CHAPTER 4

DATA ANALYSIS AND FINDINGS

4.0 Overview

In this chapter, the data was interpreted quantitatively and qualitatively. Three major statistical procedures using SPSS, Version 10 were involved in the data analysis. The first stage of analysis consisted of descriptive statistics (means and frequencies). These basic statistics provided answers to research questions 1 and 4. Stage two involved comparative statistics using the Analysis of Variance (ANOVA). Stage three involved a follow up test, the Scheffe, a standard post-hoc test which was used to determine where specific significant differences lay. The ANOVA and the Scheffe tests were used to examine the relationship between learning strategies preferences and the two variables; major field of study and achievement level. The findings provided answers to research questions 2 and 3.

In the data analysis procedures, the findings from the questionnaires, interviews, observations and an achievement test, were divided into the following components:

1. Description of the EFL learning strategies.
2. The influence of major field of study on the choice of language learning strategies.
3. The influence of performance level on the choice of language learning strategies.
4. The language learning strategies which are associated with the four language skills.

4.1 Description of the EFL Learning Strategies

4.1.1 At the Individual Level

Analysis of the data obtained from the SILL at the individual item level, indicated that EFL students in this study employed a variety of language learning strategies, with some strategies being used more frequently than others. Table 4.1 lists the strategies that were “Always” or “Usually” used by EFL students, their types and mean scores.

TABLE 4.1

Type and Mean Score of the Most Frequent Individual Strategies Used by EFL Students (cont’d)

Descriptive Statistics			
	Type	**Mean**	**Level**
I connect the sound of a new English word with an image or picture of the word to help me remember the word	Memory	3.7	High
I remember new English words or phrases by remembering their location on the page, on the board	Memory	4.2	High
I say or write new English words several times	Cognitive	3.8	High
I try to talk like native English speakers	Cognitive	3.7	High
I watch English language TV shows spoken in English	Cognitive	3.5	High
I first skim an English passage (read over the passage quickly) then go back and read carefully	Cognitive	3.8	High
I look for words in my own language that are similar to new words in English	Cognitive	3.9	High
I find the meaning of an English word by dividing it into parts that I understand	Cognitive	4.1	High
To understand unfamiliar English words, I make guesses	Compensation	3.5	High
When I can't think of a word during a conversation in English, I use gestures	Compensation	3.6	High
If I cannot think of an English word, I use a word or phrase that means the same thing	Compensation	4.1	High
I try to find as many ways as I can to use my English	Meta-cognitive	3.5	High

TABLE 4.1

Type and Mean Score of the Most Frequent Individual Strategies Used by EFL Students (cont'd)

Descriptive Statistics			
	Type	**Mean**	**Level**
I notice my English mistakes and use that information to help me do better	Meta-cognitive	4.1	High
I pay attention when someone is speaking English	Meta-cognitive	4.4	High
I try to find out how to be a better learner of English	Meta-cognitive	4.5	High
I have clear goals for improving my English skills	Meta-cognitive	3.7	High
I think about my progress in learning English	Meta-cognitive	4.2	High
I try to relax whenever I feel afraid of using English	Affective	3.5	High
I encourage myself to speak English even when I am afraid of making a mistake	Affective	3.5	High
I talk to someone else about how I feel when I am learning English	Affective	3.8	High
If I do not understand something in English, I ask the other person to slow down or say it again	Social	3.8	High

Table 4.1 shows that the strategy that had the highest mean was of the meta-cognitive type "I try to find out how to be a better learner of English". All of the other strategies were used "Usually" by EFL students. The analysis of the SILL also showed that, most of the strategies used at a high level were of the cognitive and meta-cognitive types followed by the compensation and affective types, then, the memory and finally the social type. The unpopularity of the social strategies among EFL students was expected. It was due to the EFL environment where English is not used in Saudi Arabia for communication needs in the social and economic daily lives.

The data obtained from the interviews supports the finding which indicated that EFL students were interested in improving their proficiency in the English language. Out of

the 32 students, 30 (93.8%) students gave positive results; 15 (46.9%) out of the 30 students indicated that they were keen to know how to improve their proficiency in the English language. 6 (18.8%) students praised themselves as being very good in memorization and questioned if this strategy could help them to be better learners. 5 (15.6%) students said that they exerted most of their effort to be good learners. 4 (12.5%) students acknowledged the importance of speaking English fluently when traveling abroad. On the other hand, 2 (6.3%) students indicated that they were not interested in improving their proficiency in the English language. One of them wanted to pass her exams only and the other one hoped to change her department as she was forced to join it. EFL students being interested in improving their proficiency in the English language indicated that they had the motivation to succeed, and this will help them arrange and plan their learning in an efficient and effective way.

