

The Prevalence of Vocabulary Learning Strategies among Iranian EFL Students

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Abstract

Learning vocabulary has always been a major concern for language learners. The current research was implemented to find out the kinds of Vocabulary Learning Strategies (popular, somehow popular, and unpopular) in Schmitt's new taxonomy (DET, SOC, COG, MEM, MET) used by English-major students. Fifty advanced English-major students at Shahid Bahonar University of Kerman participated in this study. To this purpose, Schmitt's Vocabulary Learning Strategies Questionnaire (VLSQ) and the last level of his Vocabulary Levels Test (VLT) were used as the instruments. It was found that MEM was the most frequently used category and SOC the least frequently used one. Furthermore, COG, DET, and MET were the second, third and fourth categories respectively. The results of the study can be used by various people involved in language education including materials developers, language teachers, administrators, and other stakeholders.

Keywords: Vocabulary learning strategies, vocabulary size, vocabulary levels test

Introduction

The famous linguist Wilkins (1972) once said: "Without grammar, little can be conveyed but without vocabulary, nothing can be conveyed (p.111)." About two decades later, linguists realized the importance of vocabulary in language teaching and learning. Nowadays, with the growth of English Language Learning and Teaching around the world, using vocabulary learning strategies has been highly emphasized. In the same vein, this study intended to enumerate the kinds of vocabulary learning strategies (popular, somehow popular and unpopular) used by English-major students.

The first part briefly introduces the theoretical background, the second part includes a summary of previous studies, the third one lists the characteristics of participants plus data collection instruments and procedure, the fourth one presents the results of statistical analyses, the fifth one states the interpretation of results plus the comparison with previous studies.

Different taxonomies were proposed for classifying Vocabulary Learning Strategies (VLSs) the first of which is by Brown and Payne in 1994 (cf. Figure 1) and the last one by Paul Nation in 2001.

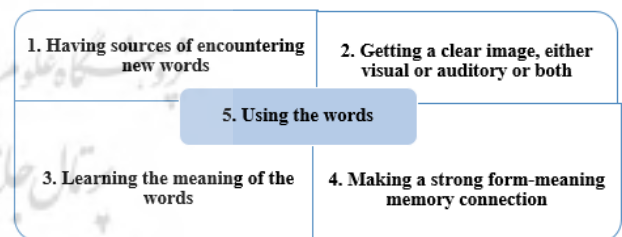


Figure 1.

Steps to learn vocabulary in a foreign language (adapted from Brown & Payne's paper, 1994).

Gu and Johnson, the authors of Vocabulary Learning Questionnaire (VLQ), proposed the second taxonomy two years after Brown and Payne, which is shown in Table 1.

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Table 1.*Dimensions and Categories of VLQ (adapted from Gu and Johnson, 1996)*

Dimensions	Categories
Beliefs about vocabulary learning	Words should be memorized, Words should be acquired in context: bottom-up, Words should be studied and put to use
Metacognitive regulation	Selective attention, Self-initiation
Guessing Ss	Using background knowledge, Using linguistic cues/ immediate context
Dictionary Ss	Dictionary strategies for comprehension, Extended dictionary strategies, Looking-up strategies

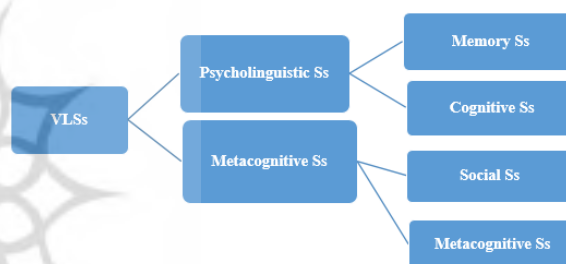
Table 2.*Dimensions and Categories of VLQ- continued*

Note-taking Ss	Meaning-oriented note-taking strategies, Usage-oriented note-taking strategies
Rehearsal Ss	Using word lists, Oral repetition, Visual repetition
Encoding Ss	Association/Elaboration, Imagery, Visual encoding, Auditory encoding, Using word-structure, Semantic encoding, Contextual encoding
Activation Ss	-----

Norbert Schmitt proposed the third taxonomy in 1997. He is also the second person to propose a somehow detailed taxonomy and create a questionnaire based on it. It's worth mentioning that his older categorization consisted of two branches: discovery strategies and consolidation strategies, and social category was classified under both branches. Therefore, his taxonomy would be as follows: Determination, Social (discovery), Social (consolidation), Cognitive, Memory and Metacognitive, which was adopted in some of the studies in the literature like Bennet (2006).

