On the Impacts of Perceptual Learning Style and Gender on Iranian Undergraduate EFL Learners' Choice of Vocabulary Learning Strategies

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Abstract

Students' learning styles and vocabulary learning strategies are among the main factors that help determine how students learn second language vocabulary. This work examined the extent to which choice of vocabulary learning strategies is affected by students' perceptual learning style. In this research, the participants were 54 EFL learners atTarbiatMoallemUniversity majoring in English literature, ranging in age from 20 to 22, and they consisted of both males and females. TOEFL test, Schmitt's (1997) vocabulary learning strategies questionnaire including 5 categories (Determination, Social, Memory, Cognitive, Metacognitive), and Joy Reid's (1987) perceptual learning style preference questionnaire were used in present study. After collecting the data, a number of descriptive and inferential analyses were conducted on the data. The findings of the study revealed there was a relationship between learners' perceptual style and vocabulary learning strategies they use so that learners' perceptual styles make statistically significant contribution to the prediction of vocabulary learning strategies. The results showed that specific learning styles correlated with specific vocabulary learning strategies. Descriptive statistical analyses showed that the most frequent learning style was visual style. Kinesthetic and auditory styles ranked the second and third styles. Also it was shown that group style with the average of 16.0741 was the least frequent. Moreover, it was indicated that the most preferred vocabulary learning strategy category of all was related to metacognitive strategies. Determination strategies ranked the second. Cognitive, memory and the social strategies ranked the third to the fifth. Concerning the gender differences in both vocabulary learning strategies, and perceptual learning styles of the participants, an independent samples t-test was conducted, and the results showed that there was no statistically significant difference between the vocabulary strategy preferences or learning styles of the two genders. The research emphasized assessing styles and vocabulary learning strategies in the L2 classroom, attuning L2 instruction and vocabulary learning strategy instruction to learners' style preferences, and remembering that no single L2 instructional methodology fits all students.

Keywords: perceptual learning style, vocabulary learning strategies, gender

1. Introduction

Vocabulary is central to language and of critical typical importance to the language learner (Zimmerman 1998), so it has always been an indispensable part of language teaching and learning; however, while interest in the second language vocabulary acquisition (SLVA) has grown in the last ten years and there is a large number of research articles investigating word learning in SLA, a number of rather basic questions about SLVAhave remained unanswered and the impact of the researches on vocabulary pedagogy has been rather limited (Zahar, Cobb & Spada, 2001). In other words, vocabulary teaching has not been responsive to problems in the area. One of these areas that need more investigations is related to Vocabulary Learning Strategies defined as"the process by which information is obtained, stored, retrieved and used" (Schmitt, 1997) or as "the special thoughts or behaviors that individuals use to help them comprehend, learn or retain new information" (O'Malley & Chamot 1990, p. 1). A comprehensive inventory of vocabulary learning strategies is developed by Schmitt (1997). His taxonomy contains determination, social, cognitive, metacognitive, and memory strategies. To Schmitt,

determination strategies are used when "learners are faced with discovering a new word's meaning without recourse to another person's experience" (p. 205). Hence, learners try to discover the meaning of a new word by guessing it with the help of context, structural knowledge of language, and reference materials. For Schmitt, the second way to discover a new meaning is through employing the social strategies of asking someone for help with the unknown words. Beside the initial discovery of a word, learners need to employ a variety of strategies to practice and retain vocabulary. Learners thus, use a variety of social, memory, cognitive and metacognitive strategies to consolidate their vocabulary knowledge. Cooperative group learning through which learners study and practice the meaning of new words in a group is an instance of social strategies for consolidating a word. Memory strategies, traditionally involve relating the word with some previously learned knowledge by using some form of imagery or grouping. Cognitive strategies include repetition and using mechanical means such as word lists, flash cards, and vocabulary notebooks to study words. Finally, metacognitive strategies in Schmitt's taxonomy are defined as strategies used by learners to control and evaluate their own learning, by having an overview of the learning process in general (Schmitt, p. 216).