Table 4.1 also shows that EFL students are more visually-oriented than auditory, tactile, or kinesthetic. They like to learn by visualizing words; consequently, they must have written directions if they are to function well in the classrooms. In learning new vocabulary items, the findings indicated that EFL students look for words in their language that are similar to new words in English, or they divide the word into parts that they understand, and they use the strategy of “Repetition”. Furthermore, these learners are not afraid of making mistakes, they are risk takers, they encourage themselves to speak English, they know well how to control their emotions and lower their anxiety in their learning through physical relaxation techniques and discussing their feelings with others. Also, their scores in using the compensation strategy of “Using gestures” for limitation in speaking were high. Finally, EFL learners feel that practising English like native speakers and asking English speakers for help encourage them learn much more;

so, they considered practising speaking English frequently as one of the best ways to improve their proficiency.

The data obtained from the interviews also yielded similar results. In learning new words 29 (90.6%) out of the 32 students, indicated that they would say the word several times; 2 (6.3%) students said that they practise by putting the new word in a sentence and 1 (3.1%) student uses rhymes to memorize the new words. At the same time, when the students are stuck with some words, 30 (93.8%) out of the 32 students indicated that they use gestures and mime while 32 (100%) said that they use a word or phrase that has the same meaning in English as well. The findings indicated that repetition is very important to these students in learning English as a foreign language. Although the strategy of repetition might not sound creative, it can still be used in innovative ways with other tactics such as clustering and concept maps and can always include some degree of meaningful understanding. In addition, the extensive use of gestures and mimes for limitation in speaking indicated that the students need extra effort to develop their vocabulary. Every possible device should be used to encourage students in building their vocabulary by using synonyms, antonyms and onomatopoeic words, by guessing meanings from contexts and by studying prefixes and suffixes.

Analysis of the SILL also indicated that the EFL learners employed a variety of language learning strategies at a medium level. Table 4.2 illustrates the strategies that were used "Sometimes" by the EFL learners.

TABLE 4.2

Type and Mean Score of the Strategies Used at a Medium Level by EFL Students (cont'd)

Descriptive Statistics			
	Type	**Mean**	**Level**
I think of relationships between what I already know and new things I learn in English	Memory	3.3	Medium
I use new English words in a sentence so I can remember them	Memory	2.8	Medium
I remember a new English word by making a mental picture of a situation in which the word might be used	Memory	3.4	Medium
I use rhymes to remember new English words	Memory	2.6	Medium
I physically act out new English words	Memory	2.7	Medium
I review English lessons often	Memory	3.1	Medium
I practise the sounds of English.	Cognitive	3.4	Medium
I use the English words I know in different ways	Cognitive	3.1	Medium
I start conversations in English	Cognitive	2.8	Medium
I read for pleasure in English	Cognitive	2.5	Medium
I write notes, messages, letters, or reports in English	Cognitive	2.6	Medium
I try to find patterns in English	Cognitive	3.1	Medium
I try not to translate word-for-word	Cognitive	3.4	Medium
I make summaries of information that I hear or read in English	Cognitive	2.5	Medium
I make up new words if I do not know the right ones in English	Compensation	3.2	Medium
I read English without looking up every new word	Compensation	2.9	Medium
I try to guess what the other person will say next in English	Compensation	3.3	Medium

TABLE 4.2

Type and Mean Score of the Strategies Used at a Medium Level by EFL Students (cont'd)

Descriptive Statistics			
	Type	**Mean**	**Level**
I plan my schedule so I will have enough time to study English	Meta-cognitive	2.7	Medium
I look for people I can talk to in English	Meta-cognitive	3.1	Medium
I look for opportunities to read as much as possible in English	Meta-cognitive	2.8	Medium
I give myself a reward or treat when I do well in English	Affective	2.7	Medium
I notice if I am tense or nervous when I am studying or using English	Affective	3.0	Medium
I ask English speakers to correct me when I talk	Social	3.2	Medium
I practise English with other students	Social	2.7	Medium
I ask for help from English speakers	Social	3.4	Medium
I ask questions in English	Social	3.2	Medium
I try to learn about the culture of English speakers	Social	2.5	Medium

Table 4.2 shows that most of the strategies that were used at a medium level were of the Cognitive types followed by the Memory ones, then, Social and next, Compensation as well as Meta-cognitive types and finally, the least type used at a medium level, was the Affective type.

