Vocabulary Levels and Vocabulary Learning Strategies of Iranian Undergraduate Students

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Abstract
This study tries to investigate the vocabulary learning strategies and vocabulary level of Iranian EFL learners and any potential relation and contribution between these two variables. The research design of the study was quantitative method and the population of the study was Iranian junior EFL students. Thus, 238 participants- both male and female- were selected from Semnan universities according to random cluster sampling. Schmitt’s vocabulary learning strategies questionnaire (VLSQ) and nation’s vocabulary level test (VLT) were used to collect data. The results showed that Iranian junior EFL students were medium strategy users with overall strategy mean score of 2.99. It indicated that the participants of the current study need more training on vocabulary learning strategies to become more familiar with all types of vocabulary earning strategies. Furthermore, memory strategy was found as the most frequently used strategy and cognitive strategy as the least frequently one. The descriptive statistics showed that students had sufficient vocabulary knowledge at 2000 and 3000 word levels. However, they did not have sufficient vocabulary knowledge at 5000, 10000, and academic vocabulary levels. The results indicated significant relationship between all vocabulary learning strategy and overall vocabulary level of the students. However, the strongest correlation was found between memory strategy and overall vocabulary level and the weakest correlation was found between social strategy and overall vocabulary level of Iranian EFL university students. It was found that all vocabulary learning strategy contributed to the overall vocabulary learning of the student. The highest contribution was related to memory strategy and the lowest to social strategy.

Key words: Vocabulary; Learning strategies; Vocabulary learning strategies; Vocabulary level; Vocabulary size

INTRODUCTION
From the early 1970s, some researchers in the field of language learning and teaching have been trying to find out teaching methods, classroom techniques, and instructional materials that will promote better learning. However, in spite of all these efforts there has been a growing concern that learners have not progressed as much as it was anticipated. Because there are individual differences in language learning such as gender, age, social status, motivation, attitude, aptitude, culture, etc.; what works for one learner might not work for another. Therefore, none of the methods and techniques has proved that they can work all the time, in all classes, and with all students. As a result, it might be appropriate to comply with Grenfell and Harris’ (1999) statement that “Methodology alone can never be a solution to language learning. Rather it is an aid and suggestion” (p. 10). Language Learning Strategies (LLS) have been one of the most popular aspects researchers have focused on since they
can internalize second language rules, customize learning and respond to individual learning needs. Vocabulary learning strategies (VLS) are a part of language learning strategies which are receiving more attention since the late 1970s. Investigation of vocabulary learning strategies has advanced our understanding of the processes learners use to develop their skills in a second or foreign language.

OBJECTIVES OF THE STUDY
The study is going to investigate vocabulary learning strategies and vocabulary level of Iranian undergraduate learners. Thus, the following objectives can be proposed:
1. To explore vocabulary learning strategies used by Iranian EFL learners.
2. To identify Iranian EFL learners’ vocabulary levels.
3. To explore the relationship between vocabulary learning strategies and vocabulary level of Iranian EFL learners.
4. To identify contribution of vocabulary learning strategies to vocabulary level of Iranian EFL learners.

RESEARCH QUESTIONS
The study sets out to seek answers to the following research question:
1. Are Iranian EFL university students, high, medium, or low strategy users?
2. What are the most and least frequently used vocabulary learning strategies of Iranian EFL learners?
3. What is vocabulary level of Iranian EFL learners?
4. Is there any significant relationship between language learning strategies and vocabulary levels of Iranian EFL learners?
5. DO vocabulary learning strategies contribute to the vocabulary level of Iranian EFL learners?

REVIEW OF THE RELATED LITERATURE
Vocabulary learning strategies are a part of language learning strategies which in turn are a part of general learning strategies. Any techniques or tools which can be used to learn vocabularies quickly, easily and independently are called vocabulary learning strategy. A number of linguists have long recognized the importance of learner independence in vocabulary learning. The view of Gairns and Redman (1986) is that students should be more responsible for their learning and pay greater attention to individual needs. The reason is that after elementary level, it is increasingly difficult for teachers to select vocabulary equally useful to all students; thus time spent on teaching may be wasted.