In his new classification, the two mentioned branches are erased and it includes just five categories: determination, social, cognitive, memory, and metacognitive strategies, all of which are based on Rebecca Oxford's classification of Language Learning Strategies (LLSs). His definition of strategies is the same as the one given by Rubin (1987, p. 29) in which learning is "the process by which information is obtained, stored, retrieved, and used", although here 'use' will mainly be defined as vocabulary practice rather than interactional communication. Therefore, vocabulary learning strategies could be any which affect this rather broadly-defined process. (Schmitt & McCarthy, 1997).

Yoshimitsu Kudo proposed the fourth taxonomy in 1999, based on Schmitt's 1997 study in Japan. Figure 2 shows his taxonomy.

**Figure 2.**

Kudo's taxonomy of VLSs (adapted from his thesis)

Finally, Paul Nation proposed the fifth and the last taxonomy (cf. Table 2). It tries to separate aspects of vocabulary knowledge (what is involved in knowing a word) from sources of vocabulary knowledge, and learning processes. The first column of this table shows the different aspects of what is involved in knowing a word together with the sources and processes which are presented in the second column. Looking at some examples may help clear the point. One of the sources of information about a word is the context in which it occurs. The context can be a source of information for the various aspects of what is involved in knowing a word - its written form, its spoken form, its word parts, its meaning, what it refers to, its grammar, its collocations, and constraints on its use. Similarly, the learning process of retrieval can be used to establish the written form of the word, its spoken form, its word parts and so on.

Table 3.*Taxonomy of Vocabulary Learning Strategies (adapted from Nation, 2001)*

General class of strategies	Types of strategies
Planning: Choosing what to focus on and when to focus on it	Choosing words, aspects of word knowledge, strategies, and planning repetition
Sources: Finding information about words	Analyzing the word, using context, consulting a reference source in L1 or L2, using parallels in L1 and L2
Processes: Establishing knowledge	Noticing, retrieving, generating

This section intends to present what previous researchers have done and also what variables they have investigated. They are sorted chronologically (starting from the least recent one to the most recent one).

The main objective of the study by Gani Hamzah, Kafipour and Abdullah (2009) was to evaluate undergraduate EFL learners' vocabulary learning strategies and its relation to the learners' vocabulary size. A total of 125 Iranian undergraduate students majoring in TEFL participated in the study. Cluster sampling was used to select participants of the study. The data were analyzed by using descriptive statistics (mean, standard deviation) and statistical multiple regression at significant of $p < 0.05$. Five different categories of vocabulary learning strategies were determination, memory, social, cognitive, and metacognitive, respectively. These categories covered an overall of 35 strategies included in vocabulary learning strategies questionnaire. The reliability index obtained for vocabulary learning strategies showed a reliability coefficient of 0.74. The other instrument used in the study, vocabulary size test, was a standardized test developed by Nation (2007). The findings of this study led to some suggestions to enhance students' vocabulary learning, increase their vocabulary size, and subsequently improve their English learning.