Analysis of the SILL indicated that EFL students whose exposure to English was limited to classroom interactions reported medium level of using resources, such as "Reading English books for pleasure" or "Writing notes and letters in English" or "Speaking English with others". In learning new vocabulary items, students employed the following strategies "Sometimes": "Using words in sentences", "Using rhymes" or

“Physically acting out new English words”. Finally, when these EFL learners were stuck with some words, they used the compensation strategy of “Making up new words” “Sometimes”.

Data obtained from the interviews yielded different results in that 30 (93.8%) students indicated that they do not read for pleasure in English. This finding contradicted the data collected from the SILL. Based on the SILL, students reported that they read for pleasure in English at a medium level. Data obtained from the interviews gave reasons for not reading for pleasure in English. 12 (37.5%) students expressed that they prefer to watch TV than to read. While 11 (34.4%) students said that their timetables were so packed that they did not have time to read for pleasure. 3 (9.4%) students added that they would more likely read in Arabic for pleasure than in English. 3 (9.4%) students acknowledged the importance of reading in English in improving their English proficiency but they declared that it was difficult for them. 1 (3.1%) student expressed her inability to read for pleasure because of her family commitments. On the other hand, 2 (6.3%) students indicated that they like English and they like to use the internet and read the news and many other topics in English. An explanation to this difference in the data obtained from the SILL and the interviews could be that students do not read for pleasure during their study but in the end of year vacation when they have much free time, they enjoy themselves and do other useful activities such as reading for pleasure in English. However, as the students’ exposure to the English language is limited to the classrooms interactions, they need to read more at home. Consequently, using the strategy of “Reading for pleasure in English” can be an efficient way in improving students’ reading skill.

Finally analysis of the SILL also indicated that EFL learners used the two strategies displayed in Table 4.3 least frequently.

TABLE 4.3

Type and Mean Score of the Least Frequently Used Individual Strategies

Descriptive Statistics			
	Type	**Mean**	**Level**
I use flashcards to remember new English words	Memory	1.61	Low
I write down my feelings in a language learning diary	Affective	1.90	Low

Table 4.3 shows that the least popular strategies among the EFL learners were “I write down my feelings in a language learning diary” and “I use flashcards to remember new English words”. However, free writing can be an effective way for stimulating students’ critical thinking skills and creativity. EFL Students should be encouraged to write down their feelings in English to build up confidence that they can fill pages with words with no fear of criticism; and thus all the mental blocks will be removed and creativity can be enhanced.

In summary, the findings indicated that out of the 50 strategies that are included in SILL, EFL students used 21 (42%) strategies at a high level, 27 (54%) strategies at a medium level and 2 (4%) strategies at a low level. Thus, developing teaching activities that promote students specific learning strategies is a must in an effort to enhance language learning.

4.1.2 At the Category Level

The SILL is divided into six categories as illustrated in Table 4.4. These categories are called “Parts” in reference to how the questions are arranged in the inventory. Each

category represents a group of learning strategies. The mean score for each category shows which groups of strategies students use the most for learning English.

TABLE 4.4

Categories of the SILL

Part	Strategies Covered	Strategy Type
A	Remembering more effectively.	Memory
B	Using all your mental processes.	Cognitive
C	Compensating for missing knowledge.	Compensation
D	Organizing and evaluating your learning	Meta-cognitive
E	Managing your emotions.	Affective
F	Learning with others.	Social

In the analysis of the SILL categories used by EFL students, the findings indicated that there were some groups of strategies which were used more frequently than others. Table 4.5 shows the mean score and ranking for each category used by EFL students.

