Training Low-Achiever EFL Learners with Metacognitive Strategy Training for Effective Vocabulary Retention

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There is ample research on the vocabulary learning strategies used by EFL and ESL learners. Moreover, many researchers have attempted to discern the effectiveness of teaching vocabulary learning strategies instruction. However, the impact of using metacognitive strategies along with vocabulary learning strategies on weak language learners has not been researched. The aim of this paper is to report on the effects of training low-achiever English as a foreign language learners with vocabulary learning strategies along with metacognitive strategies on vocabulary acquisition. Two B1 level groups of students were assigned as treatment and control groups at a university in Istanbul, Turkey. A Vocabulary Strategy Use Survey was given to identify the vocabulary strategy use of the subjects at the outset of the study. The treatment group was trained on vocabulary learning strategies combined with metacognitive strategy training. The control group studied the same words without any training. A vocabulary test was administered to both groups as a post-test and the results were compared. The findings of the Post-Test demonstrated that training weak language learners with vocabulary learning strategies along with metacognitive strategies has a positive impact on helping these learners increase their lexical knowledge, as the experimental group scored higher on the post-test compared to the control group.

Keywords: metacognition, vocabulary learning, vocabulary learning strategies, metacognitive strategies

1 Introduction

Learning English is a requirement for the majority of university students as it is commonly accepted as the language of academic and scientific research (Altbach, 2007). However, this process can prove to be a struggle for those who have difficulty in grasping a new language. Rubin (1975) was one of the first authors to suggest researching the habits of "Good Language Learners" and teaching these habits to weak learners. It is suggested that struggling language learners might be able to overcome the challenges of learning a foreign language by implementing these good language learning habits.

Vocabulary knowledge forms the basis of learning a language as it allows learners to understand and communicate in the target language (Nation, 2000). However, many language learners face challenges in acquiring great number of words in a limited time. Hence, the focus has shifted to vocabulary learning strategies from vocabulary teaching techniques. A great deal of research has been done to profile vocabulary learning strategies applied by language learners (Oxford & Crookall, 1990; Schmitt & Rae, 1993; Gu & Johnson, 1996).

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There have also been studies to learn the effectiveness of teaching these strategies to EFL learners (Rasekh & Ranjbary, 2003; Tezgiden, 2006).

However, currently there is not sufficient data about the effectiveness of teaching vocabulary learning strategies along with metacognitive strategies to low-achiever learners in an EFL setting.

The current study has attempted to answer the following research questions:

(1) What are the vocabulary learning strategies used by under-achieving EFL students?

(2) Is it beneficial to train under-achieving students in vocabulary learning strategies along with metacognitive strategies?

The significance of this paper lies in the fact that it focuses on under-achieving language learners at a tertiary level. In addition, it emphasizes the use of vocabulary strategies along with metacognitive strategies when studying words in L2.

2 Literature Review

There is substantial research about the reasons why some EFL learners fall behind in learning a foreign language while others achieve great success (Gan, Humphyres, & Hamp-Lyons, 2004; Tekir, 2021; AlShammari, 2022). Gan et al. (2004) did qualitative research through interviews with Chinese EFL learners to find out the reasons behind the success and failure of EFL learners. Their findings revealed that there was a multitude of causes for student failure; insufficient basic knowledge of vocabulary and grammar, cultural differences between L1 and L2, the use of ineffective strategies used to learn new words, low self-confidence, unsupportive learning environments, a failure to implement metacognitive strategies like setting learning goals, and a lack of self-initiation for learning a foreign language were among the reasons reported by unsuccessful language learners. Tekir (2021) also completed a study illustrating the causes of Turkish EFL learners' speaking anxiety; insufficient exposure to L2, inadequate opportunities to practice, ineffective prior learning experiences, and different expectations from EFL learners at a tertiary level (such as a greater focus on creativity). Finally, Alshammari (2022) attempted to discover the causes of the failure of Saudi Arabian learners to learn English in a teaching and learning context. The results of this study demonstrated the difficulties that Saudi learners had experienced; they preferred using lower-order thinking skills such as rote memorization, they possessed low intrinsic motivation, and they also had low self-esteem. The results of these three studies share similarities describing the causes of the failure of low performing language learners. The main issues can be listed as a lack of motivation to learn a foreign language and a lack of self-efficacy and effective memory skills, which are considered a necessity in acquiring and retaining higher levels of lexical knowledge.

Vocabulary is an essential component of language acquisition. However, learning a word involves arduous work, as there are many features to learning and retaining a new word. Foreign language learners are required to learn the meaning, pronunciation, spelling, collocations, parts of speech and the register of that word (Thornbury, 2002). Authors have also categorized lexical knowledge as either passive or active vocabulary knowledge. The former refers to the words that learners recall when they see them in a reading text or hear them spoken by another person. Conversely, the latter refers to words that learners actively use when they write and speak in English. It is suggested that learners' passive vocabulary knowledge tends to be larger than that of their active one, since they need to remember more features of the word when they try to use them actively (Nation, 2000). The current study focused on the passive lexical knowledge of the EFL learners particularly in reading comprehension.