Rezvani Kalajahi and Pourshahian (2012) aimed at exploring the relationship between vocabulary learning strategies and vocabulary size of 125 undergraduate English Language Teaching students at Eastern Mediterranean University. This research study was a correlational survey study of descriptive nature. The major findings of this study were as follows. First, the findings indicated that most of the ELT students adequately operated the psycholinguistic strategies, whereas somewhat adequately the metacognitive strategies. Next, the ELT students reportedly had a somewhat average vocabulary size to cope with advanced studies at the university level. Finally, this study found no relationship between the psycholinguistic strategy and the vocabulary size of the participants, and the relationships between the metacognitive strategy and the vocabulary size, as well

as the vocabulary learning strategy questionnaire and the vocabulary size of the participants were negligible. The findings also revealed that students did not operate certain strategies, rather a variety of strategies. It is a fact that one of the difficulties in English language teaching and learning is vocabulary acquisition, to which vocabulary learning strategies (VLS) have been proved of vital importance. Since the college English education reform, the web-based and multimedia learning environment has replaced the traditional one and calls for autonomous learners equipped with learning strategies more urgently. Therefore, Zhou (2012) took a university in China as an example to explore the vocabulary-specific strategy using and teaching in the new environment. The aim of the research is to gain insightful experience so as to benefit current English vocabulary teaching and learning at the university level.

Amirian and Heshmatifar (2013) investigated what strategies are more or less common for learning vocabulary among EFL university students at Hakim Sabzevari University in Iran. A questionnaire adapted from the taxonomy of vocabulary learning strategies (VLS) developed by Schmitt (1997) was administered to 74 EFL students (18 males and 56 females). Moreover, semi-structured interviews were also carried out with ten students who completed the written questionnaire to obtain more information about their beliefs and attitudes dealing with vocabulary learning strategies. The results revealed the following order of strategy use by the students from the most frequent to the least frequent one: determination (DET), cognitive (COG), memory (MEM), metacognitive (MET), and social strategies (SOC). In particular, findings indicated that guessing from context and dictionary use strategies were the most popular strategies, while asking the teacher or peers for meaning were rarely used.

With the growth of English for Specific Purposes (ESP) in the professional and technical areas of study, vocabulary learning strategies are considered to be one of the most important factors for student success in learning technical English. And when it comes to technical English, the other important factor could be

students' background knowledge in the area. Therefore, Wanpen et al. (2013) study investigated technical vocabulary learning strategies use of engineering students; and aimed to determine the differences in technical vocabulary learning strategies used by engineering students whose education backgrounds were on different streams. The questionnaire on technical vocabulary learning strategies was administered to 47 undergraduate engineering students from Udon Thani Rajabhat University selected as samples in the study. The subjects were also asked to complete the technical vocabulary test, and some agreed to participate in semi-structured interviews. The findings revealed that students with the educational backgrounds in vocational stream had higher technical vocabulary proficiencies than students whose educational backgrounds were in the general education stream. Differences in the use of learning strategies were found between students who employed different streams of educational backgrounds (general education stream and vocational stream) at the significant level of .05 in determination, memory, and cognitive strategies.

In the same vein, Kirmizi (2014) investigated Vocabulary Learning Strategy (VLS) use of English Language and Literature Department students in relation to academic success and vocabulary size. The participants of the study were 213 English Language and Literature students. Two data collection tools were used in the study. The first tool was The Vocabulary Learning Strategy (VLS) questionnaire which was adapted from by Gu & Johnson (1996), and the second data collection tool was a Vocabulary Level Test (VLT) developed by Nation (1983). Descriptive statistics were conducted in order to measure the level of vocabulary learning strategy (VLS) use and vocabulary size of the participants. In addition, correlation analysis was carried out in order to see which VLSs are more frequently used by low, middle and upper level vocabulary size students. The results indicated that the participants have a high level of vocabulary size for 2000-word level, 3000-word level, and academic word levels, a moderate level of vocabulary size for 5000-word level and a low level in 10000-word level. The participants were found to have a moderate level of vocabulary learning strategy use. The study also found that 3rd grade students had larger vocabulary size in terms of 2000, 3000 and academic vocabulary level. As for the vocabulary strategy use, 3rd grade students were found to use bottom-up strategies and note-taking strategies more frequently than 2nd grade students. Finally, correlation analysis revealed that bottom-up strategies, using linguistic

clues, and top-down strategies significantly correlated with academic success.