TABLE 4.5

Mean Score, Rank and Level of Strategy Categories

Part	Strategy Category	Mean Score	Rank	Level
D	Organizing and evaluating your learning	3.7	1	High
C	Compensating for missing knowledge	3.4	2	Medium
B	Using all your mental processes	3.3	3	Medium
F	Learning with others	3.1	4	Medium
E	Managing your emotions	3.1	5	Medium
A	Remembering more effectively	3.0	6	Medium

Table 4.5 shows that EFL students used all the strategy categories at a medium level except for the meta-cognitive strategy category which recorded a high level (mean 3.7). Thus, EFL students learn best by organizing and evaluating their learning. All of the rest of categories received nearly equal attention by EFL students such as “Compensating

for missing knowledge" which was used slightly more frequently than "Using your mental processes". This may be due to the EFL environment where the students encounter a knowledge barrier as they do not use English for communication and thus the break down in communication is overcome by using compensation strategies. Both the "Learning with others" and "Managing your emotions" categories received equal attention from EFL students. A possible explanation to ranking social and affective strategy categories as the second least employed ones is that they study in the traditional English classrooms where the English teachers function as information givers. As a result, students have limited opportunities to speak English and thus, they do not have to combat fear and anxiety. Another explanation might be that EFL students are not familiar with paying attention to their own feelings and social relationships as part of their language learning process. Finally, the least frequently used of the categories was the memory "Remembering more effectively". This might be explained in that EFL students depend more on rote learning which is based on the cognitive strategy repetition; therefore, they know little about using imagery or linking verbal material with motion.

Thus, EFL students should be encouraged to cooperate with their peers. They should learn how to lower their anxiety, how to encourage themselves by making positive statements, taking risks and rewarding themselves. Finally, a greater effort should be made to help students store and retrieve new information by associating, placing new words into a context, structured reviewing and linking verbal martial with motion.

4.1.3 Overall Strategy Use

Based on the analysis of the data obtained from the SILL, the EFL learners reported medium overall strategy use as their mean score is (3.3) which indicated that these strategies were used “Sometimes”.

4.2 The Influence of Major Field of Study on the Choice of Language Learning Strategies

4.2.1 At the Individual Level

Analysis of the data obtained from the SILL using descriptive statistics is summarized in Table E1 (See Appendix E). The analysis revealed that there were some similarities and differences in the use of strategies where major field of study was concerned. Table 4.6 illustrates the similarities in the use of strategies at the individual level with regard to major field of study, their mean scores, and level.

TABLE 4.6

Mean Score and Level of Individual Strategies With Regard to Major Field of Study (cont’d)

Descriptive Statistics				
		N	**Mean**	**Level**
I connect the sound of a new English word with an image or picture of the word to help me remember the word	Medicine	46	3.72	High
	English Language	80	3.63	High
	Biology	92	3.91	High
	Computer Science	46	3.59	High
	Total	264	3.73	
I use flashcards to remember new English words	Medicine	46	2.39	Low
	English Language	80	1.61	Low
	Biology	92	1.39	Low
	Computer Science	46	1.26	Low
	Total	264	1.61	

TABLE 4.6

Mean Score and Level of Individual Strategies With Regard to Major Field of Study (cont'd)

Descriptive Statistics				
I remember new English words or phrases by remembering their location on the page or on a board.	Medicine	46	4.07	High
	English Language	80	4.14	High
	Biology	92	4.38	High
	Computer Science	46	4.09	High
	Total	264	4.20	
I say or write new English words several times	Medicine	46	3.89	High
	English Language	80	3.81	High
	Biology	92	3.61	High
	Computer Science	46	3.83	High
	Total	264	3.76	
I first skim an English passage (read over the passage quickly) then go back and read carefully	Medicine	46	4.04	High
	English Language	80	3.71	High
	Biology	92	3.67	High
	Computer Science	46	4.13	High
	Total	264	3.83	
I look for words in my own language that are similar to new words in English	Medicine	46	4.11	High
	English Language	80	3.63	High
	Biology	92	3.80	High
	Computer Science	46	4.26	High
	Total	264	3.88	
I find the meaning of an English word by dividing it into parts that I understand	Medicine	46	4.09	High
	English Language	80	4.19	High
	Biology	92	4.29	High
	Computer Science	46	3.46	High
	Total	264	4.08	
I read English without looking up every new word	Medicine	46	2.80	Medium
	English Language	80	2.73	Medium
	Biology	92	2.91	Medium
	Computer Science	46	3.33	Medium

TABLE 4.6

Mean Score and Level of Individual Strategies With Regard to Major Field of Study (cont'd)

