where methods are more up to date and stray from traditional memorization strategies and lean towards cognitive and metacognitive learning strategies. Since the current study was conducted in an institutional environment and not in an academic environment, learners exhibited different social behaviors. Based the observations of the researcher and also analyses of the questionnaire, in an institutional language learning environment, due to the communicative nature of the language pedagogy, leaners tended ask for help from the people around them, including the teacher and the other learners. Group activities are very common. Teachers' assistance is always present. These conditions instinctively promote social strategies among learners. According to Amirian and Heshmatifar (2013), a different reason for leaners' abandonment of social strategies could be the teacher-oriented educational system in Iran. Teachers are in front of the classroom and provide all knowledge students need. Teachers provide the information through lecturing and the students should just listen and take note. Such teaching procedure did not have any place for group work or discussion in classroom. Moreover, regarding the relationship between vocabulary size and vocabulary learning strategies, similar to regression, data analysis showed a positive and meaningful correlation. This indicates that as learners tend to use cognitive, metacognitive and social strategies their vocabulary size would grow larger than the time they used any other vocabulary learning strategy. This finding seems to comply with Ansarin, Zohrabi, and Zeynali (2013) who came to the same conclusion.

As the learners tend to use cognitive, metacognitive, and social strategies, their vocabulary size would grow

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Table 10. Standardized and Unstandardized Coefficients in regression analysis

Model	Unstandardized Coefficients		Standardized Coefficients		
	B	Std. Error	Beta	t	Sig.
(Constant)	2.045	1.734		1.179	.242
Cognitive Strategies	.246	.085	.310	2.886	.005
Memory Strategies	.225	.101	.253	2.227	.029
Metacognitive Strategies	.142	.067	.218	2.137	.036
Social Strategies	.108	.077	.129	1.398	.166
Determination Strategies	.011	.110	.009	.069	.621

a. Dependent Variable: vocabulary size

As seen in Table 10, in vocabulary size regression based on different learning strategies, Beta and t, and three predicting variables (i.e. metacognitive strategies, cognitive strategies and memory strategies) significantly predict vocabulary size, with the highest coefficient (β=.31) for cognitive strategies. After that (β=.25) for memory strategies and (β=.21) for metacognitive strategies.

> **What seems to be essential is the active engagement of participants in different learning contexts**

Conclusion

The findings of the present study indicated that among the five vocabulary learning strategies based on Schmitt's taxonomy, cognitive, metacognitive, and social strategies were reported as the most frequently-used strategies, followed by determination strategies and memory strategies. Moreover, confirming the first main null hypothesis (and its five sub hypotheses) indicated a positive relationship between learners' use of determination, social, memory, cognitive and metacognitive strategies and their vocabulary size. The results revealed that the learners who had a tendency to employ cognitive, metacognitive and social strategies possessed a higher vocabulary knowledge. It was observed that there was a significant correlation between the learners' vocabulary size and their vocabulary learning strategies. This finding aligns with the findings of a study done by Kafipour (2006) who highlighted that learning in an EFL environment was a significant reason why social strategies were not employed as much as the other strategies, that is, in an EFL environment there is no need to negotiate the meaning of the word in communication situations. He further explained that what seems to be essential is the active engagement of participants in different learning contexts, such as classroom activities. The current study and its findings are not in-line with the above mentioned studies. The current study assessed EFL learners taking courses in language institutions

Table 6 shows that, the Pearson coefficient is .55 indicating a positive correlation between cognitive strategies and vocabulary size. Table 6 shows that at *p=.001<.05*, there is a significant relationship.

Sub-Hypothesis 5: There is a significant relationship between Metacognitive Strategies and vocabulary size of Iranian EFL learners.

Table 7. *Relationship between Metacognitive Strategies and Vocabulary Size*

Variables		vocabulary size
Metacognitive Strategies	Pearson Correlation	.498*
	Sig. (2-tailed)	.001
	N	80

Table 7 shows that the Pearson coefficient is .49, indicating a positive correlation between metacognitive strategies and vocabulary size. Table 7 shows that at *p=.001<.05*, there is a significant relationship between the two variables. Generally, the analyses of the sub hypotheses revealed that a positive correlation was observed between different learning strategies and vocabulary size indicating an overall positive relationship.

Testing the Second Main Null Hypothesis:

The second research question inquired whether vocabulary learning strategy could be predictor of a learners' vocabulary size. In order to answer that question linear regression analysis was performed in the data. The resulting numbers are presented in Table 8 and Table 9.

Table 9. *Analysis of Variance (ANOVA)*

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	326.445	5	65.289	12.704	.000a
	Residual	380.305	74	5.139		
	Total	706.750	79			

a. Predictors: (Constant), Metacognitive Strategies, Social Strategies, Determination Strategies, Cognitive Strategies, Memory Strategies

b. Dependent Variable: vocabulary size

In Table 9, F = 12.70 and P<.001 indicate a significant regression between VLS and VS. This means that Metacognitive Strategies, Social Strategies, Determination Strategies, Cognitive Strategies, Memory Strategies can meaningfully predict vocabulary size. Also, based on Table 8, R Square = .42 shows that vocabulary size explains 42% of the variability of vocabulary learning strategies. Regression coefficient results are presented in Table 10.