Despite numerous irrefutable accomplishments in the field of vocabulary learning and learning strategies, it can be observed that there are still areas of research that have received only scant focus in the Polish context, and one of them is the relationship between the use of vocabulary learning strategies and attainment in the mastery of this language subsystem. Because of that, Kwiatkowski (2014) attempted to contribute to the scarcity of quantitative investigations in the realm of vocabulary learning strategies by presenting the findings of a study which sought to establish the general pattern of vocabulary learning strategy use among Polish university students whose major subject was English and the relationship between their overall, categorical, and individual frequency of vocabulary strategy use and performance in vocabulary tests. As for the results, the study found that the participants' overall vocabulary learning strategy use, on the average, was of medium-high frequency. Furthermore, Pearson's correlation coefficients showed a positive relationship between overall and categorical application of strategic devices and vocabulary attainment. At the micro-level, the findings showed that most of the individual vocabulary learning strategy items were positively correlated with vocabulary test scores.

Sener (2015) examined the vocabulary learning strategy preferences and vocabulary size of pre-service English teachers at a state university in Turkey. It also investigated the relationship between their strategy use and vocabulary size. To this end, 304 pre-service teachers constituted the working group of the research. In this study, a quantitative research design was employed. For data collection, an adapted version of the Vocabulary Learning Strategy Inventory and Vocabulary Levels Test were used. The most frequently used vocabulary learning strategy subgroup was found to be determination and the lowest vocabulary learning strategy subgroup was cognitive. Besides, the most significant relationship was seen between the vocabulary size and cognitive strategies. Finally, multiple comparison tests revealed a significant statistical difference between the first and fourth graders' vocabulary size.

And finally, Ali Askar (2016) examined the use of vocabulary learning strategies (VLSs) by the English language teaching (ELT) and English language and literature (ELL) students as well as the impact of gender and grade levels on the use of learning strategies. A five Likert scale questionnaire, consisting of 36 items was classified under four strategy categories was administered to 466 participants from

the Duhok University. The results of the descriptive statistics showed that Duhok university students were medium strategy users. The study also found that the cognitive strategies were the most popular strategies among the learners. Social strategies were found to be the least preferred strategies. The results of the t-test showed that in general, the scores of female learners regarding the use of VLSs were slightly higher than male learners. Moreover, ELT learners were found to be more strategy users than ELL learners. The results of ANOVA revealed significant differences regarding the use of VLSs and grade levels.

Method

Participants

Fifty advanced English-major students in Shahid Bahonar University of Kerman participated in this research. They were chosen because of their level of language proficiency and their availability at the time of data collection.

Instruments

The first instrument was Schmitt's Vocabulary Learning Strategies Questionnaire (VLSQ) which consisted of 45 Likert-scale statements. Its reliability index/ Cronbach's alpha was 0.88, which shows that it's fairly reliable and valid tool. Table 3 shows the categories of the questionnaire and their associated numbers, and Fig 3 shows its coding scheme. The minimum score for this scale was 45 (45*1) and the maximum score was 225 (45*5). As is shown in Figure 3, the participants were required to answer whether they ever used a strategy, didn't usually use a strategy, somewhat used a strategy, usually used it, and always or almost always used it.

Schmitt's Vocabulary Levels Test/VLT has five levels: and Academic Vocabulary level. The second instrument was the last level of Schmitt's VLT, the other levels being the 2,000-word level, the 3,000-word level, the 5,000-word level, the 10,000-word level and the format of which is shown in Figure 4. For coding the test, the author answered one of the tests and used it as a key for coding the rest. The minimum score for this test was 12(12*1) and the maximum score was 36 (12*3). If all the numbers matched, that subject would get 3 points. If two numbers matched, the subject would get 2 points, and if only 1 number was the same, the subject would get 1 point. Adding up all the points for each set equaled the total score.

Table 4.