Oxford and Scarcella (1994) advocate the provision of systematic vocabulary instruction to let learners master specific strategies to learn words even outside their classes. For Nation (1990, 2001), the most important way to learn vocabulary is learners using strategies independently of a teacher. According to Schmitt and Schmitt (1995), the best teaching plan may be to introduce a variety of learning strategies to students so that they can decide for themselves the ones they prefer. This echoes learners’ need to develop their strategy knowledge.

Schmitt (1997, 2000) proposed a different classification system in comparison with other researchers. He suggests two dimensions of L2 vocabulary learning strategies: discovery and consolidation strategies which distinguish the strategies that learners use to determine the meaning of new words when they first encounter them from the ones they use to consolidate meanings when they encounter the words again. The former refers to determination and social strategies whereas the latter includes social, memory, cognitive, and metacognitive strategies, with 58 individual strategies in total. This categorization is based, in part, on Oxford’s (1990) taxonomy of language learning strategies. This classification is believed to be a comprehensive classification as Schmitt (2000) claimed that he tried to combine the available classification frameworks to make a more complete one. He believed that one of the key features of successful learners that have been highlighted by research (Schmitt, 2000) is that the learners make use of a variety of learning strategies. If strategies are indeed trainable, then they can be taught to less successful learners. It is also likely that learners will be more proficient in certain aspects of vocabulary learning than in others, and so by encouraging the use of different classes of strategy, teachers may be able to target individual weaknesses to improve. The results of Schmitt’s study may be the most comprehensive and reliable one as he distinguishes between strategies mostly used by the learner and strategies believed to be the most useful. His classification of VLS is also the most elaborate and extensive classification which has ever made. Schmitt’s classification and his vocabulary learning strategies questionnaire (VLSQ) will serve as the basis for the current study. Following studies are among those which concentrated on the topic in Iranian educational setting.

Eslami Rakhsh and Ranjbary (2003) investigated the effect of metacognitive strategy training through the use of explicit strategy instruction on the development of lexical knowledge among 53 male and female Iranian EFL students taking part in an intensive course of English in Tehran Institute of Technology aged 19 to 25. The results showed that there was not any significant difference between two groups in terms of vocabulary knowledge. However, post-test showed that while there was not any significant difference between control and experimental group in terms of lexical knowledge at the beginning of the study, the experimental group surpassed the control group in terms of lexical knowledge at the end of the
experiment. Thus, the findings of this study indicate that explicit metacognitive strategies instruction has a positive impact on the lexical knowledge development of EFL students.

Marefat and Amadi (2003) examined the effect of teaching direct learning strategies (memory, cognitive, and compensation) and their subcategories on the vocabulary short term and long term retention of 60 Iranian female English language learner between the age of 15 and 17. In fact, they do not concern vocabulary learning strategies; rather they investigate the impact of learning strategies on vocabulary retention. The result showed that memory and cognitive strategies were used more than other strategies as reported by the respondents in the questionnaire; moreover, learners’ strategy use in short-term retention vocabulary was more effective than in long-term retention. The results also portrayed the superiority of memory strategy use both in short and long term retention.

One of the recent studies with regard to vocabulary learning strategies have been done by Akhary and Tahirian (2009). They investigated vocabulary learning strategies use for specialized and non-specialized learning vocabulary among ESP students in different field of studies. The participants were 103 undergraduate medical and paramedical students who had enrolled in ESP in Isfahan University of Medical Sciences from 8 different fields of study. A triangulation method includes observation, interview and questionnaire was used to elicit data. The finding of the questionnaire showed that the most frequent strategy was using bilingual dictionaries and the most commonly used learning strategy was oral and/written repetition.

Every student has his or her unique way of learning a new word when studying a foreign language. Strategies are not inherently good, and there is no such thing as the best way to learn a word. However, studies have shown that certain variables such as cultural background, gender, English language proficiency, and vocabulary size might affect the choice of VLS among the learners.

