Vocabulary Learning Strategies of Iranian upper-intermediate EFL learners

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Abstract

This study examines the preferred vocabulary learning strategies of Iranian upper-intermediate EFL learners. In order to identify the aforementioned group in terms of language proficiency, a TOEFL test was administered to a population of 146 undergraduate EFL students at the university of Vali-e-Asr in Rafsanjan, Iran. Those scoring above 480 were arbitrarily labeled as upper-intermediate. Subsequently a questionnaire known as VOLSI (Vocabulary Learning Strategies Inventory) was given to the same subjects to come up with their preferred vocabulary learning strategies. Finally, a stepwise multiple regression analysis revealed that 11.4% of the variance in the learners' L2 proficiency can be accounted for by three strategy categories involving *self-motivation, word organization,* and *authentic language use* .In addition, an independent-samples t-test indicated no significant difference between learners' gender and their VLS choice.

1. Introduction

Owing to the challenging demands of a highly competitive world, many foreign/second language learners are in desperate search for time-efficient strategies to cope with the never-ending lexical predicaments *inter alia*, inherent in any language.

At any rate, resourceful learners often try and develop short cuts for effective vocabulary learning in the face of existing time constraints.   Vocabulary Learning Strategies (VLS) research attempts to explore and introduce such coveted short cuts and to this end, draws on the initiatives taken by successful learners in order to provide a useful roadmap for those in need. The increasing body of research on VLS, particularly in the last two decades as Atay and Ozbulgan (2007) also maintain, wishes to shed more light on learners' strategy repertoire and facilitate second/foreign language vocabulary learning and recall. All in all, research shows that many learners employ learning strategies in vocabulary learning more frequently than in any other language learning activities (O'Malley, Chamot, Stewner-Manzanares, Kupper, & Russp, 1985).

Studies on VLS have been conducted from various perspectives and in relation to various factors to date.   In their seminal article, Oxford and Scarcella (1994) highlighted *guessing from context* as the most useful strategy by far and advised teachers to teach vocabulary through as many fully contextualized activities as possible. Lawson and Hogben (1996) also emphasized the role of context in vocabulary acquisition, making a distinction between the use of context for generation of meaning of a new word and for acquisition of the meaning for subsequent recall. The

role of vocabulary learning from context has also been pinpointed by Nassaji (2003), who concluded that success was related to the quality rather than quantity of the strategies used.

The use of mnemonic techniques has also been one of the most popular topics with regard to VLS, centering mainly on the efficacy of the *keyword method* (Atkinson, 1975; Gu, 2003; Rodriguez, 1999; Sagarra & Alba, 2006; Shapiro & Waters, 2005; Thompson, 1987).

On the other hand, one of the fastest growing areas with respect to VLS has been the studies on Computer Assisted Vocabulary Learning (CAVL) which indicates that learners can successfully learn words using specialized programs available on CD-ROMs, the Internet, and popular computer games. One major advantage of CAVL is that learners can control and direct their own learning (Pavičić, 2008). Among the existing works, Segler, Pain and Sorace's (2002) paper on the role of VLS in ICALL environments is worthy of attention.

1.1 VLS Taxonomy and Psychometric Tools

Researchers in the area of second/foreign language teaching have classified vocabulary learning strategies differently, the most prominent of which are the ones developed by Gu and Johnson (1996), Schmitt (1997), Hatch and Brown (2000), and Nation (2001). Classification of VLS as Nyikos and Fan (2007) pointed out, has achieved only mild consensus to date.   Ahmed (1989, cited in Nyikos & Fan, 2007) grouped the 38 strategies his Sudanese learners used into five macro strategies of memorization, practice, dictionary use, note-taking, and groupwork. Gu and Johnson (1996) developed a 91-item VLS questionnaire dividing it into sections including metacognitive regulation, guessing strategies, dictionary strategies, memory strategies (rehearsal and encoding), and finally activation strategies.   Their study underscored the fact that learners use a combination of strategies rather than single individual ones in learning vocabulary. Using cluster analysis, they classified learners by their strategy profiles and learning outcomes.

Drawing on the more general *Strategy Inventory for Language Learning* (SILL) designed by Oxford (1990) , Schmitt (1997) developed a 58-item questionnaire including the previous four categories (social, cognitive, metacognitive, and memory strategies), complemented by a new category entitled 'determination' strategies under his overarching distinction between *discovery* strategies (strategies for learning what an unknown word means) and *consolidation* strategies (strategies for both learning word meaning and integrating it into the vocabulary). However, Hatch and Brown (2000) divided VLS into five integral steps, namely:

(1) Encountering new words;

(2) creating a mental picture;

(3) learning the words meaning;

(4) creating a strong linkage between word form and meaning in the memory; and

(5) using words

Nation (2001) offers his own taxonomy categorizing the types of strategies under three umbrella phases of: 1) Planning 2) Sources and 3) Processes.

