



## AN INVESTIGATION OF THE RELATIONSHIP OF LEARNING AND COMMUNICATION STRATEGIES, GENDER, AND READING PROFICIENCY IN ENGLISH AS A FOREIGN LANGUAGE

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### Abstract

The present study investigates the relationship between the types of learning and communications strategies used by male and female college learners and their achieved levels of proficiency in reading English as second language. In addition, the study looked into the question of whether low and high proficient EFL readers differ in their use of the six categories of strategies as measured by the Strategy Inventory for Language Learning, SILL, Oxford (1990). A total of 86 participants completed the 50 Likert-type items of SILL and include 6 types of strategies (metacognitive, social, compensatory, cognitive, memory, and affective). In addition, a 50-multiple choice question TOEFL test was administered to all participants in the study as a measure of reading proficiency. Descriptive statistics (means and Standard Deviations) and simple Pearson correlation coefficients were computed between the scores of the sub-scales of the SILL instrument and the participants reading scores on the TOEFL test. In addition, a two-way multivariate analysis of variance (MANOVA) test was used to address the questions raised in the study regarding whether gender and proficiency level (high versus low) have had effect on the use of the SILL six categories of strategies. The results showed no statistically significant relationship between proficiency and memory, compensation, and metacognitive strategies. However, the data showed that reading proficiency is positively related to cognitive strategies and negatively related to social strategies. The results also revealed no statistically significant difference between males and females in their overall use of strategies. Yet, although the results of the univariate analysis revealed no statistically significant differences across gender with regard to the use of memory, cognitive, compensatory, affective strategies, and social strategies, there was a statistically significant difference in the level of the use of metacognitive strategies in favor of the females. The results also revealed a statistically significant difference between high and low proficiency students in their overall use of strategies and the results of the univariate analysis showed that the low proficiency students use more memory and affective strategies more than their high proficiency counterparts. Conversely, the high proficiency students use more cognitive strategies. Finally, the results showed no statistically significant differences across the levels of proficiency with regard to the use of compensatory and metacognitive strategies. The Results are discussed in light of previous research findings and recommendations for further research are discussed.

**Keywords:** communication strategies, foreign language, reading proficiency in English

### INTRODUCTION

Recent decades have witnessed an increasing interest among second language researchers and practitioners in identifying and describing a number of cognitive, affective, and sociocultural factors as possible determinants of proficiency (Brown, 2000; Nisbet, Tindall, & Arroyo, 2005). Previous research (e.g., Dreyer & Oxford, 1996; Lightbrown & Spada, 1999; Vance, 1999) have observed that some second language learners actually acquire English as a second/foreign language (ESL/EFL) more quickly and effectively than others" (cited in Nisbet et al, 2005, p.100). Furthermore, several studies have been conducted to determine the factors and conditions that may account for variation in the proficiency of learners studying a language other than their own (Bremner, 1999; Oxford, 2001; Oxford & Burry Stock, 1995; Park, 1997). The results of these studies, among others, have suggested a number of variables including the cultural background, motivation for learning, attitudes and beliefs, learning and cognitive styles, learning and communication strategies, and the gender of learners as possible correlates of second language proficiency.

The variables of language learning and communication strategies and gender have received much attention from second language (L2) researchers and practitioners alike. For instance, Oxford (1990) designed a strategy assessment survey (SILL) which has been used extensively to determine the learning and communication strategies of L2 learners. This survey consisted of 50 Likert-type items based on a strategy classification scheme that included the six categories of memory, cognitive,



compensatory, metacognitive, affective, and social strategies. The memory strategies (items 1-9) help learners remember and retrieve information through creating mental linkages, using images and sounds, and applying action. Cognitive strategies (items 10-23) help learners process and create new language through practice, analysis and reasoning, communication, and creating structure for input and output. Compensatory strategies (items 24-29) help learners make up for gaps in their proficiency through guessing and overcoming limitations in speaking and writing. Metacognitive strategies (items 30-38) enable learners to take control over their own learning by organizing, planning, and evaluating their learning. Affective strategies (items 39-44) help learners control their feelings of anxiety, attitudes, and motivation. Finally, social strategies (items 45-50) encourage interaction among learners through cooperation, empathy and asking questions.