As it is a daunting process to master a foreign language, many researchers proposed the use of effective language learning strategies to address the learning challenges low-performing EFL learners face (Oxford, 1990; Chamot, 2005; Cohen, 2011). The focus of the current study is the use of vocabulary learning strategies and metacognitive strategies in order to effectively utilize these strategies.

2.1 Vocabulary Learning Strategies

Substantive research has been carried out to investigate vocabulary learning strategies implemented by language learners (Oxford & Crookall, 1990; Schmitt & Rae, 1993; Gu & Johnson, 1996). In the current training, Schmitt's (1998) taxonomy of vocabulary learning strategies was used as it provides a comprehensive framework for identifying the techniques students use when learning new words in a foreign language. The taxonomy encompasses two main categories which are discovery and consolidation strategies, as illustrated in Table 1.

Table 1
Vocabulary Learning Strategies by Schmitt (1998)

Discovery Strategies	Determination strategies	-Analyze part of speech, - Analyze affixes and roots, -Check for L1 cognate, -Analyze any available pictures or gestures, -Guess from textual context, -Bilingual dictionary, -Monolingual dictionary, -Word lists, -Flash cards
	Social strategies	-Ask teacher for L1 translation -Ask teacher for paraphrase or synonym of new word -Ask teacher for a sentence including the new word -Ask classmates for meaning -Discover new meaning through group work activity
Consolidation Strategies	Memory strategies	-Study word with pictorial representation of its meaning, -Image word's meaning, -Connect word to a personal experience, -Associate the word with its coordinates, -Connect the word to its synonyms and antonyms, -Semantic maps, -"scales" for gradable adjectives, -PEG method, -Loci method, -Group words together to study them, -Group words together spatially on a page, -Use new words in sentences, -Group words together within a storyline -Study the spelling of a word, -Study the sound of a word, -Say new word aloud when studying, -Image word form, -Underline initial letter of the word -Configuration, -Use keyword method -Affixes and roots, -Part of speech, -Paraphrase the words meaning, -Use cognates in study, -Learn the words of an idiom together, -Use physical action when learning a word, -Use semantic feature grids
	Cognitive strategies	-Verbal repetition, -Written repetition, -Word lists -Flash Cards, -Take notes in class, -Use the vocabulary section in your book, -Listen to tape of word lists, -Put English labels on physical objects, -Keep a vocabulary notebook
	Metacognitive strategies	-Use English-language media (songs, movies, newscasts, etc.), -Testing oneself with word tests -Use spaced word practice, -Skip or pass new word -continue to study word over time
	Social strategies	-Study and practice meaning in groups, -Teacher checks students' flashcards or word list for accuracy, -Interact with native speakers

2.1.1 Discovery strategies

Discovery strategies are used by language learners to explore and uncover the meanings of unknown words. They are grouped into two sub categories, which are determination and social strategies.

Determination strategies are applied by individuals in order to discover the meanings of words on their own. These strategies include utilizing dictionaries, guessing the meaning from context, analyzing parts of speech, affixes and roots, checking for L1 cognates, and using word lists and flashcards.

Social strategies are also used to find out the meanings of the words, yet they involve communicating with other people. For instance, if learners want to find out the meaning of an unknown word, they ask their teacher or classmates for the meaning.

2.1.2 Consolidation strategies

The focus of consolidation strategies is to reinforce and solidify newly acquired words into long-term memory. These strategies are classified into four groups; memory, cognitive, metacognitive, and social strategies.

Learners make use of *memory strategies*, which emphasize the use of mnemonic techniques and memory aids to enhance the retention of vocabulary. These strategies include mnemonic devices like acronyms, visualization, and creating memorable associations between words and their meanings. Harnessing these techniques can make the vocabulary learning process more engaging and memorable, ultimately facilitating better recall and application of newly acquired words in their language use.

Cognitive strategies are also utilized to recall words such as memory strategies. However, the main difference between the two is that cognitive strategies involve oral and written repetition, rather than making meaningful connections and associations with the newly encountered word. Many students who come from more traditional educational backgrounds have a strong tendency to use these methods to acquire new words.

Metacognitive strategies are conscious efforts applied by the language learners to acquire new words. These strategies encourage learners in taking greater responsibility for their own learning. Therefore, they test themselves with word tests, use spaced word practice, skip or pass an unknown word and continuing to study that new word over time. These strategies also involve attempting to communicate with native speakers of the target language in order to practice the words.