RESULTS

In this part, the results obtained from data analysis of the data will be presented according to the above-mentioned research questions:

Results for Research Question One
To find out if Iranian EFL students are high, medium, or low strategy users, descriptive statistics was used. Mean score and standard deviation for overall strategy use was calculated. Data analysis showed mean score of 2.99 and standard deviation of 0.21 for overall strategy use. According to scoring system developed by Oxford (1990) and used by Schmitt (1997, 2000), mean score below 2.5 shows low strategy use, mean score 2.5-3.5 shows medium strategy use, and mean score above 3.5 shows high strategy use. For the current study, mean score 2.99 showed that Iranian EFL university students were medium strategy users.

Results for Research Question Two
To identify the strategies most and least often used, descriptive statistics was again used. Mean score and standard deviation for each category of vocabulary learning strategies was calculated. Then, the strategies were ranked according to their mean score to find the most and least frequently used strategies. The following table showed descriptive statistics for each category of strategies.
According to Table 1, memory strategy with mean score of 3.01 and standard deviation of 0.35 was found to be the most frequently used strategy by Iranian EFL undergraduate students while cognitive strategy with mean score of 2.96 and standard deviation of 0.53 was found as the least frequently used strategy. The above-mentioned table showed the sequence of strategies based on the frequency of use of each strategy’s category.

Memory strategy was followed by metacognitive (mean=3.01, SD=0.84), social (m= 2.97, SD= 0.62), determination (mean=2.96, SD=0.53), and cognitive strategy (mean=2.95, SD=0.35). Referring to the mean scores, it is clear that all mean scores fell within the range of 2.5-3.5. This range belongs to medium strategy use according to Oxford (1990) scoring system. Therefore, all five categories of vocabulary learning strategies were used at a medium level. No strategy was found to be used at high or low level.

Results for Research Question Three

To find vocabulary level of students, descriptive statistics for each vocabulary level was conducted. It showed that the students knew sufficient number of vocabularies in 2000 and 3000 word levels. They knew 905 out of 1000 words in 2000 word level and 850 out of 1000 words in 3000 word level. However, they did not know a large number of words in other levels such as 5000, 10000, and academic word levels. The students knew 715 out of 1000 words in 5000 word level that meant they did not know 285 words in this level. In academic word level, the students knew 571 out of 1000 words, that is, 429 words in were not known in academic word level. In 10000 word level, only 195 out of 1000 words were known. It meant that the students did not know 805 words in 10000 word level.

Results for Research Question Four

To find correlation between vocabulary learning strategies and vocabulary levels, Pearson Correlation Product Moment was applied. Table 2 showed correlation among each strategy type and total vocabulary level as well as specific vocabulary levels.

As depicted in Table 2, significant correlation was found between all vocabulary learning strategies and overall vocabulary level. The strongest correlation was found between memory strategy and total vocabulary level with correlation coefficient of 0.371. After memory strategy, total vocabulary level had stronger correlation with determination (0.298), cognitive (0.267), metacognitive (0.164) and social strategy (0.138) respectively.

Table 2 showed correlations among each vocabulary level and individual strategies. Determination strategy correlated significantly with 5000 word level (0.262), 3000 word level (0.174), 2000 word level (0.169), and 10000 word level (0.145) respectively. No correlation was found between determination strategy and academic word level (0.110).

Social strategy showed correlation only with 2000 word level (0.178) and 3000 word level (0.127) respectively. No correlation was found among social strategy and 5000 word level, academic word level, and 10000 word level.

Memory strategy correlated with 3000 word level (0.362), 2000 word level (0.308), 5000 word level (0.262), and academic vocabulary level (0.202) respectively. No correlation was found between memory strategy and 10000 word level.

The next strategy type-cognitive strategy- correlated with all vocabulary levels except the 10000 word level.
The 2000 word level correlated with cognitive strategy at correlation coefficient of 0.302 followed by 3000 word level (0.202), 5000 word level (0.156), and academic word level (0.153).

Finally, metacognitive strategy only correlated with 10000 word level. No correlation was found among metacognitive strategy and 2000, 3000, 5000, and academic word level.