Descriptive Statistics				
	Total	264	2.91	
If I cannot think of an English word, I use a word or phrase that means the same thing	Medicine	46	4.26	High
	English Language	80	4.11	High
	Biology	92	3.90	High
	Computer Science	46	4.04	High
	Total	264	4.05	
I notice my English mistakes and use that information to help me do better	Medicine	46	4.33	High
	English Language	80	4.30	High
	Biology	92	3.99	High
	Computer Science	46	3.67	High
	Total	264	4.09	
I pay attention when someone is speaking English	Medicine	46	4.61	High
	English Language	80	4.53	High
	Biology	92	4.23	High
	Computer Science	46	4.46	High
	Total	264	4.42	
I try to find out how to be a better learner of English	Medicine	46	4.85	High
	English Language	80	4.56	High
	Biology	92	4.27	High
	Computer Science	46	4.35	High
	Total	264	4.47	
I think about my progress in learning English	Medicine	46	4.50	High
	English Language	80	4.55	High
	Biology	92	3.92	High
	Computer Science	46	4.07	High
	Total	264	4.24	
I give myself a reward or treat when I do well in English	Medicine	46	2.93	Medium
	English Language	80	2.73	Medium
	Biology	92	2.48	Medium

TABLE 4.6

Mean Score and Level of Individual Strategies With Regard to Major Field of Study (cont'd)

Descriptive Statistics				
	Computer Science	46	2.93	Medium
	Total	264	2.71	
I talk to someone else about how I feel when I am learning English	Medicine	46	3.67	High
	English Language	80	4.01	High
	Biology	92	3.74	High
	Computer Science	46	3.52	High
	Total	264	3.77	
If I do not understand something in English, I ask the other person to slow down or say it again	Medicine	46	3.89	High
	English Language	80	3.66	High
	Biology	92	4.12	High
	Computer Science	46	3.57	High
	Total	264	3.84	

The analysis indicated that the most frequent individual strategies that were used "Always" by both Medical and English majors were "I try to find out how to be a better learner of English", "I pay attention when someone is speaking English", and "I think about my progress in learning English". In addition, the data obtained from interviewing eight students from each Department: Medical, English Language, Biology and Computer Science, yielded the same results as all of the 8 (100%) Medical students and all of the 8 (100%) English majors were interested in improving their proficiency in the English language. On the other hand, Computer Science majors used only the strategy of "I pay attention when someone is speaking English" most frequently and Biology majors did not use any strategy "Always" or "Almost Always". In other words, Medical and English majors regulated their learning by planning, monitoring and evaluating their learning activities. These findings are convincing to the researcher as both of the Medical and English majors study extensive theoretical courses that require a great deal

of planning and preparation; thus it is easy for the students to transfer the use of the strategies to learning English.

The findings also indicated that the students in all major fields of study reported low use of the strategy “I use flashcards to remember new English words”, furthermore, English majors used other strategies at a low level such as: “I use rhymes to remember new English words”, “I physically act out new English words”, and “I write down my feelings in a language learning diary”. Similarly, the data obtained from the interviews indicated that all of the 8 (100%) English majors never used the strategies of physically acting out new English words or using rhymes in remembering new English words rather they used “Repetition”. Furthermore, Biology majors used the following ten strategies at a low level:

1. I use new English words in a sentence so that I can remember them.
2. I read for pleasure in English.
3. I write notes, messages, letters, or reports in English.
4. I make summaries of information that I hear or read in English.
5. I plan my schedules so I will have enough time to study English.
6. I look for people I can talk to in English.
7. I look for opportunities to read as much as possible in English.
8. I write down my feelings in a language learning diary.
9. I practise English with other students.
10. I try to learn about the culture of English speakers.

The data obtained from the interviews yielded similar results as all of the 8 (100%) Biology majors indicated that they do not read for pleasure in English, they also do not use new English words in sentences; rather they use repetition to remember new

vocabulary items. This low level in the use of the above strategies is perhaps due to the use of Arabic language as a medium of instruction in their department. Therefore, students who are not highly motivated to learn or use English will probably not make an effort to use it outside the classroom.

Computer Science students on the other hand used the following eight strategies at a low level:

1. I use rhymes to remember new English words.
2. I physically act out new English words.
3. I start conversation in English.
4. I read for pleasure in English.
5. I try to find patterns in English.
6. I make up new words if I do not know the right ones in English.
7. I write down my feelings in a language learning diary.
8. I try to learn about the culture of English speakers.