Social strategies can be used by learners not only to discover the meanings of new words, but also to consolidate words. These strategies highlight the role of interpersonal interactions in improving lexical knowledge. Social strategies encompass activities like conversation, discussion, and collaborative learning, in which learners interact with native speakers or fellow learners to practice and expand their vocabulary. Social engagement in language learning fosters real-world communication and contextual understanding of words, making them more relevant and more memorable. Integrating these types of consolidation strategies into the learning process not only helps language learners build vocabulary, but it also helps them gain confidence in learning and retaining new words.

Oxford (2011) advices the selection of appropriate strategies for certain tasks in order for these strategies to be effective. The author also suggests the use of a combination of strategies for more encounters and forming more personal links with the input.

2.2 Metacognitive Strategies

Dirkes (1985) describes metacognition as being aware of our own learning process. The author adds that the main metacognitive strategies are; (1) Connecting new information to older knowledge; (2) Selecting strategies consciously; (3) Planning, monitoring and evaluating one's own thinking processes. Oxford (2011) states that successful language learners commonly use metacognitive strategies. According to the author, there are eight steps that these learners take to acquire L2. These steps are: (1) paying attention; (2) planning for cognition; (3) obtaining and using resources for cognition; (4) organizing for cognition; (5) Implementing plans for cognition; (6) orchestrating cognitive strategy use; (7) monitoring cognition; and (8) evaluating cognition.

A strong relationship between employing metacognitive strategies and developing autonomy has been stated by many researchers (Kosar & Bedir, 2015; Marantika, 2021). These authors stated that learner autonomy is described as taking responsibility for one's learning and making conscious decisions based on the challenges faced during the learning process. This means learners should actively become involved in their own learning process. According to the results of a study done by Gan, Humphyres, and Hamp-Lyons (2004), low-performing language learners usually lack autonomy.

2.3 Metacognitive Strategy Training Models

Three main strategy training models, which share some similarities, have been proposed over the last 20 years (Anderson, 2002; Chamot, 2005; Oxford, 2011). In Anderson's (2002) model, the steps are: (1) preparing and planning for learning; (2) selecting and using learning strategies; (3) monitoring strategy use; (4) orchestrating various strategies; and (5) evaluating strategy use and learning. The stages in Chamot's (2005) model are: (1) planning; (2) monitoring; (3) problem-solving; and (4) evaluating. Finally, Oxford's model is composed of eight phases, which are: (1) paying attention; (2) planning; (3) obtaining and using resources; (4) organizing; (5) implementing plans; (6) orchestrating strategy use; (7) monitoring; and (8) evaluating. These metacognitive strategy training models share similarities, as they all propose identifying the prevailing strategies in students as a first step. They then present new strategies which build on existing ones. Furthermore, they all suggest ample practice and a conscious evaluation of a learners' strategy use as a vital part of the process.

3 Study

Before the training, both groups were given a vocabulary learning strategies questionnaire and a vocabulary achievement test. Then, the students in the treatment group were trained with an 8-step metacognitive strategy model that was proposed by Anderson (2002) along with vocabulary learning strategies categorized by Schmitt (1998) for five weeks. During the 5-week training, the students in the treatment group kept a vocabulary notebook and a learner portfolio evaluating their learning processes. At the end of the training, both groups received a vocabulary achievement test and their scores were compared. Finally, some students in the treatment group were interviewed.

The training materials were created and adapted by the researcher. Each week, vocabulary learning strategies were presented in the first session, followed by student practice in the second session focusing on new vocabulary from that week's word list. After working on their own, students were encouraged to share their own personal vocabulary learning strategies with their classmates. At the end of every week, students were tasked with evaluating the effectiveness of the vocabulary learning strategies they had used that week. They were

encouraged to take notes on their personal progress for that week. They reflected on their feelings about their progress or lack thereof.

3.1 Setting and Participants

The subjects were attending a preparatory program at a university in Istanbul where they had to learn English prior to continuing their studies in their English medium majors. It is an intensive English program with 24-contact hours per week. The majority of the students in the program complete it in about a year. However, the subjects in the current study had been in the program repeating levels for over a year. Overall, they had low-motivation and low attention spans. They also had behavioral issues in the classroom, poor memory skills, and they lacked study skills. They tended to put the blame on the institution for having artificially high expectations of them to master English in such a short time. Furthermore, they reported that they did not need to learn English due to the technological environment at that time. For example, many pointed to programs and applications such as Google Translate and the use of Turkish subtitles in non-Turkish movies and television programs they watched. Some of them also stated they possessed a lack of language learning aptitude as a primary source of their failures. The students in the experimental group were also quite resistant to taking part in any sort of training or academic work related to language learning as they had low self-esteem.

34 pre-intermediate (B1) level students who had failed different levels multiple times participated in the research. All the subjects had started the program in A1 (starter) level more than a year before. There were 17 students in each group and the groups were designated as treatment and control groups. The students in each group studied the same words which were required by the institution. Each level was an 8-week cycle and the experimental group received training on vocabulary learning strategies along with metacognitive strategies for five of the eight weeks. The other group continued their classes as usual.

