

## **A Comparative Study of Language Learning Strategies Employed by Bilinguals and Monolinguals with Reference to Attitudes and Motivation**

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### **Abstract**

This study aimed at investigating EFL learners' cognitive and affective factors, namely the use of Language Learning Strategies (LLS), attitudes and motivation with special reference to linguistic background of students. It was an attempt to see whether bilingual and monolingual learners of English differ significantly in LLS use, attitudes, motivation, and proficiency in English. Further attempts were also made to determine the best predictors of language proficiency and LLS use in the total sample. By employing an ex post facto design, 216 third grade high school female students were selected from among two groups of Armenian-Persian speakers and Persian speakers (110 Armenian-Persian speakers and 106 Persian speakers). One General English Proficiency Test (Nelson test, 150 C) with three valid and reliable questionnaires – SILL, attitudes and motivation – were administered to both groups. Statistical analyses of t-tests showed that there were no significant differences between the two groups regarding their proficiency in English as well as motivation. By contrast, statistically significant differences existed between the two groups with regard to LLS use and attitudes toward English and foreign languages. Further analyses showed that bilinguals differed from monolinguals in their use of metacognitive, cognitive and compensation strategies. The findings also revealed that the most frequent LLS used by two groups were metacognitive and social strategies while affective strategies were used at the lowest frequency. The two groups differed in the order of three other categories of LLS i.e., cognitive, compensation and memory. The results of multiple regression analyses also showed that the best predictors of language proficiency were years of study and use of LLS respectively. Moreover, attitudes and years of study accounted for the greatest variation in LLS use.

**Key words:** language learning strategies, bilinguals, monolinguals, cognitive and affective factors, attitudes, motivations, proficiency.

## **INTRODUCTION**

One of the most important outcomes of the movement towards more communicatively oriented language learning and teaching has been the enhancement of the role of the 'learner' in the language learning process. Thus, understanding certain learners' characteristics and the ways in which learners differ from one another has been, and still is, a fundamental concern to those involved in second language acquisition (SLA).

In fact, the learner variables that can influence the course of second language development are potentially infinite and very difficult to classify in a reliable manner. Research on individual differences in SLA have highlighted the importance of such variables as age, gender, language aptitude, language attitudes, cultural background, motivation, learning styles, learning strategies, self-confidence, self-esteem, personality traits, etc. (Oxford & Nyikos, 1989; Scarcella & Oxford, 1992; Oxford & Ehrman, 1995).

Noticeably, however, in the last three decades language learning strategies (as a cognitive variable) and motivation and attitudes (as affective variables) have gained so much importance among L2 researchers that they have been incorporated in models of second language learning.

Studies on language learning strategies (LLS, hereafter) have shown that appropriate LLS are useful in the development of communicative competence and improved proficiency and learner autonomy (Oxford & Crookall, 1988, 1989; Oxford, 1990).

On the other hand, the theory, research and experimentation of recent years have led to the increasing conviction of the importance of the affective component in language learning. Hilgard (1963:267), well known for his study of human learning and cognition, once noted that "purely cognitive theories of learning will be rejected unless a role is assigned to affectivity." Thus, in recent years FL educators have focused on affective variables such as attitudes and motivation.

However, in the investigation of these variables contradictory findings have been reported by SLA researchers. In some studies

(e.g., Gardner, 1975, 1982, 1985) it was found that motivational and attitudinal factors were critical in prediction of students' success and proficiency in language learning.

In contrast, some other studies have reported mostly weak correlations between these affective factors and attained EFL proficiency (Chihara & Oller, 1978).

Leet and Keesling (1993) revealed that two types of contexts may have critical roles in the level and type of motivation and attitudes: (1) a second-language acquisition (SLA) context; and (2) a foreign-language learning (FLL) context. According to them the effects of attitudes and motivation in language proficiency might be much stronger where there is more opportunity for contact between learners and target language speakers (i.e., in SLA contexts) than in a foreign language learning context where the opportunities are limited.