**Results for Research Question Five**

To find the contribution of vocabulary learning strategies to vocabulary level of the students, stepwise multiple regressions was applied. The following table showed the contribution of vocabulary learning strategies to the learners’ vocabulary level.

<table>
<thead>
<tr>
<th>Strategies</th>
<th>B</th>
<th>β</th>
<th>T</th>
<th>Sig. T</th>
<th>R²</th>
<th>Contribution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Memory</td>
<td>9.576</td>
<td>0.371</td>
<td>6.135</td>
<td>0.000</td>
<td>0.138</td>
<td>13.8</td>
</tr>
<tr>
<td>Determination</td>
<td>5.560</td>
<td>0.318</td>
<td>5.580</td>
<td>0.000</td>
<td>0.238</td>
<td>10.0</td>
</tr>
<tr>
<td>Cognitive</td>
<td>4.252</td>
<td>0.245</td>
<td>4.466</td>
<td>0.000</td>
<td>0.298</td>
<td>6.0</td>
</tr>
<tr>
<td>Metacognitive</td>
<td>2.466</td>
<td>0.224</td>
<td>4.186</td>
<td>0.000</td>
<td>0.347</td>
<td>4.9</td>
</tr>
<tr>
<td>Social</td>
<td>3.069</td>
<td>0.207</td>
<td>3.977</td>
<td>0.000</td>
<td>0.389</td>
<td>4.2</td>
</tr>
<tr>
<td>Constant</td>
<td>16.965</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>38.9</td>
</tr>
</tbody>
</table>

The stepwise multiple regression showed that all five categories of vocabulary learning strategies contributed to the vocabulary level of students. The total contribution was 38.9% at significant level p<0.05. Multiple regression showed a correlation between the dependent variable (vocabulary level) and all independent variables (vocabulary learning strategies) which was 0.624 (multiple R). The variances value of dependent variable correlated significantly with five of independent variables. This can be explained through the power which was able to describe the regression model with the value (R²) which was 38.9%.

The main strategy which contributed most to vocabulary level was memory strategy (β=0.371, T=6.135, Sig. T=0.000). Memory strategy's contribution was as much as 13.8%. It showed when the score for memory strategy was added up by one unit, the learners’ vocabulary level was increased by 0.371 units. The second strategy which contributed more was determination strategy (β=0.318, T=5.580, Sig. T=0.000). This strategy contributed 10% toward vocabulary level. In other words, when determination strategies were use by one unit, the learners’ vocabulary level was increased by 0.318 units.

The Beta value for using cognitive strategy showed a great effect on vocabulary level of the students (β=0.245, T=4.466, Sig. T=0.000). When the score for cognitive strategy was added up by one unit, the learners’ vocabulary level was increased by 0.245 units with the contribution of 6%.

Metacognitive strategy had also an effect on vocabulary level of the students (β=0.224, T=4.186, Sig. T=0.000). Related to this was when the score of metacognitive was added up by one unit, vocabulary level of the students was increased by 0.224 units.

Finally, social strategy was found as the strategy which contributed to vocabulary level less than other strategies (β=0.207, T=3.977, Sig. T=0.000). This strategy showed a contribution of 4.2% toward the learners’ vocabulary level. This circumstance clearly revealed when the score for social strategy was increased by one unit, the learners’ vocabulary level was increased by 0.207 units. The following ANOVA table (Table 4) gives more information about the relationship between vocabulary learning strategies and vocabulary level of the students.

### Table 4: Regression ANOVA Table

<table>
<thead>
<tr>
<th>Source</th>
<th>Sum of Square</th>
<th>Mean Square</th>
<th>DF</th>
<th>F</th>
<th>Sig. T</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression</td>
<td>7914.744</td>
<td>1583.549</td>
<td>5</td>
<td>29.539</td>
<td>0.000</td>
</tr>
<tr>
<td>Residual</td>
<td>12437.050</td>
<td>53.608</td>
<td>232</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>20354.794</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The value of R² (0.389) showed a correlated level and contribution between all five categories of vocabulary learning strategies and the significance toward the vocabulary level is moderate. According to Table 4, the findings of the variants analysis is the F value=29.539 (df=5, 232) and is significant at P level (p=0.000) <0.05. As an explanation, the value of R² is 38.8% based on the overall contribution of all five categories of vocabulary learning strategies observed.
DISCUSSION
In this part, findings for each research question will be discussed in details.