3.2 Instruments

Both quantitative and qualitative methods were used to gather data. A vocabulary learning strategies questionnaire, a vocabulary achievement test, learner portfolios, and student interviews were used to collect data.

3.2.1 Vocabulary learning strategies questionnaire

A vocabulary learning strategies questionnaire was designed, based on the taxonomy of vocabulary learning strategies listed by Schmitt (1998). It is a 5-point scale survey in which subjects indicated how often they used the strategies from 1 (never) to 5 (always). The lists of strategies identified by Schmitt (1998) are categorized under the umbrellas of either discovery strategies or consolidation strategies. Moreover, these two categories are further classified into sub categories. Hence, each item in the questionnaire refers to one of these strategies.

3.2.2 Vocabulary achievement test

A vocabulary achievement test was given as a pre-test and a post-test to learn the subjects' vocabulary knowledge. The vocabulary items were limited to forty words with forty multiple-choice cloze type questions. The words were selected from the vocabulary list that was assigned by the institution. According to the Cambridge Advanced Learners Dictionary, four words were from the first 1000 most frequently used words in English (K1), seven of them were from the 2000 most frequently used English words (K2) and finally twenty-nine of the words were from the academic word list (AWL). The institution aimed to focus more on teaching lower frequency words along with academic vocabulary as the students were being prepared for their

English medium classes in their majors. As a result, the majority of the words on the vocabulary achievement test were low frequency words, which necessitated multiple encounters in order to be acquired. These words were also considered more difficult to remember. The questions were primarily aimed to assess the students' passive vocabulary knowledge at the sentence level.

3.2.3 Learner portfolios

Yang (2003) suggests many advantages of having students keep learner portfolios during strategy-based instruction. The author indicates that these portfolios can allow learners to reflect on their own learning processes by assessing their strengths and areas which required improvement. In turn, this allowed them to adapt and refine their approaches to vocabulary learning and develop autonomy along the way.

Students in the treatment group were given learner portfolios to record their experiences in using vocabulary learning strategies on a weekly basis. The portfolio included a list of vocabulary learning strategies to be used over a period of five weeks, the list of forty target words to be covered, questions about the difficulty of learning words, challenges students faced in the application process to learn words, and the strategies that worked or did not work for them. Learner portfolios helped elicit invaluable data about the effectiveness of employing metacognitive strategies and students' views on their own learning issues and the training.

3.2.4 Interviews

Interviews can help clarify the answers given by the subjects, provide a deeper understanding of participants' views and experiences during the research process, and probe more detailed information enhancing the depth of the data gathered (Adhabi & Anozie, 2017). A whole class discussion was initiated by the researcher after the last training session and the researcher asked some open ended questions to pairs of students to get their opinions about the effectiveness of the study.

4 Findings and Discussion

4.1 Data from the Vocabulary Learning Strategies Questionnaire

Table 2

Means and Standard Deviations for the Most Commonly Used Vocabulary Learning Strategies Classified by Schmitt (1998)

	N	Minimum	Maximum	Mean	Std. Deviation
Determination	34	2	4	3,26	,459
Social Discovery	34	2	4	2,86	,683
Memory	34	1	4	2,74	,656
Metacognitive	34	1	4	2,66	,650
Social Consolidation	34	1	5	2,62	1,008
Cognitive	34	1	4	2,50	,677
Valid N (listwise)	34				

A look at the vocabulary learning strategies questionnaire results in Table 2 tells us that Determination Strategies (M=3,26, SD=,459) are the most commonly used strategies with moderate use, followed by Social strategies (M= 2,86, SD=,683) among the discovery strategies used by these subjects. Among the consolidation strategies Memory Strategies (M=2,74, SD=,656) are the most commonly used ones followed by Metacognitive

Strategies (M=2,66, SD=,650), Social Consolidation strategies (M= 2,62, SD=1008) and Cognitive strategies (M=2,50, SD=,677). In this case it is interesting to see that cognitive strategies like written repetition or keeping word lists were not among the highly used vocabulary learning strategies as these strategies are thought to be commonly used by students with traditional educational backgrounds. In addition, metacognitive strategies rank lower on the list. While these strategies require greater processing skills, they would actually be more useful for learners in acquiring new words. As a result, the strategies listed above are the most commonly used vocabulary learning strategies by under-achieving language learners in the current context.