Besides, some other studies thus far have shown the importance of attitudes and motivation in the choice of language learning strategies (Oxford & Nyikos, 1989; Nyikos & Oxford 1993; McIntyre & Noels, 1996). However, as confessed by SLA researchers, more piece of evidence is required to judge whether this finding can be generalized to different groups of learners in different social contexts, with different cultural backgrounds.

So, taking these points into consideration and considering the fact that the area of affective factors along with LLS – specially with reference to learners' linguistic background – was one of the least investigated areas of TEFL, particularly in Iran, this study was set out to examine the mentioned variables (i.e., language learning strategies, attitudes and motivation) and the possible relationships between them in two types of contexts: (1) in bilingual and monolingual contexts; and (2) in a foreign language learning context.

### **Research Questions and Hypotheses**

This study was set out to find answers to the following research questions.

- 1) *Are there any significant differences between monolingual and bilingual learners of English regarding their attitudes, motivation, LLS use and proficiency in English?*
- 2) *Do bilinguals and monolinguals differ in the order of LLS use?*
- 3) *Are there any significant differences in the use of LLS categories in monolingual and bilingual learners of English?*
- 4) *From among various variables, i.e., LLS, attitudes, motivation and years of study, which one is the best predictor of proficiency in English in the total sample?*
- 5) *From among various variables, i.e., attitudes, motivation, years of study and proficiency in English, which one is the best predictor of LLS use in the total sample?*

In order to investigate the above-mentioned questions, the following null hypotheses were posed regarding questions 1 and 3.

*H<sub>01</sub>- There are not any significant differences between two groups regarding their attitudes, motivation, LLS use and proficiency in English.*

*H<sub>02</sub>- There are not any significant differences in the use of LLS categories in monolingual and bilingual learners of English.*

For the rest of the questions, no hypotheses were posed since they were purely descriptive.

## **METHOD**

### **Subjects**

The subjects of this study were 216 female third graders of high school majoring in science and mathematics in the age range of 16-18. They were in two groups: Group one consisted of 106 Persian speakers and Group two of 110 Armenian-Persian speakers.

The sampling procedure was held as follows: in order to have a representative sample of the population, from among three accessible Armenian girls' high schools located in different districts of Tehran, two were selected accidentally. The participating schools were located in 8<sup>th</sup> and 6<sup>th</sup> districts of Tehran. Similarly, two Persian girls' high schools were selected from the aforementioned districts to minimize

the effect of social class. Finally, from these four high schools, nine intact classes were selected accidentally to participate in the study.

### **Instrumentation**

The instruments used to collect data from the subjects were: (1) a general proficiency test (Nelson test, 150 C) for determining the students' proficiency level of English. The test comprised 50 multiple choice grammar and vocabulary items which was piloted prior to the administration with the students of the same grade with similar characteristics to those of the subjects of the study; (2) a questionnaire in LLS called SILL (Strategy Inventory for Language Learning), designed by Oxford (1990). It included 50 Likert-type items in six subscales of LLS i.e., memory, cognitive, compensation, metacognitive, affective and social strategies. (3) two subscales of AMTB (Attitudes and Motivation Test Battery) designed by Gardner (1985) to measure students' attitudes toward learning English and their interest in foreign languages; with each subscale containing 10 Likert-type items (4) a questionnaire on motivation designed by Baker (1992) to investigate students' motivational intensity; with 21 Likert-type items (5) a self-report proficiency questionnaire for assessing bilingual students' degree of bilingualism containing 20 Likert-type items designed by the researcher of the study.

A point of note worthy to mention here is that in addition to the strategies items contained in the SILL, the students were also asked to cite other strategies of learning that they use in their learning tasks but not mentioned in the questionnaire. This was done with the intention to provide the possibility of enriching the LLS proposed by Oxford, as well as to provide an opportunity for bilinguals to write down the specific strategies that they may use differently from monolinguals as a result of their previous language experience.

All the questionnaires employed in this research were reliable and valid and many studies have provided evidence for their high psychometric qualities (Oxford & Nyikos, 1989; Watanabe, 1990; Yang, 1992; Oxford et al. 1993; Park, 1994; Green & Oxford, 1995; Gardner & MacIntyre, 1993; Baker, 1992).