Numerous studies have used the SILL instrument and established a possible link between the frequency of strategy use and learners' gender on the one hand, and the level of proficiency on the other. According to Green and Oxford (1995), Lan and Oxford (2003), and Nyikos and Oxford (1993) proficient readers report higher frequency of strategy use than their less proficient peers. Similarly Bruen (2001) and Ramirez (1986) have both reported that a positive relationship exists between language proficiency levels in German and French respectively and the years of language study. Along similar lines Park (1997) reported that the SILL learning strategies are positively related to English proficiency of Korean university students as measured by a practice version of the Test of English as a Foreign Language (TOEFL). Furthermore, this researcher concluded that the cognitive and social strategies are more predictive of TOEFL scores than other strategies. Similarly Khalil (1995) explored the effect of language proficiency and gender on frequency of strategy use among Palestinian university and high school students. The findings of this research have shown that proficiency level and gender have a main effect on overall strategy use, but their effects on the use of the six categories of strategies are variable. Conversely, Nisbet, Tindall, and Arroyo (2005) report that the SILL strategies accounted for only 4% of the variation of TOEFL scores of Chinese university students and that males and females did not differ in the frequency of using language learning strategies.

More recently, Wong and Nunan (2011) reported some significant differences between effective and less effective language learners. For instance, effective learners like to watch and listen to native speakers, see English words, watch TV in English, converse in English, and learn many new words more than their less effective peers. Conversely, less effective learners were more likely to expect teachers to tell them about their mistakes as well as help them to talk about their interests. Furthermore less effective learners like to have their own textbooks and learn new words by doing something.

On the other hand, McMullen (2009) reported that Saudi female college students used slightly more language learning strategies than male students. This researcher also reported that computer science students used slightly more language learning strategies than those students majoring in management information systems. Along similar lines, Kyungism and Leavell (2006) reported that language learners who use more strategies advance along the proficiency continuum faster than their counterparts who use less strategies. Furthermore, these researchers found that students prefer metacognitive strategies most and showed the least use of affective and memory strategies. Finally, female students were found to have tendency to use social and affective strategies more than males.

The preceding review of related studies suggests that the relationship between gender and language proficiency on the one hand and language learning strategies on the other may be context- specific and controversial. Consequently, there is a need for further investigations of the role of strategies and gender in various cultural and linguistic contexts as suggested by Park (1997). The purpose of the present study is to investigate the relationship between the types of learning and communications strategies used by male and female learners and their achieved levels of proficiency in reading English as second language. In addition, the study looked into the question of whether low and high proficient EFL readers differ in their use of the six categories of strategies measured by SILL. Specifically, the following research questions were investigated:



1. Are there statistically significant relationships between the categories of learning and communication strategies identified by Oxford (1990) namely, memory, cognitive, compensation, metacognitive, affective, and social and reading proficiency?
2. Are there statistically significant differences in reading proficiency and learning and communication strategies by gender?
3. Is there a statistically significant difference between low and high proficient readers and their reported use of communication and learning strategies measured by SILL?

## Method

### Instruments and Study Tools

The strategy Inventory for Language Learning (50 – item, version 7.0 for ESL/EFL) developed by Oxford (1990) was used to collect data for the present study (see Appendix). The SILL is a self reporting survey that consist of 50 Likert-type items to which respondent indicate on a 5 point scale their level agreement with the statements. This survey included 6 types of strategies (metacognitive, social, compensatory, cognitive, memory, and affective) that have been identified both theoretically as well as through previous factor analyses (Oxford 1990). Table 1 lists the types of strategies and their Cronbach alpha values based on data from the present study.