Table 3
Means and Standard Deviations for the Most Commonly Used Vocabulary Learning Strategies Adapted from the List by Schmitt (1998)

Rank	Strategy No	Strategy	Strategy Category	Mean	SD
1	2	When I do not know the meaning of a word, I look it up in a bilingual dictionary.	DET	4,53	,706
2	14	When I do not know a word, I try to guess it by connecting it to a word in Turkish.	DET	4,00	1,044
3	4	If I do not know a word, I ask the teacher to translate it into Turkish.	DET	3,97	,904
4	20	I try to remember words by connecting them to something in Turkish (e.g. sabotage-sabotaj)	MEM	3,91	1,055
5	46	When I learn a new word, I say it many times to remember its pronunciation and meaning.	COG	3,85	1,019

Table 3 presents the top five strategies employed by the subjects. Looking up an unknown word in a bilingual dictionary (M=4,53, SD=,706) has the highest mean score, followed by guessing the meaning of an unknown word by connecting it to a word in Turkish (M=4,00, SD=,1044), asking a teacher for the L1 equivalent of an unknown word (M=3,97, SD=,904), remembering the meaning of a new word by its L1 cognate (M=3,91, SD=1,055) and auditory repetition to transfer the word into long term memory (M=3,85, SD=1,019).

Table 4.
Means and Standard Deviations for the Least Commonly Used Vocabulary Learning Strategies

Rank	Strategy No	Strategy	Strategy Category	Mean	SD
62	34	I learn new words by writing them on a piece of paper in a particular shape. (e.g. : animal dog Δ cat)	MEM	1,82	,968
63	50	I take the cards, which have English words on one side and the Turkish meaning on the other side, wherever I go.	COG	1,76	1,350
64	55	While watching TV, I write down the words or phrases I hear.	COG	1,74	1,024
65	43	When I learn new words with similar meanings, I draw a grid to remember their meaning. <table><tr><td></td><td>hands</td><td>sky</td><td>weather</td></tr><tr><td>Clean</td><td>√</td><td></td><td></td></tr><tr><td>Clear</td><td></td><td>√</td><td>√</td></tr></table>	MET	1,74	,963
66	57	I keep a diary in English.	COG	1,00	,000

Table 4 demonstrates the five least commonly used vocabulary learning strategies. Drawing a grid to differentiate the meanings of synonyms ranked lowest among all the strategies (M=1,74, SD=,963). Writing down the words or phrases heard while watching TV (M=1,74, SD=1,024), carrying word cards which contain L1 translations of the words on the other side (M=1,76, SD=1,350) and using semantic grids to study hyponyms (M=1,82, SD=,968) can be listed as the other least commonly used vocabulary learning strategies by the participants of the current study.

4.2 Results of the Vocabulary Achievement Test

Independent Samples t-tests were run to compare the scores of the treatment and control groups on the pre-tests and post-tests of the vocabulary achievement test.

Table 5
Descriptive Statistics for Independent Samples T-tests for the Mean Scores of Pre-tests and Post-tests of Both Experimental and Control Group

		N	Mean	Std. Deviation	Std. Error Mean
Pre-test Results	Experimental	17	1,618	3,0543	,7408
	Control	17	1,912	2,8681	,6956
Post-Test Results	Experimental	17	75,588	13,5361	3,2830
	Control	17	47,941	11,2928	2,7389

The mean scores in Table 5 (Experimental group, 1,912 %; Control group 1,618 %) illustrate that subjects in both groups had similar levels of word knowledge before the treatment. The pre-test results also suggest that the participants were not familiar with the words on the test as the mean scores are considerably low covering these words in the previous cycle as they were doing the same level again. In order to find out whether or not the means are significantly different, the p-value, which is labeled as Sig. (2-tailed) in Table 7 should be checked. It is seen that the p-value is less than 0.05 (p < 0.05) (p-value= .774<0.05), so it could be determined that there was no significant difference between the two groups before the study in terms of lexical knowledge.

However, when the mean scores for the post-test results in Table 5 are analyzed (ExpGr. Post-test M=75,588, SD= 13,5361; Cont.Gr. Post-Test M= 47,941, SD=11,2928), it could be stated that the means score of the experimental group was much higher than the control group's means score on the test. If the p-value is checked in Table 6, it could be concluded that there is a significant difference between the means scores of the post-test results of the groups at the p<0.05 level (pvalue = .000 < .05).

Table 6
Output for Levene's Test for Equality of Variances for Pre-test and Post-test Scores of Both Groups

		Levene's Test for Equality of Variances		t-test for Equality of Means					95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Pre-test Results	Equal variances assumed	,000	1,000	-,289	32	,774	-,2941	1,0162	-2,3640	1,7758

	Equal variances not assumed			-,289	31,874	,774	-,2941	1,0162	-2,3644	1,7761
Post-Test Results	Equal variances assumed	,639	,430	6,466	32	,000	27,6471	4,2755	18,9382	36,3559
	Equal variances not assumed			6,466	31,004	,000	27,6471	4,2755	18,9272	36,3669

In order to find out whether or not the treatment had a noteworthy effect on the lexical knowledge of the participants in the experimental group, the means scores of the experimental group on the test before the training and the means scores on the post-test after the training were compared by a dependent samples t-test.