Table 3. *Relationship between Determination Strategies and Vocabulary Size*

Variables		vocabulary size
Determination Strategies (DET)	Pearson Correlation	.224*
	Sig. (2-tailed)	.046
	N	80

As Table 3 shows, the Pearson coefficient is .22 indicating a positive correlation between determination strategies and vocabulary size. the Pearson correlation coefficient in Table 3 at *p=.046<.05* indicates a significant relationship.

Sub-Hypothesis 2: There is a significant relationship between Social Strategies and vocabulary size in Iranian EFL learners.

Table 4. *Relationship between Social Strategies and Vocabulary Size*

Variables		vocabulary size
Social Strategies	Pearson Correlation	.286*
	Sig. (2-tailed)	.010
	N	80

As Table 4 shows, the Pearson coefficient is .28. indicating a positive correlation between social strategies and vocabulary size. The information in Table 4 shows that at *p=.010<.05*, there is a significant relationship.

Sub-Hypothesis 3: There is a significant relationship between Memory Strategies and vocabulary size of Iranian EFL learners.

Table 5. *Relationship between Memory Strategies and Vocabulary Size*

Variables		vocabulary size
Memory Strategies	Pearson Correlation	.569*
	Sig. (2-tailed)	.001
	N	80

Table 5 shows that the Pearson coefficient is .56, indicating a positive correlation between memory strategies and vocabulary size. Table 5 shows that at *p=.001<.05*, there is a significant relationship.

Sub-Hypothesis 4: There is a significant relationship between Cognitive Strategies and vocabulary size of Iranian EFL learners.

Table 6. *Relationship between Cognitive Strategies and Vocabulary Size*

Variables		vocabulary size
Cognitive Strategies	Pearson Correlation	.551*
	Sig. (2-tailed)	.001
	N	80

complete vocabulary learning strategies questionnaire, and at the end of the term, they were asked to take Laufer and Nation's vocabulary size test. The time gap was due to administrative issues at the institute. The obtained scores were analyzed using SPSS to yield descriptive and inferential statistics. In addition, to test the first and second null hypotheses, correlation and regression analyses were conducted, respectively.

Data Analysis and Results

Reliability Analysis of the Instruments: To ensure the reliability of the questionnaire, it was piloted among 20 advanced Iranian EFL learners. Cronbach's alpha value of all strategy categories of the questionnaire falls above the acceptable range of .6.

Vocabulary Learning Strategies: In order to identify the vocabulary learning strategies of the participants, they were asked to complete the 25-item taxonomy of vocabulary learning strategies by Schmitt (1999).

The descriptive analysis, after administering the questionnaire, are presented in Table 1.

Table 1. *Descriptive Statistics for each Vocabulary Learning Strategy*

Variable	N	Minimum	Maximum	Mean	Std. Deviation
Determination Strategies (DET)	80	2.00	12.00	7.5375	2.46466
Social Strategies (SOC)	80	10.00	24.00	17.5250	3.58257
Memory Strategies (MEM)	80	2.00	16.00	8.6500	3.35684
Cognitive Strategies (COG)	80	7.00	24.00	15.8625	3.77112
Metacognitive Strategies (MET)	80	6.00	20.00	14.1875	4.58422

The mean for Determination Strategies, Social Strategies, Memory Strategies, Cognitive Strategies and Metacognitive Strategies, the reliability coefficient is respectively 7.53, 17.52, 8.65, 15.86 and 14.18.

Vocabulary Size: Nation's (2012) Vocabulary Size Test (a word frequency count test of 500 word families) was administered. This section of the vocabulary size test contained 18 items. Participants were scored based on their answers to these items. Table 2 reports the results of the analysis.

Table 2. *Descriptive Statistics*

	N	Minimum	Maximum	Mean	Std. Deviation
Vocabulary Size	80	6.00	16.00	11.8750	2.99102

Table 2 shows that none of the participants were able to answer all of the questions correctly.

Testing the first Main Null Hypotheses:

The first Null hypothesis included five null sub-hypotheses, corresponding to five vocabulary learning strategy inventory.

Sub-Hypothesis 1: There is a significant relationship between Determination Strategies and vocabulary size in Iranian EFL learners.

Introduction

All language skills depend on vocabulary knowledge in one way or another; little may be conveyed without knowledge of grammar, but almost nothing can be conveyed without vocabulary knowledge (Wilkins, 1972). However, it is not easy to gain knowledge of sufficient number of words. Nation (2006), for example, asserts that if the learner wishes to read newspapers or novels, s/he must know 8000 to 9000 word families. Moreover, knowing a word is not just being familiar with a word's form and definition (Granowsky, 2002). There are several other aspects of the vocabulary including word form, word structure, syntactic pattern, meaning, and relationship with other words that need to be learnt (Laufer, 1997).