Recently research on second language learning strategies has received much attention in SLA not only as an obvious consequence of shift of emphasis from product of learning to its process (Oxford, 1990) but also from teacher to learner(learner-centered approaches) (Wenden, 1991; Tamada, 1996). It means that recently individual factors of learners have been under more emphasis. Concerning vocabulary learning strategies, what is important is that choice of these strategies is related to individual factors such as age, gender, and style.Thus, there should be some studies on this issue. Although there were many studies on vocabulary learning strategies in the past, the role of individual factors had been ignored in most of them. Besides, in the few existing works about the relationship between individual factors and choice of second language vocabulary learning strategies, the considered individual factors were limited to age, gender, level of proficiency or level of vocabulary knowledge. One individual factor ignored in these studies was perceptual learning style. This major factor may have relations with strategy use. Dunn and Dunn (1979 as cited in Reid 1987) define learning styles as "a term that describes the variations among learners in using one or more senses to understand, organize, and retain experience" (p. 89). Perceptual learning styles are of different types: auditory, visual, tactile, kinesthetic, group, and individual.Auditory learners are "students who enjoy the oral-aural learning channel. Thus they want to engage in discussions, conversations, and group work. These students typically require only oral directions" (Oxford, 1995, p. 36). Visual learners are learners who "prefer to learn via the visual channel. Therefore they like to read a lot, which requires concentration and time spent alone. Visual students need the visual stimulation of bulletin boards, videos and movies. They must have written directions if they are to function well in the classroom" (Oxford, 1995, p. 35). Tactile learning "suggests learning with one's hands through manipulation or resources, such as writing, drawing, building a model, or conducting a lab experiment" (Kinsella, 1995, p. 172). Kinaesthetic learning "implies total physical involvement with a learning environment such as taking a field trip, dramatizing, pantomiming, or interviewing" (Kinsella, 1995, p. 172). A group learner is the one who "learns more effectively through working with others" (Reid, 1995). An individual learner is someone who "learns more effectively through working alone" (Reid, 1995).

In addition to considering the perceptual learning styles, it should be reminded that, although the importance of second language vocabulary strategies in student-centered approaches have made it as a basic componentin some of second language researches, the results of these studies have been inconclusive so that in different contexts, different results have been found (Oxford & Nyikos, 1989; Ehrman & Oxford, 1990). Therefore, context of learning English as a second language or foreign language, and the degree of exposure to English language in that context can affect second language learners` choice of vocabulary strategies. Consequently, the results of other studies in one context cannot have important implications in a different context.

The literature on vocabulary learning strategies points to a number of factors that correlate with learners' use of strategies. Among these, in some contexts, learners' level of language proficiency (Chang, 1990; Green & Oxford, 1995), motivation (Oxford & Nyikos, 1989) and gender (Ehrman & Oxford, 1989; Green & Oxford, 1995; Chandler, Lizotte & Rowe, 1998) have been shown to have a strong effect on learners' use of different types of strategies. However, as the researches indicate these effects are context specific. So in this study some of these factors were regarded in Iran as an EFL context of learning with low exposure of learners to L2. Also, the effect of some other factors such as perceptual learning style on choice of vocabulary strategies which has not yet been investigated was studied in this work.

In sum, thesementioned problems provided the motivation for more investigations on this area in Iran so that the relationship between use of second language vocabulary strategies and individual factors such as gender and perceptual learning style were investigated. The minor aim of present study was to investigate frequency and type of vocabulary learning strategies used by Iranian EFL students.

The research questions to be investigated in this study are:

Is there any relationship betweenIranian Undergraduate EFL Learners' use of second language vocabulary strategies and their perceptual learning style?

Is there any relationship between Iranian Undergraduate EFL Learners use of second language vocabulary strategies and gender?

2. Methodology

In this research, the participants were 54 EFL learners at TarbiatMoallemUniversity majoring in English literature, ranging in age from 20 to 22, and they consisted of both males and females. At first, TOEFL Test was given to participants to assure that they are all in the same level of proficiency. Next, Schmitt`s (1997) "taxonomy of vocabulary learning strategies" was filled by learners to report their chosen vocabulary learning strategies. This questionnaire includes 5 categories, including Determination, Social, Memory, Cognitive and Metacognitive strategies, also it consists of 58 items with five-Likert Scale, ranging from (1= scarcely used, to 5= always used). As reported by Schmitt, the test is both reliable (.81) and valid. Then Perceptual Learning Style Preference Questionnaire (PLSPQ) developed by Reid (1987) was filled by the participants. It is a self-reporting questionnaire consisting of five statements on each of the six learning style preferences to be measured: visual, auditory, kinesthetic, tactile, group learning, and individual learning. The participants responded based on a five point Likertscale, ranging from strongly agree to strongly disagree.

3. Data Analysis

In this study the data was collected and anumber of descriptive (mean + Standard Deviation, SD) and inferential analyses (Correlations) were conducted on the data.

The statistical analyses wereconducted by using the Statistical Package for Social Sciences (SPSS). Regarding PLSQ, A t-test was conducted to identifywhether there was significant difference in the learning style preference betweenmales and females.Similar statistical procedures were used to analyze the data obtained from theSILL. Descriptive statistics were used to rank order the strategy categories from themost preferred to the least preferred category. A t–test was also conducted to findwhether there was difference in the preference of learning strategies between malesand females. In order to reveal whether there was a significant relationship between thelearning styles and the languagelearning strategies the Pearson correlation was used.