Table 7
Descriptive Statistics for Dependent Samples T-tests for the Mean Scores of Pre-tests and Post-tests of Both Experimental and Control Group

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	Experimental Group Pre-test Results	1,912	17	2,8681	,6956
	Experimental Group Post-test Results	75,588	17	13,5361	3,2830
Pair 2	Control Group Pre-test Results	1,618	17	3,0543	,7408
	Control Group Post-test Results	47,941	17	11,2928	2,7389

The Mean shows the average score of the students on the test before the training and after the training. It can be seen that the mean score of the post-test results of the experimental group is much higher than the pre-test results (Pretest, 1,912; Post-test 75,588). Moreover, when Table 8 is analyzed, it can be noted that the p-value is less than 0.05 ($p<0.05$), so it could be inferred that the pre-test and post-test scores of the experimental group statistically differ meaningfully. In this case, it could be concluded that the participants in the treatment group did better on the test after receiving the treatment and that they acquired the words on the list effectively.

Table 8
Output for Levene's Test for Equality of Variances for Dependent Paired Pre-test and Post-test scores of Both Groups

	Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference		t	df	Sig. (2-tailed)
				Lower	Upper			
Experimental Group Pre-test Results - Experimental Group Post-test Results	-73,6765	14,7139	3,5686	-81,2416	-66,1113	-20,646	16	,000
Control Group Pre-test Results - Control Group Post-test Results	-46,3235	11,7632	2,8530	-52,3716	-40,2754	-16,237	16	,000

If the pre-test and post-test results of the control group are examined, it can be stated that there is a large difference between the two mean scores (Pre-test, 1,618; Post-test, 47,941). This result can also be confirmed by checking the p-value, which is less than 0.05 at the p-level ($p<0.05$). Hence, the group which did not receive any treatment actually learnt not all but most of the words on the target vocabulary list being exposed to the traditional

teaching and learning methods. However, their post-test mean score is much lower than the experimental group's mean score, which means that the 5-week treatment had a much more significant impact on the vocabulary knowledge of the experimental group.

In addition to the group mean scores, individual cases in both groups should be studied as well. Table 9 below demonstrates the use of vocabulary learning strategies used by each subject in the experimental group and their vocabulary achievement test scores before and after the training. However, it should be pointed out that the vocabulary learning strategies used by the subjects reported here were the ones before the training.

Table 9

Individual Case Sumaries of Experimental Group

Case Number	DET	SOC/D	MEM	SOC/C	COG	MET	Total	Pre-test	Post-Test
1	2,70	1,75	2,34	2,00	2,15	2,88	2.30	5	72.5
2	2,80	3,75	3,21	2,50	3,15	2,88	3.04	0	90
3	2,90	2,50	2,34	3,00	2,00	2,88	2.60	0	72.5
4	3,30	3,25	2,86	3,50	2,85	2,75	3.08	2.5	55
5	3,20	2,75	2,86	1,00	1,77	3,50	2.51	0	67.5
6	2,80	3,00	3,48	1,00	3,69	2,25	2.70	0	87.5
7	3,10	4,50	3,10	3,50	2,69	3,00	3.31	0	90
8	3,70	3,00	3,45	2,50	2,00	3,88	3.08	0	92.5
9	3,60	2,00	2,34	3,50	3,31	4,25	3.16	7.5	72.5
10	3,20	2,50	2,66	2,00	2,00	2,75	2.51	0	70
11	3,40	3,25	2,79	2,50	2,69	2,50	2.85	0	77.5
12	2,60	2,25	3,14	4,00	2,38	2,00	2.72	0	52.5
13	3,20	2,75	2,83	3,00	2,54	3,62	2.99	5	77.5
14	3,50	1,75	2,45	2,50	2,92	3,25	2.72	5	90
15	3,40	3,00	2,72	2,00	2,08	2,75	2.65	0	85
16	3,30	2,00	2,90	4,00	2,38	2,62	2.86	0	82.5
17	3,20	2,25	2,72	2,00	2,00	2,38	2.42	7.5	50

When the table above is analyzed, it can be noticed that the lowest score from the post-test was 50 % in the experimental group and the highest score was 92.5 %, which shows that all the participants in the treatment group learned at least half of the words on the target vocabulary list. Four of them received between 90 and 100, three of them scored between 80 and 90, six of them scored between 70 and 80, only one of them received 67.5 % and three of them scored between 50 and 60. If the highest scores are examined, it can be understood that they belong to the only students who used the strategies the most (Post-test= 90, Total= 3.04; Post-test= 90, Total= 3.31; Post-test=92.5, Total= 3.08) with one exception (Post-test= 90, Total= 2.72). However, this one case was reported to have benefitted from metacognitive strategies the most (MET=3.25). This result also overlaps with the other top cases results. To illustrate, the student who scored 92.5% on the post-test reported predominantly using metacognitive strategies (3.88).