The Categories of Schmitt's VLSQ and their Associated Numbers

Name of categories	
DET: 1,2,6,7,14,15,16,17	SOC: 3,4,5
COG: 8,9,10,11,12,13, 24,25,26,28,34,35,38	
MEM: 18,19,20,21,22,23,27,29, 30,31,32,33,37,44	
MET: 36,39,40,41,42,43,45	

1 point	2 points	3 points	4 points	5 points
Never or almost never true of me	Usually not true of me	Somewhat true of me	Usually true of me	Always or almost always true of me

Figure 3.

The coding scheme of Schmitt's VLSQ

1 area	
2 contract	_____ written agreement
3 definition	_____ way of doing something
4 evidence	_____ reason for believing something is or is not true
5 method	
6 role	

Figure 4.

The format of Academic Vocabulary Level of Schmitt's VLT

Procedure

The procedure of data collection took about 2 months. Before going to classes, arrangements were made with instructors so that students had time to answer the scales. The author attended the class with the instructor and distributed the scales after explaining how to answer them. Since the time of data collection coincided with almost the end of the year and it was probable that some students wouldn't return the scales, the researcher collected the scales after about half an hour with the help of those who had already answered and the instructor.

Findings

This section presents the results of some statistical analyses done by SPSS version 22. Figures 5-9 show the pie charts of student's answers to second, fourth, thirteenth, nineteenth and forty third statement of Schmitt's VLSQ and Tables 4-6 contain the mean of items in categories of Schmitt's vocabulary questionnaire to identify different kinds of strategies (popular, somehow popular and unpopular) based on the literature. The second question which belongs to the determination category asked to what extent the

participants used a monolingual dictionary. Figure 5 shows the percentages of their answers.

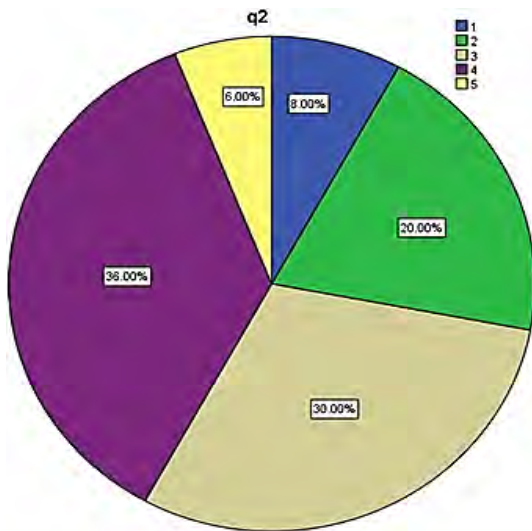


Figure 5.
Students' Opinions about the Second Statement

As it is shown in figure 5, 8% of the participants never or almost never used a monolingual dictionary, 20% of them didn't usually use it, 30% somewhat used a monolingual dictionary, 36% of the participants usually used a monolingual dictionary and only 6% always or almost always used it. The fourth statement asked the participants whether they would ask their teacher for using a new word in an English sentence or not. Figure 6 shows the percentages of their answers.

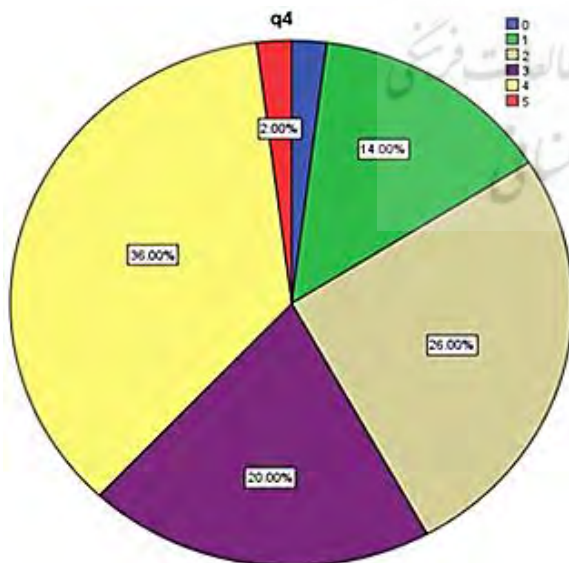


Figure 6.
Students' Answers to this Statement

14% of them stated they never or almost never used it, 26% of them didn't usually use this strategy, 20% of them somewhat used it, 36% of them usually used it and finally, 2% of them chose none of the items, the same percentage to those who stated they always or almost always used this strategy. Writing down a new word, its definition/synonym, its part of speech (noun, verb, adj., adv., etc.) an example sentence in which the word is used and other grammatically related words is the fifth strategy belonging to the cognitive category. Figure 7 shows the percentages of participants' responses to items 1-5 of this statement.