One of the most in-depth studies of VLS, however, belongs to Stoffer (1995) who designed a questionnaire (VOLSI) consisting of 53 likert-type individual strategies, and then had them factor analyzed into the following nine categories:

(1) strategies involving authentic language use

(2) strategies involving creative activities

(3) strategies used for self motivation

(4) strategies used to create mental linkages

(5) memories strategies

(6) visual/auditory strategies

(7) strategies involving physical action

(8) strategies used to overcome anxiety and

(9) strategies used to organize words

This measurement scale (VOLSI) gives information about the behavior of foreign language learners.   It is possible to find out how frequently students use VLS and what kind of strategies they use. The evidence of construct –related,

content –related and criterion-related validity was provided respectively using factor analysis, consultation with experts and correlating with Oxford's SILL. Furthermore, a correlation study using Cronbach alpha was used to obtain the reliability of the VOLSI (r_{xx} = .86). The most frequent strategy used in Stoffer's study was item 5 (link to L1 words similar in spelling) and overall, the fourth group of strategies (strategies for creating mental linkages). It was also found that learners who had previously received some kind of VLS instructions used these strategies more frequently than those with no instructions whatsoever. The age of the language learners appeared to be significant on seven of the nine factors. Gender differences, however failed to be significant only by a small margin.

The majority of studies in question imply that learners possess some sort of VLS inventory, though they do not make a systematic use of it and therefore are in need of instruction. For example, learners know surprisingly little about the use of mnemonics that can help them to integrate new material in the existing cognitive units (Thompson, 1987).

1.2 VLS in Relation to Other Factors

The use of VLS in association with field sensitivity was investigated by Chiang (2004) who also observed that older students were inclined to employ more strategies in vocabulary learning. The Taiwanese students in his research who pursued English major reported being more positive towards the use of almost all VLS than their non-English peers. Yu (2000) also examined the use of VLS from sociocultural perspectives through a comparative study of Japanese, Korean and Taiwanese EFL learners. The study showed that mediating agents, especially teachers' attitude and teaching methods have a great influence on learners' beliefs and strategy use.

1.3.VLS and Gender

Choice of VLS and gender differences has also been at the core of some researches. Experimental evidence in Nyikos (1987) indicated that men outperformed women significantly with regard to visual and color association strategy for vocabulary learning. However, a close analysis of data in Catalan's study (2003) indicated females' greater use of formal rule strategies, input elicitation strategies, rehearsal strategies and planning strategies, and males' greater use of image vocabulary learning strategies. In addition, the females' total strategy usage percentages were higher than the males', which points to either different perceptions of vocabulary learning behaviors or different patterns of vocabulary strategy usage for males and females.

2. Objectives of the Study and Research Questions

Considering all the above-mentioned studies and their implications and significance, this study attempts to unravel which vocabulary learning strategies are used by Iranian EFL learners at the upper-intermediate level. Also this study tries to investigate if there is any relationship between gender and language learners' use of vocabulary strategies in vocabulary learning.

In brief, drawing on the nine categories (factor structures) of VLS introduced by Stoffer (1995)- discussed earlier-this paper seeks to explore the following research questions:

1) Which category (or categories) of Stoffer's VLS are used by upper-intermediate learners?

2) Is there a significant relationship between the Iranian upper-intermediate EFL learners' gender and their use of (Stoffer's) VLS?

3. Method

3.1 Subjects

The sample pool consisted of 146 undergraduate students all majoring in English language at Vali-e-Asr University of Rafsanjan, Iran. The students were intact groups ranging from the first to seventh semester (113 female and 33 male). Following the administration of a TOEFL (paper-based) test, participants scoring above 480 were classified as upper-intermediate. In effect, the participants' L2 proficiency was operationally defined as their score in the TOEFL test.

3.2 Instruments

Addressing the preceding research questions, a Vocabulary Learning Strategies Questionnaire (VOLSI) which had been previously administered and validated (Stoffer, 1995) was utilized in this study as a tool to elicit the vocabulary learning strategies used by Iranian language learners. VOLSI is a 53–item likert scale from 1(never) to 5(always). Also a TOEFL test was used at the outset of the study in order to measure the participants' language proficiency.