Table 10
Individual Case Sumaries of Control Group

Case Number	DET	SOC/D	MEM	SOC/C	COG	MET	Total	Pre-test	Post-Test
1	3,80	2,00	1,69	1,00	2,54	2,50	2.25	0	50
2	3,90	3,50	4,34	5,00	3,69	3,38	3.96	7.5	62.5
3	2,50	2,75	2,10	2,50	2,15	1,38	2.23	0	57.5
4	3,20	2,75	2,45	2,50	1,85	2,38	2.51	7	50
5	3,40	3,00	3,07	3,50	3,38	2,00	3.05	0	45
6	3,60	2,50	2,97	1,50	2,62	2,62	2.63	0	52.5
7	4,00	2,50	3,83	4,50	2,92	3,38	3.52	0	47.5
8	4,00	3,50	2,93	2,50	3,23	2,62	3.13	0	55
9	3,90	4,00	3,83	4,00	3,15	2,50	3.56	5	55
10	3,10	4,00	2,48	2,00	1,54	2,12	2.54	0	35
11	2,90	3,25	2,90	2,50	1,77	2,00	2.55	0	45
12	2,70	2,75	1,66	2,00	1,85	1,88	2.13	0	55
13	3,40	2,75	1,55	3,50	2,23	3,12	2.75	0	62.5
14	3,40	3,25	2,83	2,50	3,62	2,38	2.99	7.5	25
15	3,60	3,50	2,14	1,50	1,08	1,38	2.19	0	35
16	2,00	1,75	1,28	1,50	1,54	2,00	1.67	0	55
17	3,50	3,25	3,07	2,00	3,08	2,62	2.92	0	27.5

A similar result can be seen in the control group individual case summaries (Table 10) as well. The subject who scored the highest score on the post vocabulary achievement test (62.5%) in this group reported 3.96 total use of strategies and 3.38 use of metacognitive strategies. Another student who received 62.5 reported using 2.75 total use of strategies, which could be considered as low, yet he stated using 3.12 use of metacognitive strategies.

Nation (2001) has suggested that under-achieving learners use bilingual dictionaries more to discover the meaning of unknown words in a text. This may save them time, but Nation stresses that successful learners should also try to make use of guessing strategies. This suggestion supports the results of the current study. The vocabulary learning strategies questionnaire results suggest that participants in the current study tend to rely on bilingual dictionaries to understand the meaning of an unknown word, rather than work out the meaning through guessing. According to Oxford (1990), over-dependence on bilingual dictionaries can slow down the development of language competence in L2, which seems to be supported by findings of the current study. In order to consolidate what they learn, subjects in the current study predominantly use oral repetition of the words, which qualifies as pure rote memorization. Instead, Nation (2001) has suggested that language learners ought to utilize spaced repetition rather than oral repetition. One example of this strategy is the use of vocabulary cards. However, using vocabulary cards is one of the least commonly used vocabulary learning strategies of participants in the current study. Using semantic grids (M=1.74) was another strategy which was rated as one of the least commonly used strategies. Oxford (1990) suggests that the use of semantic grids and grouping appear to be more beneficial for higher level language learners, as their vocabulary size is greater than low-level learners. The author, however, illustrates that the use of these grids can also be a benefit for lower level learners. This strategy

can assist them in organizing information in their minds, and, as a result, storing the words in their long-term memory more effectively. Nonetheless, as the results of the study have shown, the participants of the study did not utilize these strategies. The researcher of the current study believes that findings regarding individual vocabulary learning strategies of under-achieving students demonstrate that these learners have low self-confidence, lack autonomy, and are mostly teacher dependent.

The post-vocabulary achievement test results illustrate that the experimental group performed at a higher level than the control group. The 5-week vocabulary retention training process strengthened the vocabulary learning abilities of the experimental group. This finding provides an answer to the second research question at hand: It is beneficial to train under-performing EFL students in vocabulary learning strategies along with metacognitive strategies.

4.3. Learner Portfolio Feedback

The data collected from the learner portfolios provided invaluable feedback. All the students mentioned that they realized they were not aware of variety of vocabulary learning strategies. They also stated that they became aware of their individual ways of studying. Some of the feedback written in Turkish translated to English is as follows:

> "This week, I drew a picture to remember the meaning of the verb "raise". I realized that it is really helpful to draw pictures to remember the meanings of the words."

> "I tried drawing a picture for the word "accomplish" this week. But I couldn't come up with anything memorable. So I gave up. I think I should figure out another way."

> "This week I learned three new words. But I don't think it is enough. There is a lot to study and not enough time. I plan to learn more words trying out other strategies next week."

> "Writing words ten times to remember them doesn't work for me. I like adding a musical tune to the words. I think that is much more fun."

> "My friends are telling me that studying words together is very beneficial. But I prefer studying alone making up silly stories with the words. I think that is my favorite strategy."