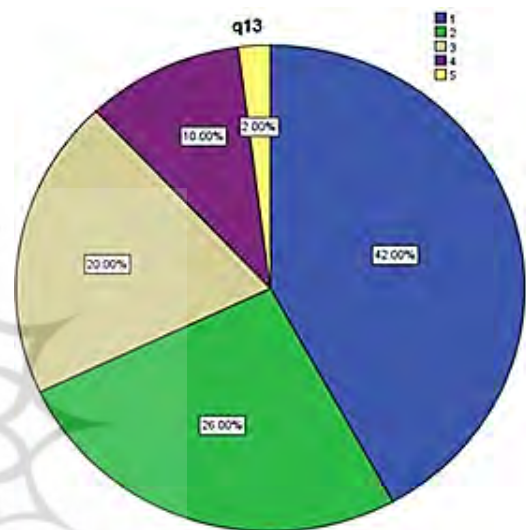


Figure 7.
The Subjects' Opinions about the Thirteenth Statement

Like the previous statements this strategy isn't a popular one because the participants have mostly chosen items 1-3 (item 1: 42%, item 2: 26%, and item 3: 20%). It's worth mentioning that only a small number of the participants expressed that they usually or always used this strategy type (item 4: 10%, item 5: 2%).

Associating a word with its coordinates and collocations is the second strategy type belonging to the memory category. Figure 8 shows the percentages of participants' answers to items 1-5 of this statement.

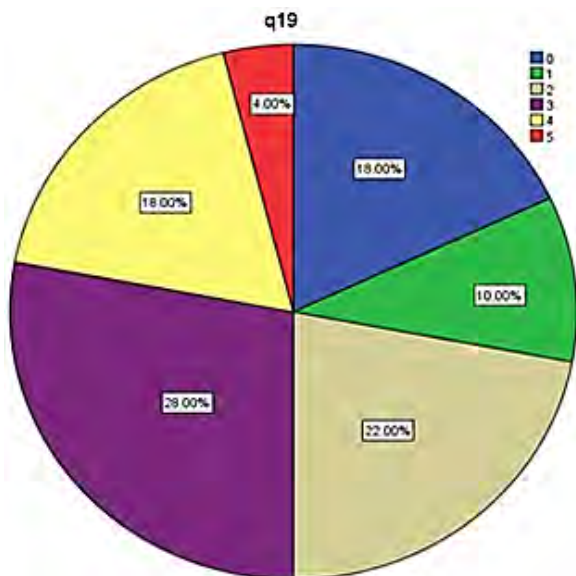


Figure 8.
Students' Opinions about the Nineteenth Statement

Because items 1-3 have the highest percentages (item 3: 28%, item 2: 22%, item 1: 10%), this strategy is a somehow popular one. Some of the participants usually used this strategy type (item 4: 18%). Finally, a very small number of the participants were eager to use this strategy type (item 5: 4%). Picking up new words when playing computer games in English is the sixth strategy which belongs to the metacognitive category. Figure 9 shows the percentages of participants' answers to items 1-5 of this statement.