3.3 Procedure

In this study, respondents were asked to indicate how frequently they used the strategies in the questionnaire for vocabulary learning. Since all the participants were English majors, VOLSI was *not* translated into the learners' mother tongue (i.e., Farsi). Meanwhile, in order to exercise caution, some problematic words that might have presumably blocked comprehension (e.g. collage) were further defined before distributing the inventory. Filling the questionnaire on average took about 15 to 20 minutes.

In summary, to recognize the respondents' L2 proficiency level, a paper-based TOEFL test was given to them a few days following the distribution of VOLSI. The major reason for the TOEFL test was to distinguish the more proficient learners later titled as upper-intermediate (those scoring above 480). Secondly, a panel of instructors at Vali-e-Asr University was also consulted to judge on the subjects' proficiency level who interestingly corroborated the L2 proficiency level of this group categorized as upper-intermediate.

3.4 Data Analysis and Results

Table 1 below illustrates the overall 146 participants' mean scores on the TOEFL test as well as the nine strategy types most frequently used by them in vocabulary learning.

In order to find out more about the strategies espoused by more proficient students, a stepwise multiple regression analysis was conducted yielding the following coefficients.

As can be seen from the above tables, a stepwise multiple regression analysis was used in order to identify the vocabulary learning strategies that are the best predictors of L2 proficiency. Table 2 indicates that St 2 (items ranked in factor 2) have obtained the highest mean score of all. Table 3 displays three categories of strategies (out of nine) that are significant predictors of the participants' total TOEFL score (see appendix A. for factor loadings of the three most popular strategy types among more proficient students), with factor 2 ranking first in the model (3.3% of the variance). The second most effective predictor turned out to be factor 3 (4.1% of the variance) and eventually factor 1 as the third predictor (4.0% of the variance).

Therefore, it can be concluded that 11.4% of the variance in L2 proficiency can be accounted for by the above-mentioned three strategy categories. Automatically, 6 out of 9 categories (or factors) did not significantly predict the subjects' overall L2 proficiency. The alpha level used for all tests of significance was .05 in this study.

Addressing the second research question, an independent samples t-test (see appendix B. for the table of results) was used to test the influence of gender on the learners' use of VLS. The results suggested that none of the strategy categories can be significantly ($p<.05$) related to the gender of the learners (H_o was not rejected). Therefore the two groups turn out to be equal in terms of VLS use.

4. Conclusion

The current paper provides a new dimension to an earlier study by Stoffer (1995) who investigated the underlying factor structures of Vocabulary Learning Strategies Inventory. She demonstrated through principal components factor analysis procedure that the 53 items of the VOLSI were clustered around nine dimensions related to the area of vocabulary learning. As an extension to this study, the researchers in this attempted to explore potential associations of the nine VLS factor structures with the strategies used by more proficient learners. In so doing, a TOEFL test was administered to 146 English majors to discriminate between higher level and lower level learners in terms of language proficiency. In a few days' time, a questionnaire (VOLSI) was given to all subjects to discover their vocabulary learning strategic priorities. Finally, a stepwise multiple regression analysis conducted to the scales revealed that only three out of nine factors panned out to be significant predictors of L2 proficiency. In effect, more proficient learners tended to make greater use of the above sets (see Table 2.) either through instruction or personal experience.

The strategy types identified with VLS choice of higher level learners could act as an eye-opener in terms of strategies of success for lower proficiency learners and those who seek out effective techniques likely to culminate in better retention of L2 vocabulary.

Language teachers ought to be on the lookout to permanently tap into learners' language awareness through strategy training or SBI (Strategy-Based Instruction) considering the fact that research provides support for learners to be successful.

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Table 1. Descriptive Statistics of the Participants' TOEFL Test Results

	Mean	Std. Deviation	N
TOEFL	405.3630	50.81255	146
st1	2.5521	.59645	146
st2	3.5130	.56303	146
st3	2.4090	.66407	146
st4	2.9007	.46769	146
st5	3.3168	.54933	146
st6	2.3233	.62544	146
st7	2.5587	.61712	146
st8	3.0098	.57060	146
st9	3.2427	.51532	146

Table 2. Dependent Variable: Total Coefficients (a)

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta	B	Std. Error
1	(Constant)	347.560	26.307		13.212	.000
	st2*	16.454	7.395	.182	2.225	.028
2	(Constant)	363.250	26.585		13.664	.000
	st2	23.291	7.758	.258	3.002	.003
	st3	-16.484	6.578	-.215	-2.506	.013
3	(Constant)	364.703	26.104		13.971	.000
	st2	12.082	8.813	.134	1.371	.173
	st3	-27.920	7.885	-.365	-3.541	.001
	st1	25.656	10.150	.301	2.528	.013

* st = strategy

Table 3.