**Table 1 Scales Included in the strategy Inventory for Language Learning (SILL)**

Scale	No. of Items	Alpha Reliability	N
Memory	9	.61	76
Cognitive	14	.54	73
Compensatory	6	.40	76
Metacognitive	9	.82	78
Social	6	.66	77
Affective	6	.55	80
Total	50	.82	60

In addition, a 50-multiple choice question TOEFL test was administered to all participants in the study as a measure of reading proficiency. This test was completed in 50 minutes. Finally, the participants completed a questionnaire that investigated the gender and major field of study of each participant.

### Participants and Study Context

The participants were a total of 86 university students who are majoring in medicine (10), science (10), computer 17, business 40, 4 major-less, and 5 with missing data regarding the major field of study. Furthermore, there were 51 male students (59.3%) and 35 females (40.7%). However, the number of cases, as will be shown in the subsequent pages, have declined due to the introduction of the list-wise deletion of missing cases when the statistical tests were run to address the questions raised in the study.

The study context is a relatively prestigious institution of higher learning located in Beirut, Lebanon, that follows the American model of education. Students enrolled in this institution normally come from high socio-economic backgrounds and have a high proficiency level given that they are admitted based on acceptable scores on the Scholastic Aptitude Test (SAT) and their school ranking in their high schools. The language of instruction is English and students are expected to function in an all-English curriculum in their respective fields of study.



### Data Analysis

Six composite scores were computed for each participant by adding the scores on the sub-scales in the SILL instrument respectively measuring the strategy types. Descriptive statistics (means and Standard deviations) and simple Pearson correlation coefficients were computed between the scores of the sub-scales of the SILL instrument and the participants reading scores on the TOEFL test. This was in order to address question 1 regarding the relationships of the learning and communication strategies and reading proficiency.

In addition, a two-way multivariate analysis of variance (MANOVA) test was used to address the second and third questions raised in the study regarding whether gender and proficiency level (high versus low) have had effect on the SILL six categories of strategies. The gender variable with two levels (male versus female) and the proficiency level also with two levels (high versus low) were used as independent variables. The levels of proficiency were determined based on the median score of  $Md = 34.50$  on the TOEFL reading scores of the participants. The dependent variables consisted of the categories of strategies measured by SILL.

### Results

**Table 2 Pearson Product Moment Correlation Coefficient and Descriptive Statistics for reading Proficiency and Language Learning Strategy**

	Reading Proficiency r	P	N
Memory	-.13	.28	66
Cognitive	.21	.08	64
Compensatory	-.17	.15	67
Metacognitive	.07	.52	70
Social	-.18	.12	70
Affective	-.31**	.00	69

\*\* significant @ p L.00

The data show no statistically significant relationship between proficiency and memory strategies ( $r = -.13, p = .28$ ), compensation strategies ( $r = .17, p = .15$ ), metacognitive strategies ( $r = -.07, p = .52$ ). However, the data show that reading proficiency is positively related to cognitive strategies at  $p < .1$  alpha level ( $r = .21, p = .08$ ) and negatively related to social strategies at  $p < .00$  ( $r = -.31, p = .00$ ).

**Table 3 presents descriptive statistics, F values, and levels of statistical significance on variations in the use of strategy categories by gender.**

MANOVA Results on significant variations in use of categories of strategies by Gender								
SILL Category	Male (n = 34)		Female (n = 26)		df	F	P	Comments
	M	SD	M	SD				
Memory	24.79	4.87	25.92	6.00	1,58	.64	.42	NS
Cognitive	44.488	4.99	45.92	6.41	1,58	.50	.48	NS
Compensatory	19.00	3.37	18.53	3.55	1,58	.26	.61	NS
Metacognitive	29.38	5.74	32.02	7.23	1,58	2.51	.11	F>M



Affective	15.32	4.29	16.57	4.71	1,58	1.15	.28	NS
Social	17.97	4.60	18.30	4.94	1,58	.07	.78	NS

The results reveal no statistically significant difference between males and females in their overall use of strategies  $F(6,53) = .62, p = .70$ . Furthermore, the results of the univariate analysis revealed no statistically significant differences across gender with regard to the use of memory strategies  $F(1,58) = .64, p = .42$ , cognitive strategies,  $F(1,58) = .50, p = .48$ , compensatory strategies  $F(1,58) = .26, p = .61$ , affective strategies  $F(1,58) = 1.15, p = .28$ , and social strategies  $F(1,58) = .07, p = .78$ . However, there was a statistically significant difference in the level of the use of metacognitive strategies in favor of the females  $F(1,58) = 2.51, p = .11$ .