On the other hand, if foreign language learners are equipped with the strategies such as vocabulary learning strategies, they can be much more successful language learners because vocabulary learning strategies make learners autonomous and enable them to take the responsibility for their own learning (Oxford, 1990). Obviously, learning and using these strategies will lead to improved vocabulary knowledge (Benson, 2001). Furthermore, as endorsed by Laufer (1995), one of the major determinants of the vocabulary used in language production is the vocabulary size of the speaker/writer, particularly if the speaker/writer is a second language learner with a relatively small vocabulary compared with the native speakers of the second language.

The purpose of this study is to explore the relationship between vocabulary learning strategies and vocabulary size of Iranian EL learners. In this line, the following two research hypotheses were devised:

H01: *There is not any significant relationship between vocabulary size and vocabulary learning strategies of Iranian EFL learners.*

H02: *Vocabulary size cannot predict vocabulary learning strategies of Iranian EFL learners.*

> **Knowing a word is not just being familiar with a word's form and definition**

Method

Participants: Totally, 80 advanced Iranian EFL learners out of a total number of two hundred female EFL learners from Pardisan language Institute of Tabriz, were randomly selected. The age range was between 16 and 35.

Instruments: The first instrument in this survey based correlational study was a 25-item (5-item Likert scale) questionnaire based on Schmitt's (1997) Taxonomy. Learners' scores indicate their prominent vocabulary learning strategies including *"discovery, consolidation, determination, memory, strategies"*. They also included *"social, cognitive and metacognitive"* strategies..

Moreover, Laufer and Nation's vocabulary size test at 5000 frequency level (previously validated in several ways) was utilized as an instrument to estimate the vocabulary size of non-English speaking learners (Read, 2000). In this test, the initial letters are given as a clue and the participants are required to complete the sentences with the appropriate words in 30 minutes. The scores that learners obtain in the test reveal their vocabulary size.

Procedure: On the very first session of October educational term in 2016, the participants were asked to

Research

The Relationship Between Iranian EFL Learners' Vocabulary Learning Strategies and Their Vocabulary Size

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چکیده

راهبردهای یادگیری لغات عبارتند از روش‌هایی که فراگیران زبان برای یادگیری لغات جدید به‌کار می‌گیرند و دامنهٔ لغت به تعداد گروه‌های واژگانی اشاره دارد که هر فرد می‌داند. پژوهش حاضر با هدف بررسی رابطهٔ احتمالی بین راهبردهای یادگیری لغات فراگیران ایرانی زبان انگلیسی به‌عنوان یک زبان خارجی و دامنهٔ لغت آن‌ها انجام شد. به این منظور، از ۸۰ فراگیر زبان انگلیسی خواسته شد پرسشنامه‌ای دربارهٔ راهبردهای یادگیری لغت پاسخ دهند. این پرسشنامه شامل ۲۵ گزینه دربارهٔ راهبردهای یادگیری لغات، یعنی راهبردهای حافظه ای، فراشناختی، شناختی و اجتماعی بود. سپس از آن‌ها خواسته شد در آزمون دامنه لغت شرکت کنند و نتایج به‌صورت نمرهٔ لغت ثبت شدند. تحلیل هم‌بستگی و رگراسیون روی داده‌های حاصل از تکمیل پرسشنامه و آزمون دامنه لغت نشان داد که بین راهبردهای یادگیری لغات و دامنه لغت، هم بستگی معنی داری وجود دارد. همچنین تحلیل رگراسیون مشخص ساخت که راهبردهای یادگیری لغات می‌توانند به خوبی پیش بینی کنندهٔ حجم لغت فراگیر باشند؛ چرا که در تحقیق حاضر راهبردهای یادگیری لغات می‌توانستند به طور بالقوه تا ٤٢ درصد دامنهٔ لغت فراگیران را پیش‌بینی کنند. علاوه بر این، شناسایی رایج ترین راهبردهای مورد استفاده، چشم‌انداز بهتری برای یادگیری لغات توسط فراگیران زبان انگلیسی به‌عنوان زبان خارجی فراهم می‌سازد.

کلیدواژه‌ها: راهبردهای یادگیری لغات، دامنهٔ لغات

Abstract

Vocabulary learning strategies are the strategies learners utilize to acquire new words, and vocabulary size refers to the number of word families one knows. The current study was designed to examine the probable relationship between Iranian EFL learners' vocabulary learning strategies and their vocabulary size. To this end, at first 80 advanced language learners were asked to answer a questionnaire identifying their vocabulary learning strategies. It consisted of 25 items on different vocabulary learning strategies including, social, cognitive, metacognitive, and memory strategies. The same learners were then presented with vocabulary size test which revealed their vocabulary size scores. Correlation and regression analysis on the obtained data revealed that there is a positive correlation between learners' vocabulary learning strategies and their vocabulary size. Moreover, regression analysis revealed that vocabulary learning strategies are a good predictor of vocabulary size since 42 percent of learners' vocabulary learning strategies could potentially predict learners' vocabulary size. Moreover, identifying the most common vocabulary learning strategies adopted by Iranian EFL learners provides both learners and teachers with a better view on vocabulary acquisition.

Keywords: vocabulary learning strategies,vocabulary size, vocabulary acquistion