**Procedure**

As the first step of the research, all the questionnaires were translated into Persian in order to prevent any possible misunderstanding or confusion on the side of the subjects. Moreover, a background questionnaire covering years of foreign language study outside school program, age, mother tongue and other topics was developed by the researcher in order to gather some personal information about subjects.

After doing sampling procedure and choosing 9 intact classes to participate in the study, the researcher conducted the data collection with the help of schools' staff. At the first stage, Nelson test was administered after subjects received uniform instructions to respond to 50 test items within 60 minutes. Afterwards, the background questionnaire as well as other questionnaires was administered after the students were instructed on how to fill them out. The students were asked to respond to items as honestly as possible. Effort was made to make the students feel certain that the responses were not to be used for performance evaluation.

After the data were collected, the instruments were examined and the incomplete ones were discarded. Then they were codified for the computer analysis.

**Data Analysis**

To address the previously mentioned research questions the following statistical analyses were run.

- Descriptive statistics for the measurement of the degree of bilingualism of bilingual students;
- Four independent samples t-tests to compare bilinguals and monolinguals regarding their use of LLS, motivation, attitudes toward English and proficiency in English;
- Six independent samples t-tests to compare bilinguals and monolinguals regarding the frequency of use of LLS categories;
- Descriptive statistics to determine the order of strategy use in the two groups;

- Two multiple regression analyses to determine the best predictors of language proficiency and use of LLS in the total sample.

It is worth pointing out that the scores on all the instruments used in this study were measured on an interval scale and the raw scores were converted to proportions (dividing the scores by the number of items).

## RESULTS

### Measurement of Degree of Bilingualism

The mean scores of proficiency in Armenian and Persian languages in bilinguals revealed that except for grammar and speaking in Armenian, all other skills have mean scores higher in Persian than Armenian. In some cases the differences were more noticeable than others. For example, the scores on writing and reading ESP materials and using idioms and proverbs in Armenian were much lower than the mean scores of these skills in Persian.

This is probably due to the fact that the amount of instruction in Armenian language is relatively little; i.e. three hours per week. Also, the subjects taught in Armenian are restricted only to Armenian language and religion. All other academic subjects such as science, mathematics, history, geography, economics, chemistry, physics, etc. are taught merely in Persian from elementary up to high school. Thus, as the result of this study showed Armenian students develop a better command of written and spoken skills in Persian (L2) regarding academic subjects. So it can be claimed that Armenian learners are proficient in Persian regarding academic subjects.

### Research Question 1

- *Are there any significant differences between bilingual and monolingual learners of English regarding their attitudes, motivation, LLS use and proficiency in English?*

Four independent samples t-tests were carried out to find answer to this question. Table 1 shows the results.

Table 1. Independent T-Tests for Proficiency, LLS, Attitudes &amp; Motivation

Variables	Bilingual		Monolingual		T- value	d.f.	P
	$\bar{X}$	S	$\bar{X}$	S			
Proficiency	29.05	10.08	27.21	10.04	1.39	214	.17
LLS	3.18	.46	3.03	.54	2.17*	214	.03
Attitudes	4.23	.66	4.01	.72	2.38*	214	.01
Motivation	3.96	.53	3.83	.78	1.37	214	.16

As the results indicate there were no significant differences between the means of two groups on two variables i.e., proficiency in English and motivation. In these two variables the two groups did not differ significantly ( $T_{214}=1.39$ ,  $P>.05$ ;  $T_{214}=1.37$ ,  $P>.05$ , respectively). Thus, regarding these two variables the null hypotheses were supported.

Considering the results of t-test on proficiency, it can be concluded that the two groups were homogenous regarding their proficiency in English.