It can be inferred from the comments that students were trying out different kinds of strategies discussed during the training sessions. They were also focusing on their own learning process by evaluating whether or not certain strategies were working for them. The data also suggests that during the process, the students' self-esteem increased more and they became more motivated to try different techniques to learn new words.

4.4. Feedback from the Full Class Discussion and Student Interviews

After the last training session, the researcher had a full class discussion with the students. Moreover, semi-structured interviews were held with pairs of students. All the students stated positive views about the training sessions.

Some of the feedback from the full class discussion and the interviews with the students are as follows:

> "I didn't know about vocabulary learning strategies before this training at all. By applying the strategies, I started to expand my vocabulary knowledge. However, the best part of the training was discovering the strategies that suit me the best."

"I believe that we should use these vocabulary strategies constantly so that they can become part of our learning processes and we can start applying them unconsciously, like driving a car."

"At first, I learned I could draw pictures to remember the words. Then, I discovered that I should not draw pictures to remember words. I found out that everybody has their own way of learning things."

"I enjoyed the training sessions a lot. I had a lot of fun and I did not understand how the time went by so quickly during the sessions. Normally, I get bored a lot and I do not want to do anything in the lessons. I felt like I was useful and I should be there to help my friends. I felt that my presence in the class was important."

"One thing I noticed during the training that I can understand difficult texts better now that I know more words. I also like trying to guess the meaning of the words that I do not know. I never thought I could read and understand a text without looking up a word in a dictionary."

"Before this training I used to make a list of words with their English equivalents. Then, I would try to memorize the meanings of those words the night before the weekly vocabulary quiz. I use to think that I studied hard, but still failed the exams. I thought I was stupid. This training made me feel like I am actually a creative person."

The statements from the students in the experimental group provide clear evidence that their motivation and confidence levels increased dramatically towards the end of the training. The majority of them gained a sense of achievement, which made them put more effort into trying out new techniques without any fear. Moreover, the majority of the subjects in the treatment group stated that the training was fun and engaging. The researcher believes that even if these learners were not able to achieve some kind of success in acquiring new words, the obvious positive change they reflected in their learning process and in the classroom environment was one of the most valuable results of this study.

5 Conclusion

There have been many studies to discover the effectiveness of strategy based instruction for vocabulary acquisition (Rasekh & Ranjbary, 2003; Tezgiden, 2006). However, the current study also focused on the influence of metacognitive strategy training particularly with struggling language learners.

The results of the vocabulary learning questionnaire revealed that these learners tend to use determination and social strategies more than cognitive and metacognitive strategies, which require more sophisticated thinking skills. The current study also showed that under-achieving foreign language learners rely more on the teacher when they try to figure out the meaning of a word in the target language.

The results of the vocabulary achievement test revealed that training weak language learners with metacognitive strategy training does help these learners improve their passive vocabulary knowledge. It can also equip them with effective strategies to learn vocabulary. However, as mentioned earlier, this study only focused on recalling the meanings of the words when reading short sentences, which means that it doesn't necessarily postulate that the same training would bring similar positive results for active vocabulary use in speaking and writing. The author of this article believes that further research needs to be carried out to discover the effectiveness of training less accomplished learners with these strategies on vocabulary use in productive skills.

Learner portfolios and student interviews showed that students realized that they need to focus more on their own learning processes. The students mentioned that they realized that they should pay more attention to how to learn things rather than what to learn. It was also observed that the attitude of the students in the experimental

group changed dramatically. Towards the end of the training, they became more willing to try out new strategies and evaluate their effectiveness. They also seemed to have a higher motivation to study and learn English. In this case, it could also be stated that metacognitive strategy training can help under-achieving learners build confidence, which is crucial in moving forward in language learning.

One implication of this study could be that underachieving-language learners may require a specialized curriculum that focuses on strategy based instruction when they are placed in one class. Moreover, incorporating these strategies into language programs can not only help struggling learners catch up with their peers but also empower them with crucial metacognitive skills that can be applied across various learning contexts, particularly when they start their specialized majors. Another implication is that these learners can benefit from keeping learner portfolios in which they take notes on their learning process. This may result in developing learner autonomy and self-efficacy.

In conclusion, the findings of this study offer compelling evidence in support of the combined use of vocabulary learning strategies and metacognitive strategy training for poor performing EFL language learners at the tertiary level. Nevertheless, the author acknowledges the need for further research with a different population in a variety of settings. For instance, the current study was done in a monolingual EFL class in which the teacher and the learners share the same L1 (Turkish) and cultural background. The author of this article believes that further research is needed to be done with a similar training model, yet in an ESL environment with learners from multinational backgrounds to support the results of the current study. Another important point to indicate is that the current study was carried out with pre-intermediate level learners studying at a university. Therefore, to reinforce the findings of the current study, further research could be implemented with other levels and age groups.

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