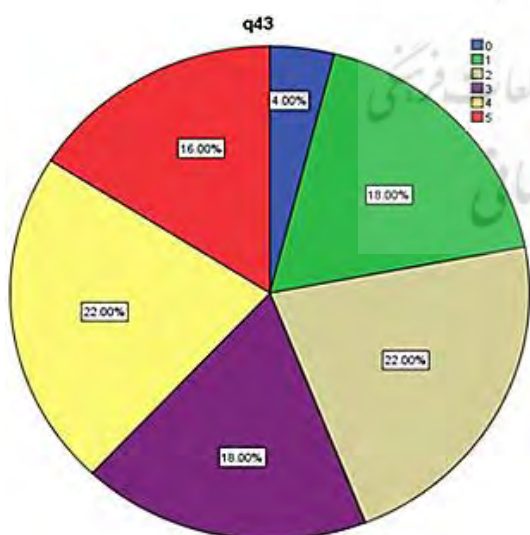


Figure 9.
The Percentages of Subjects' Answers to Items 1-5 of This Statement

Picking up new words when learners are playing computer games in English is neither a popular strategy nor an unpopular one because there's no single item which has the highest percentage. Surprisingly, the percentage of those who chose items 2 and 4 and those who chose items 1 and 3 is the same (items 2 and 4: 22%, items 1 and 3: 18%). And finally, some of the participants were eager to use this strategy (item 5: 16%). Tables 5-8 show the kinds of strategies used by the participants.

Table 5.
Listing Kinds of Strategies in the First and Second Category of Schmitt's Taxonomy

Category	No	Mean (M)	Kind
DET	1	2.20	Unpopular
	2	2.73	Somehow popular
	6	2.55	Somehow popular
	7	2.78	Somehow popular
	14	2.21	Unpopular
	15	2.17	Unpopular
	16	2.06	Unpopular
SOC	17	3.06	Somehow popular
	3	3.13	Somehow popular
	4	3.76	Popular
	5	3.08	Somehow popular

The literature of this area offers the following rationale for identifying kinds of strategies:

($M \leq 2.40$: Unpopular strategy, $2.50 \leq M \leq 3.40$: Somehow popular strategy and $M \geq 3.50$: Popular strategy). Unpopular strategies are shown with red, somehow popular ones with yellow and popular ones with green (stemmed from authors' creativity).

Table 6.
Kinds of Strategies in the Third Category of Schmitt's Taxonomy

Category	No	Mean (M)	Kind
COG	8	3.17	Somehow popular
	9	3.63	Popular
	10	2.97	Somehow popular
	11	2.14	Unpopular
	12	2.36	Unpopular
	13	2.23	Unpopular
	24	2.85	Somehow popular
	25	2.72	Somehow popular
	26	2.70	Somehow popular
	28	3.36	Somehow popular
	34	2.97	Somehow popular
	35	2.76	Somehow popular
	38	3.02	Somehow popular

Table 7.

Listing Kinds of Strategies in the Fourth Category of Schmitt's Taxonomy

Category	No	Mean (M)	Kind
MEM	18	3.10	Somehow popular
	19	2.95	Somehow popular
	20	2.17	Unpopular
	21	3.42	Somehow popular
	22	2.40	Unpopular
	23	2.63	Somehow popular
	27	3.36	Somehow popular
	29	2.82	Somehow popular
	30	3.14	Somehow popular
	31	3.14	Somehow popular
	32	3.82	Popular
	33	2.76	Somehow popular
	37	3.08	Somehow popular
	44	3.02	Somehow popular

The literature of this area offers the following rationale for identifying kinds of strategies:

($M \leq 2.40$: Unpopular strategy, $2.50 \leq M \leq 3.40$: Somehow popular strategy and $M \geq 3.50$: Popular strategy). Unpopular strategies are shown with red,

somehow popular ones with yellow and popular ones with green (stemmed from authors' creativity).

