoretical Framework

Much information has been written about the benefits of semantic mapping strategy in facilitating students' learning vocabulary through increasing their vocabulary items and through helping students in connecting between related words and improving students' motivation. Bleckley (2008) reported that the semantic mapping is beneficial approach that involves associating new words with other words already present in the learners' mental lexicon. Debate (2006) indicated that semantic mapping is a useful strategy that helps teachers in assessing students' prior knowledge.

2. Problem of the Study

Throughout my years of practicing my job as EFL supervisor at Jordan Ministry of Education, it has been noticed that the Jordanian EFL Eighth Grade Students face difficulties in expanding and recalling vocabulary items which is clear in their evaluation. The problem may due to the lack of the appropriate strategies that teachers use in teaching vocabulary items. Amoush (2012) reported that most EFL Jordanian do not build relationships between the terms in the text to build up the meaning.

Therefore, the main concern of this study is to explore the effects of semantic mapping on the Jordanian EFL Eighth Grade Students' learning vocabulary since semantic mapping can be modified as effective strategy for expanding words and connecting between them.

3. Objectives of the Study and its Importance

3.1 Objectives of the Study

This study aims mainly at investigating the effect of using semantic mapping on Jordanian EFL Eighth Grade students' learning vocabulary. It aims at answering the following question: To what extent does semantic mapping improve Jordanian EFL Eighth Grade Students' learning vocabulary?

3.2 Studying Importance

To the researcher's best knowledge, a few studies have been conducted to investigate the role of semantic mapping on Jordanian students' learning vocabulary. This study specifically focuses on the role of semantic mapping in developing Jordanian eighth Grade students' learning vocabulary. Thus, the English language curriculum designers may find in this study some practical implications for developing students' vocabulary learning.

The study may have some pedagogical implications. Teachers may benefit from the results of the study and become more informed regarding improving vocabulary learning. Moreover, the findings may be beneficial to the Jordan Ministry of Education which may take the recommendations into consideration when designing new curricula.

4. Study Terms

The following terms will have the associative meaning whenever they appear in the study.

Semantic mapping

is using mind maps to teach vocabulary items about a certain topic visually in terms of classifying and connecting between words.

Vocabulary learning

knowing the meaning of a word and how it connects to other words. In this study, vocabulary learning is measured by the students' scores on the vocabulary test.

5. Methods

5.1 Sampling, Instrumentation, Data Collection and Data Analysis

To achieve the purpose of the research, a sample of two intact eighth-grade classes was purposefully drawn from Balila Secondary school for girls, Jerash, Jordan since the researcher works in Jerash Directorate of Education. One 39-student section was randomly assigned to the control group and another 41-student section to the experimental group. The control group was taught by the conventional methods outlined in the Ministry-prescribed Teacher Book whereas the experimental group was taught through the instructional program. The two groups were pre- and post-tested on vocabulary. Between the pre- and post-test, the instructional program, which comprises the vocabulary items of seven reading comprehension texts, was implemented over a seven-week interim, with two 40-minute sessions a week.

To answer the research question, which addressed the potential effect of using semantic mapping on vocabulary learning, means, standard deviations, adjusted means, and MANCOVA were used to determine any potentially significant differences in the participants' vocabulary learning, which can be attributed to the treatment.

Validity and Reliability of the Instrument

The pre-post-vocabulary test was checked by a jury of two university professors and four English supervisors to establish the validity of the instructional program. The jury made a number of suggestions which were all taken into account in the final versions of the instrument.

To establish the reliability of the pre-post- vocabulary test, it was administered twice to a sample of 20 students, who were excluded from the main sample of the study, with a two-week time lapse. Pearson correlation coefficient between the first and the second administration amounted to 0.85 which was deemed suitable for purposes of the current research.

6. Findings of the Study

To answer the research question, means and standard deviations of the students' pre- and post-test scores were calculated, as shown in Table 1 below.

Table (1): Means and Standard Deviations of the Students' Pre-/Post-Vocabulary Test Scores.

Std. error	Adj. mean	Post		Pre		n	Group	Vocabulary Learning Domains
		Std. dev	Mean	Std. dev	Mean			
0.36	11.91	4.39	11.87	4.72	9.68	39	Control	Classifying and connecting words
0.36	13.31	3.64	13.34	4.47	9.81	41	Experimental	

0.40	8.13	3.76	8.12	4.21	6.63	39	Control	Identifying meaning of new words
0.40	8.35	4.36	8.37	4.87	6.60	41	Experimental	
0.27	3.35	3.17	3.31	3.23	2.60	39	Control	Defining words
0.69	34.71	12.78	34.62	12.55	23.02	41	Experimental	

Table 1 shows observed differences between the participants' mean scores in vocabulary on the post-test, in favor of the students in the experimental group. To determine the potential statistical significance of these differences (at $\alpha \leq 0.05$), MANCOVA was used to compare the participants' performance on the vocabulary post-test, as shown in Table 2.

Table (2): MANCOVA Results of the Students' Scores on Post- Test Vocabulary.

Eta	Sig	F	MS	df	SS	Vocabulary Learning Domains	Source
0.08	0.009*	7.13	39.09	1	39.06	Classifying and connecting words	Way
0.002	0.70	0.11	0.94	1	0.95	Identifying meaning of new words	
0.09	0.006*	7.86	24.06	1	24.09	Defining words	
0.25	0.000*	28.12	563.21	1	563.21	Overall	
			5.47	77	421.67	Classifying and connecting words	Error
			6.72	77	517.83	Identifying meaning of new words	
			3.07	77	236.74	Defining words	
			20.02	77	1542.17	Overall	
				80	1375.56	Classifying and connecting words	Corrected total
				80	1369.76	Identifying meaning of new words	
				80	69.41	Defining words	
				80	13295.55	Overall	

Table 2 shows a statistically significant effect (at $\alpha \leq 0.05$) in the students' mean scores on the vocabulary post-test, as a result of the instructional program which is based on using semantic maps. Note also that the practical significance of the treatment is 0.25 (from Table 2 above), which indicates a high effect for the implementation of the instructional program.

6.1 Discussion of the Findings

The findings revealed statistically significant differences (at $\alpha \leq 0.05$) between the learning vocabulary of the participants who have received the semantic maps-focused instruction and those who have not, which may signal the effectiveness of using semantic maps in teaching vocabulary items .

It seems that using semantic maps improved students' ability in classifying words and making connection between them and thus expanding the vocabulary items. This result supports the findings of Bani Salameh's (2010), who claimed that using semantic maps increases students' vocabulary and thus is regarded as an appropriate strategy for teaching vocabulary. It also goes in harmony with the findings of Zaid (1995) who confirmed the importance of using semantic mapping as a great vocabulary strategy.

7. Recommendations

In light of the results of this study, it is recommended that the EFL researchers should conduct a content analysis on Action Pack series for Jordanian students in order to examine the

inclusion of semantic maps in vocabulary activities. The researchers also can investigate the effect of training Jordanian EFL teachers on using semantic maps in teaching vocabulary items. Moreover, they should investigate the effect of using semantic maps in improving students' reading comprehension skills.

Conflicts of interest statements

All authors declare that they have no conflicts of interest.

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