Discussion for Research Question One
Although some students used strategies at a high level, the students in total used strategies at a medium level. It might be due to their attitude toward usefulness of the strategies, that is, they found a small group of strategies suitable for their learning. Thus, they focused on those strategies and ignored other strategies. They might not be aware that different learning situations need different strategies in order to maximize learning.

Another possible reason for limited use of strategies might be due to unfamiliarity with different types of strategies so they stuck to the strategies they were aware of. The last possible reason might be that the students used some strategies subconsciously. Thus, they were not aware what they were using in their learning was a kind of strategy. Therefore, they did not report them as a strategy. Kafipour (2010) in his PhD thesis pointed to this factor as one of the main reasons why the respondents in his study did not report some strategies in interview and journal writing. He stated that some of the respondents of his study felt shy to report some strategies as they thought those methods are incorrect ways to practice vocabularies. They were not aware and did not believe that they were using some important strategies to retain vocabulary. To solve this problem, complete and comprehensive strategy training was recommended by Nation (2001). He said the students should be taught how and when to use each strategy and how to combine a group of strategies to get the maximum achievement.

Discussion for Research Question Two
Data analysis revealed memory strategies as the most frequently used strategies by Iranian EFL undergraduate students. High use of memory strategies showed that the students preferred vocabulary learning strategies which were simple with less need for mental activities and processing. This finding is consistent with the results of a study done by Sahbazian (2004). She found that the participants of her study preferred using memory strategies. A reason why memory strategies were found to be the most frequently used strategies might be due to the popularity of rote learning among students and teachers in Iran. In rote learning, the focus is on mnemonic techniques. Similar to the position in Turkey as mentioned by Sahbazian (2004), the real teaching and learning method which was practiced in universities in Iran was rote-memorization although it was claimed that communicative approach is the base for teaching and learning.

Metacognitive strategies were found to be the second most frequently used strategy in the current study. It showed that learners were strongly taking control of their own learning. Taking control of one’s own learning is a major feature in independent learning. Thus, group work, reviewing, and informal testing should be emphasized for such learners since these strategies are activities which can easily be done without any need for teacher. This finding was unlike the findings of Sahbazian’s (2004) study. She found metacognitive strategies among the less frequently used strategies and concluded that the Turkish learners did not or could not take control of their own learning. Thus, she did not recommend using learning strategies which were not independent of classroom and teachers in the beginning of the students’ learning. Cognitive strategies were the least frequently used strategy by Iranian EFL students with mean score of 2.95. Since cognitive strategies were found to be positive predictor of general proficiency as shown by Gu and Johnson (1996), it can be justified that these strategies were used less frequently due to the insufficient general English proficiency of the learners in the present study.

Social strategies were found to be the third strategy used by the learners. Iranian EFL learners consider English language as an individual learning process (Kafipour, 2006). This might be the reason why they did not seek for other people’s help when they faced with a difficult or new word. Social strategies require that the learners actively participate in learning process and in classroom activities while Iranian students were known as passive students (Kafipour, 2006). One reason for the learners’ inactivity in classrooms and in learning in general was the traditional education system in Iran. This education system was teacher-centered. Teachers provided 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 that is why the students became passive in learning process. This finding was similar to the findings of similar studies of EFL students such as Sahbazian (2004; Kudo, 1999; Al-Nujaifi, 2000; and Schmitt, 1997). All these studies emphasized that learning in an EFL environment was a major reason why social strategies were not widely used, that is, in an EFL environment there is no need to negotiate the meaning of the word in communication situations.