4. Results

4.1 Analysis of Vocabulary Learning Strategies

Schmitt's (1997) "taxonomy of vocabulary learning strategies" was filled by learners to report their chosen vocabulary learning strategies. This questionnaire includes 5 categories, including Determination, Social, Memory, Cognitive and Metacognitive strategies, also it consists of 58 items with five-Likert Scale, ranging from (1= scarcely used, to 5= always used). The results of the descriptive statistics conducted to identify the general tendency of vocabulary strategy preferences of the participants in this study, indicated that the most preferred strategy category of all, with a mean score of 3.1380 was the one related to metacognitive strategies. Determination strategies ranked the second with an average of 3.0000. The third place in the ranking order was taken by the cognitive strategies with a mean score of 2.8677. The mean scores of the memory and the social strategies were 2.7847 and 2.2259 respectively, and ranked the fourth and the fifth (see Table 1).

Table 1. Descriptive Statistics Concerning Vocabulary Learning Strategies

	N	Minimum	Maximum	Mean	Std. Deviation
Metacognitive	54	2.00	4.40	3.1380(a)	.56925
Determination	54	2.14	4.14	3.0000	.47340
cognitive	54	1.57	3.86	2.8677	.54723
Memory	54	1.94	3.65(b)	2.7847	.38688
Social	54	1.20	3.40	2.2259	.51255
Valid N (listwise)	54				

Concerning the gender differences in the vocabulary learning strategies of the participants, an independent samples t-test was conducted, and the results showed that there was no statistically significant difference between the Vocabulary strategy preferences of the two genders because all of the values were far above the significance value, $p < .05$ (see Table 2).

Table 2. Independent Samples T-test for Gender Differences in Vocabulary Learning Strategies Group Statistics

	gender	N	df Mean	Std. Error Mean	t	p
Determination	female	44	3.0357	.07302	.249	.16528
	male	10	2.8429	.12857	.211	.14786
Social	female	44	2.2636	.07205	.261	.17907
	male	10	2.0600	.20450	.367	.21683
Memory	female	44	2.8008	.06212	.527	.13630
	male	10	2.7140	.07966	.400	.10101
Cognitive	female	44	2.9708	.07498	.003	.17749
	male	10	2.4143	.17360	.012	.18910
Metacognitive	female	44	3.1648	.09083	.473	.20033
	male	10	3.0200	.12454	.359	.15414

4.2 Analysis of the Perceptual Learning Styles

The results of the descriptive statistics conducted to identify the perceptual learning styles of the participants in this study, indicated that the most frequent learning style was visual style with a mean score of 37.6296. Kinesthetic and auditory styles with mean scores of 36.4815 and 36.1111 ranked the second and third styles. Also it was shown that group style with the average of 16.0741 was the least frequent (see Table 3).

Table 3. Descriptive Statistics Concerning Perceptual Learning Style

	N	Minimum	Maximum	Mean	Std. Deviation
Visual	54	10.00	50.00	37.6296	7.60411
Kinesthetic	54	.00	48.00	36.4815	8.97742
Auditory	54	10.00	48.00	36.1111	7.72564
Tactile	54	10.00	46.00	33.6667	6.89271
Individual	54	10.00	25.00	17.4074	3.99301
Group	54	.00	23.00	16.0741	4.84808
Valid N (listwise)	54				

Concerning the gender differences in the learning styles preferences of the participants, an independent samples t-test was conducted and at $p < .05$ the no significance value for perceptual styles was found. This means that there is no statistically significant difference in the preference of learning styles between females and males (see Table 4).

Table 4. Independent Samples T-test for Gender Differences in Perceptual Learning Styles

	gender	N	df	Mean	Std. Error Mean	t	p
Visual	female	44	37.5909	37.5909	1.23305	.938	-.20909
	male	10	37.8000	37.8000	1.44376	.913	-.20909
Tactile	female	44	34.3182	34.3182	.95997	.147	3.51818
	male	10	30.8000	30.8000	2.73577	.250	3.51818
Auditory	female	44	36.8636	36.8636	1.09080	.135	4.06364
	male	10	32.8000	32.8000	2.93939	.220	4.06364
Group	female	44	16.2500	16.2500	.68826	.581	.95000
	male	10	15.3000	15.3000	1.94964	.655	.95000
Kinesthetic	female	44	37.0909	37.0909	1.38010	.300	3.29091
	male	10	33.8000	33.8000	2.53772	.273	3.29091
Individual		44	17.0909	17.0909	.58777	.225	-1.70909
		10	18.8000	18.8000	1.36463	.271	-1.70909

4.3 Analysis of the Relationship between Learning Styles and Learning Strategies

In order to determine whether there was a statistically meaningfulrelationship between the learning style preferences and the vocabulary learningstrategy preferences of the students, the Pearson correlation was computed. Theresults revealed that the auditory perceptual learning styles significantly correlated with social (p=0.019) and cognitive (p=0.023) vocabulary learning strategies at p < .05 significance value. Also, there was significant correlation between group perceptual style and social vocabulary learning strategies (p=0.020). In addition, it was indicated that kinesthetic styles and social vocabulary strategies correlate to each other significantly (p=0.025).