However, for the two other variables i.e., use of LLS and attitudes toward English and foreign languages the two groups differed significantly ( $T_{214}=2.17$ ,  $P<.05$ ;  $T_{214}=2.38$ ,  $P<.05$ , respectively). As a result, with respect to these two variables the null hypotheses were rejected. Hence, it can be concluded that Armenian students made more frequent use of LLS than the Persian speaking students. Moreover, the bilingual students expressed more positive attitudes than the monolingual students.

## Research Question 2

- *Do bilinguals and monolinguals differ in the order of LLS use?*

Descriptive statistics were used to find the answer to this question. Table 2 summarizes the use of LLS in each group in a hierarchical order from high to low.



Table 2. Mean Scores of LLS Use in Bilinguals &amp; Monolinguals

Strategy Category	Bilingual			Strategy Category	Monolingual		
	X	SD	N		X	SD	N
Metacognitive	3.64	.66	110	Metacognitive	3.44	.84	106
Social	3.37	.81	110	Social	3.35	.81	106
Cognitive	3.17	.55	110	Memory	2.95	.61	106
Compensation	3.18	.70	110	Cognitive	2.92	.63	106
Memory	2.90	.62	110	Compensation	2.91	.73	106
Affective	2.71	.64	110	Affective	2.60	.75	106

The findings revealed that the most frequent LLS used in two groups were metacognitive and social strategies while affective strategies were used at the lowest frequency. The two groups differ in the order of three other categories of LLS i.e., cognitive, compensation and memory.

It is worth pointing out that monolingual learners did not report using any strategy other than those mentioned in the SILL. However, bilingual learners reported that regarding item 19 of the SILL (see Appendix 1), they looked for words both in Persian and Armenian to find similarity with new words in English.

### Research Question 3

- *Are there any significant differences in the use of LLS categories in monolingual and bilingual learners of English?*

Six independent t-tests were carried out to answer this question. Table 3 shows the results.

As it is seen there were no significant differences between the means of the two groups on the use of three categories of LLS i.e., social, affective and memory. For these categories the two groups did

not differ significantly ( $T_{214}=.23$ ,  $P>.05$ ;  $T_{214}=1.15$ ,  $P>.05$ ;  $T_{214}=.50$ ,  $P>.05$ , respectively). Hence, the null hypotheses were supported regarding these LLS categories.

*Table 3 Independent T-Tests for Categories of LLS In Bilinguals & Monolinguals*

LLS category	Bilingual		Monolingual		T-value	T-critical	d.f.	P
	$\bar{X}$	S	$\bar{X}$	S				
Metacognitive	3.64	.66	3.44	.84	1.98*	1.96	214	.049
Cognitive	3.17	.55	2.92	.63	3.11*	1.96	214	.002
Social	3.37	.81	3.35	.81	.23	1.96	214	.818
Affective	2.71	.64	2.60	.75	1.15	1.96	214	.252
Compensation	3.18	.70	2.91	.73	2.70*	1.96	214	.008
Memory	2.90	.62	2.95	.61	.50	1.96	214	.619

However, for three other categories – cognitive, compensation and metacognitive – the two groups differed significantly ( $T_{214}=3.11$ ,  $P<.05$ ;  $T_{214}=2.70$ ,  $P<.05$ ;  $T_{214}=1.98$ ,  $P<.05$ , respectively). Thus, it seems that bilingual learners used more frequently metacognitive, cognitive and compensation strategies than monolingual learners. Hence, the null hypotheses were rejected regarding these categories.

#### **Research Question 4**

- *From among various variables, i.e., LLS, attitudes, motivation and years of study, which one is the best predictor of proficiency in English in the total sample?*

Stepwise multiple regression analysis was carried out to find the answer to this research question. Table 4 shows the results.

As Table 4 shows on the first step, years of study entered as the variable which had the highest correlation with the proficiency. The R square (.21) or the coefficient of multiple determination indicates the proportion of variation in proficiency that was explained by years of

study. It means that 21% of the variation in proficiency was explained by years of study or years of exposure to L2.