**Table 4 presents descriptive statistics,  $F$  values, and levels of statistical significance on variation in the use of strategies by level of proficiency.**

MANOVA Results on significant variations in use of categories of strategies by Proficiency Level								
SILL Category	High (n = 34)		Low (n = 26)		F	df	P	Comments
	M	SD	M	SD				
Memory	23.96	4.67	26.47	5.43	3.20	1,50	.07	L>H
Cognitive	46.34	4.98	43.78	6.36	2.65	1,50	.11	H>L
Compensatory	18.62	3.38	18.52	3.84	.04	1,50	.83	NS
Metacognitive	30.79	5.97	29.34	6.32	.71	1,50	.40	NS
Affective	14.68	4.28	17.17	4.58	4.04	1,58	.05	L>H
Social	17.58	4.17	18.30	5.24	.30	1,58	.58	NS

The results reveal a statistically significant difference between high and low proficiency students in their overall use of strategies at the  $p < .1$  alpha level  $F(6,45) = 1.72, p = .13$ . The results of the univariate analysis show that the low proficiency students use more memory strategy than their high proficiency counterparts  $F(1,50) = 3.2, p = .07$ . Likewise, the low proficiency students use more affective strategies  $F(1,50) = 4.04, p = .05$ . Conversely, the high proficiency students use more cognitive strategies  $F(1,50) = 2.65, p = .11$ . Finally, the results show no statistically significant differences across the levels of proficiency with regard to the use of compensatory strategies  $F(1,50) = .04, p = .83$ , metacognitive strategies  $F(1,50) = .30, p = .58$ .

## Discussion

The results of the present study suggest the following aspects of interest. Firstly, the memory, cognitive, compensatory, metacognitive, and social strategies are not related to proficiency as measured by reading comprehension. This finding is in agreement with the findings of Nibset, Tindall and Arroyo (2005) who reported that the SILL strategies accounted only for 4% of the variation in the TOEFL scores of Chinese university students. One possible explanation of these findings is that students in the present study are unaware of the range of strategies measured in SILL and that the reading task they performed did not call for the use of the compensatory and social strategies. Second, the results did not indicate any statistically significant difference in the use of strategies between males and females except in the use of metacognitive strategies. That is, the results indicated that the females tended to monitor their own learning of English through thinking about their progress in the acquisition of the language and seeking opportunities, paying attention, and setting goals for learning more than males. These findings do not corroborate those of Khalil (1995) and those of previous studies that reported that female students use more strategies than males. This suggests that the use of strategies might be context specific and variable across different linguistic and cultural situations. Finally, the results regarding the interplay between reading proficiency and the use of strategies underscored the variability and complexity of strategy use in language learning and acquisition. For instance, while the low proficient students reported that they use more memory and affective strategies



than their high proficient counterparts, the latter reported that they used more cognitive strategies than the less proficient students. This suggest that it would be in order to instruct and encourage low proficient learners in using cognitive strategies in order to maximize their opportunities to acquire a language other than their own. Furthermore, the results revealed no statistically significant difference across the level of proficiency (high versus low) with regard to use of compensatory, meta-cognitive, and social strategies.

## Conclusion

The present study examined the connection between the variables of language proficiency and gender on the one hand and the use of the six categories of strategies (memory, cognitive, compensatory, metacognitive, affective, social) measured by SILL on the other. The results generally suggest that the connection between the variables of gender and reading proficiency and use of learning and communication strategies on the other may be context specific and complex. As such there is a need for further research regarding the interplay of these variables in various cultural and linguistic contexts.