Table 5. Pearson Correlation Matrix

		Determination	Social	memory	cognitive	metacognitive
visual	Pearson Correlation	-.061	.243	.025	.173	-.209
	Sig. (2-tailed)	.659	.077	.858	.210	.129
	N	54	54	54	54	54
tactile	Pearson Correlation	.119	.252	.223	.227	-.071
	Sig. (2-tailed)	.392	.066	.105	.099	.611
	N	54	54	54	54	54
auditory	Pearson Correlation	.159	.318(*)	-.011	.308(*)	.097
	Sig. (2-tailed)	.250	.019	.934	.023	.486
	N	54	54	54	54	54
group	Pearson Correlation	.049	.317(*)	.142	.187	.120
	Sig. (2-tailed)	.723	.020	.304	.177	.388
	N	54	54	54	54	54
kinestetic	Pearson Correlation	.072	.306(*)	.239	.193	.104
	Sig. (2-tailed)	.603	.025	.081	.162	.455
	N	54	54	54	54	54
individual	Pearson Correlation	-.014	-.068	.016	-.028	.047
	Sig. (2-tailed)	.918	.625	.910	.841	.738
	N	54	54	54	54	54

* Correlation is significant at the 0.05 level (2-tailed).

5. Discussion and Conclusion

In this work which examined the extent to which choice of vocabulary learning strategies is affected by students' perceptual learning style, the findings revealed that the most frequent learning style for Iranian learners at this proficiency level was visual style. Kinesthetic and auditory styles ranked the second and third styles. Also it was shown that group style with the average of 16.0741 was the least frequent. Moreover, it was indicated that the most preferred vocabulary learning strategy category of all was related to meta cognitive strategies. Determination strategies ranked the second. Cognitive, memory and the social strategies ranked the third to the fifth. These findings support what was offered by Reid (1987) that the learning style preferences of ESL learners from different language differ significantly from each other. For instance, in his research, the Korean students were found to be the most visual in their learning style preferences. They were significantly more visual than the US and Japanese learners. Japanese learners, on the other hand, appeared to be the least auditory of all learners and were significantly less auditory than Arabic and Chinese learners.

Concerning the gender differences in both vocabulary learning strategies, and perceptual learning styles of the participants, the results of current study showed that there was no statistically significant difference between the vocabulary strategy preferences or learning styles of the two genders.This result seems to support the findings of Ehrman and Oxford (1990) who reported that the number and kind of strategies used by females were similar to those used by males. However, their research was about learning strategies in general.

The results of data analysis in present study indicated that there was some kinds of relationships between learners' perceptual style and vocabulary learning strategies they use so that learners' perceptual styles make statistically significant contribution to the prediction of vocabulary learning strategies. The results revealed that

the auditory perceptual learning styles significantly correlated with social (p=0.019) and cognitive (p=0.023) vocabulary learning strategies at $p < .05$ significance value. Also, there was significant correlation between group perceptual style and social vocabulary learning strategies (p=0.020). In addition, it was indicated that kinesthetic styles and social vocabulary strategies correlate to each other significantly (p=0.025). These findings revealed that auditory learners are very good at learning new L2 words through cooperation or practicing unknown words by asking others for help. Also, such learners try to consolidate the new words through cognitive strategies. They frequently use mechanic means such as word lists, flash cards, and vocabulary notebooks to study words. According to the results, the learners with Group Perceptual Style, learn new words best through social strategies, and this is something that is completely suitable to their style since a group learner is the one who "learns more effectively through working with others" (Reid, 1995). Moreover, in this study it was shown that kinesthetic learners learn the new words and consolidate them through social strategies, and this is supported by Kinsella (1995)'s definition that Kinesthetic learning "implies total physical involvement with a learning environment such as taking a field trip, dramatizing, pantomiming, or interviewing". All these results emphasized assessing styles and vocabulary learning strategies in the L2 classroom, attuning L2 instruction and vocabulary learning strategy instruction to learners' style preferences, and remembering that no single L2 instructional methodology fits all students.

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