Discussion for Research Question Three
According to Nation’s (2001) interpretation framework, the students in the current study knew sufficient words from 2000 and 3000 word level while they needed a bit more work at 5000 word level since they did not know 285 out of 1000 words in this level. Perhaps, graded reading would be useful. This finding is also consistent with the study done by Ho-Chuen (1997). He found that the participants in his study knew sufficient words in 2000 and 3000 word level but they needed to learn more vocabularies from 5000 word level.

In the present study, the participants were
undergraduate students at Iranian universities; therefore, it is very important for the students to have sufficient academic word level in order to be able to have a successful learning at university (Nation, 2001). However, the analysis showed that the students only knew 571 words from this level and they were unfamiliar with 429 words from academic word level. It showed that the students were low on academic word level. Thus, intensive work is required on teaching and learning of academic words before any other teaching and learning activities. The analysis revealed that the students were very low on 10000 word level. It showed that they needed extensive and direct instruction of vocabularies as well as graded reading to learn enough words from this level.

Discussion for Research Question Four and Five

To find correlation between vocabulary learning strategies and vocabulary levels, Pearson correlation was conducted. It was interesting to find out that all strategies based on the same sequence in the correlation contributed to vocabulary level as indicated in stepwise multiple regression analysis (Table 3). This finding that higher numbers of vocabulary learning strategies contribute to the overall vocabulary level than other variables as learning style in this study was supported by several studies. Curtis (1987) believed that vocabulary learning strategies directly affect vocabulary levels of the learners while it mostly has an indirect effect on other variables. Cusen’s (2005) also found a closer relationship between vocabulary learning strategies and vocabulary level than other variables of his study.

This strong and direct relationship between vocabulary learning strategies and overall vocabulary level in addition to the contribution of vocabulary learning strategies to the vocabulary level of the students showed that vocabulary level of the students can be increased quickly by the use of extensive and correct use of vocabulary learning strategies (Schmitt, 1997).

Determination and cognitive strategies were found as the least frequently used strategies while they were the second and third contributors to the overall vocabulary level of the students. Such findings are one of the reasons why Oxford (2001) stated that the frequency of use of a strategy and its contribution percentage should be determined in the beginning of a class to enable teachers to gain the best outcome from their teaching. She continued that making the students aware of the strategies they use in learning as well as their effectiveness can help them to manage their strategy use and subsequently improve learning.

The students should be made aware of determination strategy as the second contributor to overall vocabulary level of the learners. They should become familiar with effectiveness of this strategy and its use should be promoted and enforced by the teachers in the classroom. This finding is unlike the findings of Bennett’s (2006) study. He found that determination strategy did not contribute to vocabulary size of the students. He believed that determination strategies are usually used to find the meaning of new words when the learners encounter a new word for the first time. Thus, this strategy is used to find the meaning of rather than to remember the meaning. He concluded that is why the use of this strategy did not significantly added to the vocabulary size of the participants in his study. However, this study did not confirm the results of Bennett’s (2006) study. Therefore, Iranian undergraduate EFL students should be encouraged to use more determination strategies.

CONCLUSION

The current study showed that Iranian junior EFL students were medium strategy users with overall strategy mean score of 2.99. It indicated that the participants of the current study need more training on vocabulary learning strategies to become more familiar with all types of vocabulary learning strategies since a good learner is a learner who applies all strategies in his/her learning at a high level (Oxford, 2001). Among the strategies, memory was used most frequently and cognitive strategy was used less frequently. The study also investigated vocabulary knowledge of the learners and found that they had sufficient vocabulary knowledge at 2000 and 3000 word levels. However, they did not have sufficient vocabulary knowledge at 5000, 10000, and academic vocabulary levels.

As another finding, the study found significant relationship between all vocabulary learning strategy and overall vocabulary level of the students. However, the strongest correlation was found between memory strategy and overall vocabulary level and the weakest correlation was found between social strategy and overall vocabulary level of Iranian EFL university students. Furthermore, it was found that all vocabulary learning strategy contributed to the overall vocabulary learning of the student. Memory strategy as the most contributed variable and social strategy as the least contributed one.

REFERENCES