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**APPENDIX**

**Strategy Inventory for Language Learning (SILL) Version 7.0 (ESL/EFL)**

**Name:** ----- **Date** ----- / ----- / -----  
**Faculty:** ----- **Major:** -----  
**Indicate your sex:** Male: ----- Female: -----

**This form of the Strategy Inventory for Language Learning (SILL) is for students of English as a second or foreign language. You will find statements about learning English. Please read each statement carefully and circle the number (1,2,3,4,5) that tells how true of you the statement is.**

1. Never or almost never true of me
2. Usually not true of me
3. somewhat true of me
4. usually true of me
5. Always or almost always true of me

Statements	Level of Agreement				
	1	2	3	4	5
1. I think of relationships between what I already know and new things I learn in English					
2. I use new English words in a sentence so I can remember them					
3. I connect the sound of a new English word and an image or picture of the word to help me remember the word					
4. I remember a new English word by making a mental picture of a situation in which the word might be used					
5. I use rhymes to remember new English words					
6. I use flashcards to remember new English words					
7. I physically act out new English words					
8. I review English lessons often					
9. I remember new English words or phrases by remembering their location on the page, on the board, or on a street					
10. I say or write new English words several times					
11. I try to talk like native English speakers					
12. I practice the sounds of English					
13. I use the English words I know in different ways					
14. I start conversations in English					
15. I watch English language TV shows spoken in English or go to movies spoken in English					
16. I read for pleasure in English					



17. I write notes, messages, letters or reports in English	1	2	3	4	5
18. I first skim an English passage (read over the passage quickly) then go back and read carefully.	1	2	3	4	5
19. I look for words in my own language that are similar to new words in English	1	2	3	4	5
20. I try to find patterns in English	1	2	3	4	5
21. I find the meaning of an English word by dividing it into parts that I understand	1	2	3	4	5
22. I try not to translate word-for-word	1	2	3	4	5
23. I make summaries of information that I hear or read in English	1	2	3	4	5
24. To understand unfamiliar words, I make guesses	1	2	3	4	5
25. When I can't think of a word during a conversation in English, I use gestures	1	2	3	4	5
26. I make up new words if I don't know the right ones in English	1	2	3	4	5
27. I read English without looking up every new word.	1	2	3	4	5
28. I try to guess what the other person will say next in English	1	2	3	4	5
29. If I can't think of an English word, I use a word or phrase that means the same thing	1	2	3	4	5
30. I try to find as many ways as I can to use my English	1	2	3	4	5
31. I notice my English mistakes and use that information to help me do better	1	2	3	4	5
32. I pay attention when someone is speaking	1	2	3	4	5
33. I try to find out how to be a better learner of English	1	2	3	4	5
34. I plan my schedule so I will have enough time to study English	1	2	3	4	5
35. I look for people I can talk to in English	1	2	3	4	5
36. I look for opportunities to read as much as possible in English	1	2	3	4	5
37. I have clear goals for improving my English skills	1	2	3	4	5
38. I think about my progress in learning English	1	2	3	4	5
39. I try to relax whenever I feel afraid of using English	1	2	3	4	5
40. I encourage myself to speak English even when I'm afraid of making mistakes	1	2	3	4	5
41. I give myself a reward or treat when I do well in English	1	2	3	4	5
42. I notice if I am tense or nervous when I am studying or using English	1	2	3	4	5
43. I write down my feelings in a language learning diary	1	2	3	4	5
44. I talk to someone else about how I feel when I am learning English	1	2	3	4	5
45. If I don't understand something in English, I ask the other person to slow down or say it again	1	2	3	4	5
46. I ask English speakers to correct me when I talk	1	2	3	4	5
47. I practice English with other students	1	2	3	4	5
48. I ask for help from English speakers	1	2	3	4	5
49. I ask questions in English	1	2	3	4	5
50. I try to learn about the culture of English speakers	1	2	3	4	5