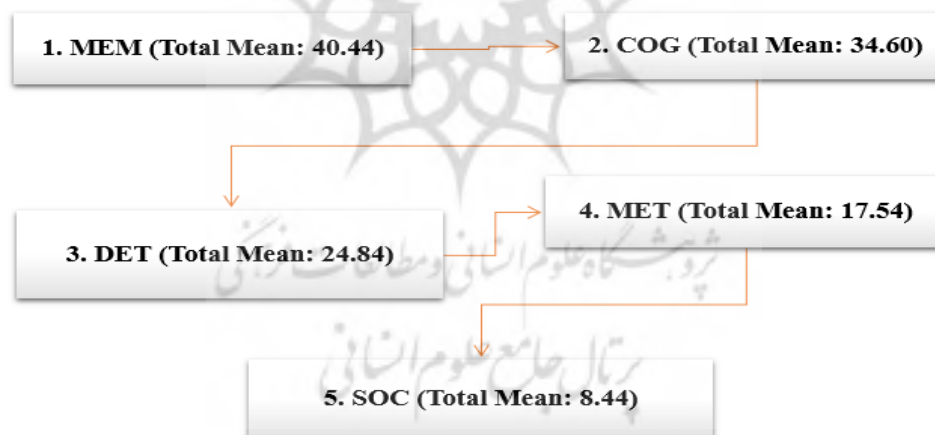
Table 8.

Listing Kinds of Strategies in The Last Category of Schmitt's VLSQ

Category	No	Mean (M)	Kind
MET	36	3.08	Somehow popular
	39	2.23	Unpopular
	40	2.87	Somehow popular
	41	2.74	Somehow popular
	42	2.63	Somehow popular
	43	2.93	Somehow popular
	45	3.14	Somehow popular

The literature of this area offers the following rationale for identifying kinds of strategies:

($M \leq 2.40$: Unpopular strategy, $2.50 \leq M \leq 3.40$: Somehow popular strategy and $M \geq 3.50$: Popular strategy). Unpopular strategies are shown with red, somehow popular ones with yellow and popular ones with green (stemmed from authors' creativity). Figure 10 shows the most frequently used categories as well as the least-frequently-used ones based on their means.

**Figure 10.**

What Categories Students Used Most and Least Arranged Based on Their Total Mean Performance.

Discussion and Conclusion

This section intends to compare and contrast what this study has found with what other similar studies in the literature and enumerate some suggestions for further research. The main finding of this paper was that memory and cognitive categories were used most-frequently and metacognitive and social categories were used least-frequently. The following paragraphs

intend to compare the finding of this study with other studies which had used the same instrument.

Regarding which categories were used most-frequently, Gani Hamzah, Kafipour, and Abdullah (2009) revealed that their participants used determination and memory categories most-frequently. Wanpen et al. (2013) found that the general-education stream used metacognitive and memory categories most frequently and the vocational stream

metacognitive and social categories most-frequently. And finally, Amirian and Heshmatifar (2013) found that participants used determination and cognitive categories most-frequently. To sum up, it can be said that the mentioned findings are all in contrast to the finding of this study.

Regarding which categories were used least-frequently, Amirian and Heshmatifar (2013) found that their participants used metacognitive and social categories least-frequently, in line with the finding of this study. Gani Hamzah, Kafipour, and Abdullah (2009) found that cognitive and social categories were used least-frequently. And finally Wanpen et al. (2013) found that the general-education stream used social and determination categories least-frequently and vocational stream used memory and cognitive categories least-frequently.

The authors found more studies but couldn't bring them in this section because they had used other instruments (They had either used Gu and Johnson's VLQ or Kudo's VLQ, and Paul Nation's VST instead of Schmitt's VLT). The only limitation of this study is small sample size.

The main groups who can benefit from the reported findings are teachers and textbook developers. Teachers can use the list of popular, somehow popular and unpopular strategies and assess how using the strategies affects the students' vocabulary size. Textbook developers can encourage the use of strategies by means of exercises and tasks which require students to use them. Eventually, the authors' suggestions for further research include the following five areas:

1. Exploring how the list of strategies listed can be implemented.
2. Replicating the current study with more participants (The relationship between the participants' overall, categorical, individual strategies and their vocabulary size.
3. Conducting some cross-cultural mutual projects by two researchers from different cities and same research interests.
4. Exploring how using educational technologies affects the students' strategy use and consequently their vocabulary size.
5. Choosing variables from the area of psycholinguistics and using VLSs and explore how it affects their vocabulary size.

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