*Table 4. Multiple Regression for Proficiency*

Variables	B	SEB	Beta	T	Sig T	Multiple R	R square
Years of study	.27	.04	.37	6.04	.000	.46	.21
LLS	4.18	1.04	.25	4.107	.0001	.52	.27
(Constant)	1.86	.18		10.332	.000		

On the second step LLS entered in the analysis. The R square increased to .27, meaning that 27% of the variation in the proficiency was explained by the combined effects of years of study and LLS use.

The analysis ended up at this point since no other variable had a significant T less than .05 to be entered in the equation.

A point of note important to be mentioned here is a fact stated by Tabachnick and Fidell (1983: 67) that "A falsely small correlation can be obtained if the range of responses to a variable is restricted somehow in a sample." With respect to this study since all the subjects were female third graders of high school with almost similar characteristics and equal variance in proficiency scores, the responses to the variables under investigation were somehow restricted. Thus, the reliability coefficients on the relationships between the variables were somehow low. As stated by Chamot et al (1988), it is statistically impossible for high correlations to appear with such a restricted range.

Moreover, according to Hatch & Lazaraton (1991: 442), "a correlation in the .30 or lower may appear weak, but in educational research such a correlation might be very important." Thus, as the present study was a descriptive one aiming at exploring the current state of affairs, the R square of .27 is an acceptable correlation indicative of the existence of some positive linear relationships between years of study and LLS with proficiency in English.

### Research Question 5

From among various variables, i.e., attitudes, motivation, years of study and proficiency in English which one is the best predictor of LLS use in the total sample?

Stepwise multiple regression analysis was run to find an answer to this question. The results are shown in Table 5.

*Table 5. Multiple Regression for LLS*

Variables	B	SEB	Beta	T	Sig T	Multiple R	R square
Attitudes	.25	.05	.37	4.38	.0000	.42	.17
Years of study	4.29	1.25	.29	3.43	.0009	.51	.26
(Constant)	1.94	.24		7.87	.0000		

On the first step attitudes entered in the equation as the most related variable to LLS use. The R square of .17 shows that 17% of the variation in LLS use was due to the effect of attitudes toward English.

On the next step, years of study entered in the analysis. The R square increased to .26, meaning that 26% of the variation in the LLS use was explained by the combined effect of attitudes and years of study.

### CONCLUSION AND IMPLICATIONS

Recent models of language learning have included learner variables in their theoretical framework. The findings of the present research provide a further confirmation for the results of previous studies which have tried to incorporate LLS into theoretical models of language learning, as one of the factors influencing achievement (Wen and Johnson, 1991; MacIntyre, 1994).

Moreover, the finding about the apparently limited role of motivation and attitudes in the learners' proficiency in a foreign language learning context may imply some reformulations in Gardner's socio-educational model of language. As suggested by this

study, in FLL contexts more indirect roles might be attributed to motivation and attitudes. Attitudes can be considered important in the choice and use of LLS and LLS can contribute directly to language proficiency.

Furthermore, the findings of this study might have some implications for studies of bilingualism. As compared with monolinguals, bilinguals' more frequent use of cognitive, metacognitive and compensation strategies might suggest some differences between two groups as a result of differences in linguistic background. Of course, further research in this respect is required.

Moreover the study findings may have some implications in teacher training and material and curriculum development regarding strategy training to both teachers and students and changing negative attitudes of the students.

### **Suggestion for Further Research**

Related to the issues investigated in the present study, several directions for further research can be envisaged.

1) The bilingual participants of this study were Armenian-Persian speakers. Studies may be replicated within and across other bilingual groups in Iran so that more consistent information becomes available.

2) The subjects of this study were female third graders of high school. Other studies can be carried out with subjects of different levels of proficiency, gender, age, and social class.

3) The variables under investigation in this study were LLS, motivation, attitudes and years of study. Other studies can be conducted considering other variables such as learning styles, anxiety, self-esteem, major, etc.

4) Other experimental studies may be done to search for ways to positively influence students' attitudes or LLS use in classroom.

6) This study used questionnaires as data collection instruments. Other studies could be conducted using other techniques such as interviews, think-aloud and introspection.

*Revised version received 2 June 2003*

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