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
1	.182(a)	.033	.027	50.13409	.033	4.951	1	144	.028
2	.272(b)	.074	.061	49.23954	.041	6.280	1	143	.013
3	.337(c)	.114	.095	48.33720	.040	6.389	1	142	.013

a   Predictors: (Constant), st2

b   Predictors: (Constant), st2, st3

c   Predictors: (Constant), st2, st3, st1

Table 4. Descriptive Statistics

	Sex	N	Mean	Std. Deviation	Std. Error Mean
st1	Female	113	2.5027	.57172	.05378
	Male	33	2.7212	.65563	.11413
st2	Female	113	3.4841	.55268	.05199
	Male	33	3.6121	.59517	.10361
st3	Female	113	2.3780	.66320	.06239
	Male	33	2.5152	.66618	.11597
st4	Female	113	2.8838	.48057	.04521
	Male	33	2.9583	.42236	.07352
st5	Female	113	3.3142	.56203	.05287
	Male	33	3.3258	.51153	.08905
st6	Female	113	2.2770	.63513	.05975
	Male	33	2.4818	.57198	.09957
st7	Female	113	2.5651	.62602	.05889
	Male	33	2.5368	.59444	.10348
st8	Female	113	3.0076	.59020	.05552
	Male	33	3.0173	.50603	.08809
st9	Female	113	3.2073	.51010	.04799
	Male	33	3.3636	.52257	.09097
TOEFL	Female	113	399.9735	46.47281	4.37179
	Male	33	423.8182	60.71627	10.56935

Appendix A.

1. Strategies involving authentic language use:

- Read L2 newspapers and magazines

- Read L2 literature and poetry

- Watch L2 movies

- Practice in conversation with L2 speaker

- Make up conversations with L2 speaker

- Write letters using new words

- Relate new words to myself

- Draw pictures of new words

- Link words in list by creating a story

- Use brainstorming to recall words

2. Strategies used for self-motivation:

- Encourage myself when afraid of mistakes

- Try to relax when afraid of using new words

- Pay attention to speech

- Feel successful when learning new words

- Picture myself using word in situation
- Enjoy learning new vocabulary
- Aware of incorrect use
- Break words into its parts
- Use brainstorming to recall word
- Make up a sentence with each new word

3. Strategies used to organize new words:

- Organize new words on word processor
- Use computer programs to practice words
- Use videos used for L2 learners
- Make collages with related words
- Link words in list by creating a story
- Practice word by using real objects

Appendix B.

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	T	Df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
st1	Equal variances assumed	2.031	.156	-1.868	144	.064	-.21856	.11702	-.44986	.01274
	Equal variances not assumed			-1.732	47.127	.090	-.21856	.12617	-.47236	.03524
st2	Equal variances assumed	.432	.512	-1.151	144	.252	-.12805	.11128	-.34801	.09191
	Equal variances not assumed			-1.105	49.254	.275	-.12805	.11592	-.36097	.10487
st3	Equal variances assumed	1.236	.268	-1.044	144	.298	-.13715	.13136	-.39679	.12249
	Equal variances not assumed			-1.041	51.960	.302	-.13715	.13168	-.40140	.12710
st4	Equal variances assumed	.294	.589	-.804	144	.423	-.07448	.09265	-.25762	.10866
	Equal variances not assumed			-.863	58.387	.392	-.07448	.08631	-.24723	.09826
st5	Equal variances assumed	.279	.598	-.106	144	.915	-.01160	.10907	-.22718	.20398
	Equal variances not assumed			-.112	56.533	.911	-.01160	.10356	-.21901	.19581
st6	Equal variances assumed	.073	.788	-1.665	144	.098	-.20483	.12301	-.44796	.03830
	Equal variances not assumed			-1.764	57.080	.083	-.20483	.11612	-.43735	.02769
st7	Equal variances assumed	.323	.571	.231	144	.818	.02831	.12251	-.21384	.27046
	Equal variances not assumed			.238	54.454	.813	.02831	.11906	-.21035	.26697
st8	Equal variances assumed	.633	.427	-.086	144	.932	-.00973	.11329	-.23366	.21420
	Equal variances not assumed			-.093	59.780	.926	-.00973	.10413	-.21803	.19857
st9	Equal variances assumed	.000	.999	-1.540	144	.126	-.15630	.10149	-.35690	.04429
	Equal variances not assumed			-1.520	51.155	.135	-.15630	.10285	-.36276	.05016
Total	Equal variances assumed	5.256	.023	-2.411	144	.017	-23.84	9.89	-43.396	-4.293
	Equal variances not assumed			-2.085	43.522	.043	-23.844	11.437	-46.903	-.7861

Independent Samples Test