In addition, the data obtained from the interviews yielded the same results as all of the 8 (100%) Computer Science students indicated that they never use the strategies of physically acting out new English words or using rhymes in remembering new English words rather, they use the strategy of “Repetition”. They also indicated that they do not read for pleasure in English and they do not make up words if they do not know the right ones in English rather, they use a word that has the same meaning or they use gestures. The low use of the above strategies may be due to the students’ busy timetable and the length of time they spend in front of the computer.

In general, the findings indicated that besides the qualitative differences in the use of strategies where major field of study is concerned, there were quantitative differences too. Out of the 50 strategies included in the SILL, Medical students used 36 (72%) strategies most frequently, followed by English majors who used 27 (54%) strategies "Always" or "Almost Always", then, Computer Science majors who used 20 (40%) strategies most frequently and finally Biology majors who used 17 (34%) strategies "Always" or "Almost Always". On the other hand, Biology students used 22 (44 %) strategies "Sometimes" (i.e. at a medium level) followed by Computer Science majors 21 (42%), English majors 19 (38%) and finally Medical students 13 (26%) all of whom used strategies at a medium level. Likewise, Biology majors used 11 (22%) strategies least frequently, followed by Computer Science majors 9 (18%), English majors 4 (8%) and finally, Medical majors who used 1 (2%) strategy at the low level.

Another analysis of the SILL using ANOVA revealed significant differences in the use of language learning strategies at the individual level within the different major fields of study. Table E2 (See Appendix E) summarizes the results of this analysis and lists the significant relationships between the use of strategies and major fields of study.

The results showed that the F-values are statistically significant at the 0.05 level as the computed F-ratio with 3 and 260 degrees of freedom exceeds 2.63. Thus, there were significant differences in the means of the strategies used by EFL learners with regard to major field. The post-hoc Scheffe test as illustrated in Table E3 (See Appendix E) specifies where significant differences lay.

The results showed some variations in the use of individual strategies in relation to major field of study. Medical students reported the use of the following strategies more significantly than English Language, Computer Science and Biology students:

1. I use new English words in a sentence so I can remember them.
2. I use rhymes to remember new English words.
3. I use flashcards to remember new English words.
4. I review English lessons often.
5. I write notes, messages, letters, or reports in English.
6. I look for people I can talk to in English.
7. I encourage myself to speak English even when I am afraid of making a mistake.
8. I practise English with other students.

Furthermore, Medical students reported more significant use of the strategy “I try to guess what the other person will say next in English” than did English majors. On the other hand, Medical students reported the use of 25 (50 %) strategies more significantly than did Biology majors and 11 (22%) strategies more significantly than did Computer Science students.

The results indicated that English majors used the strategy “I make up new words if I do not know the right ones in English” more significantly than did Medical students. Furthermore, English majors reported the use of 17 (34%) strategies more significantly than did Biology students and finally, they used 7 (14%) strategies more significantly than did Computer Science students.

On the other hand, Biology students reported the use of the strategy “I make up new words if I do not know the right ones in English” more significantly than did Medical

students. This may be due to the limited exposure of Biology students to the English language as the language of instruction in this department is Arabic. Moreover, the strategy “I physically act out new English words” was used more significantly by Biology students than did English Language students. This indicated that language activities for Biology students should involve some movement or some manipulation of objects. Finally, Biology students used 6 (12%) strategies more significantly than did Computer Science students.

The results yielded that Computer Science students used the strategy “I look for words in my own language that are similar to new words in English” more significantly than did English majors, and they used 6 (12%) strategies more significantly than did Biology majors.

In summary, the findings indicated that there were qualitative and quantitative differences in the use of individual strategies where major field of study was concerned. These differences can be highlighted in the preparation of materials for different departments.

In contrast, the results indicated that there were some similarities in the use of strategies at the individual level with regard to major field of study as illustrated in Table 4.7.

TABLE 4.7

Equality of Means Between the Use of Strategies and Different Major Fields of Study (cont'd)

ANOVA						
		Sum of Squares	**df**	**Mean Square**	**F**	**Sig.**
I connect the sound of a new English word and an image or picture of the word to help me remember the word	Between Groups	4.907	3	1.636	.923	.430
	Within Groups	460.533	260	1.771		
	Total	465.439	263			
I remember new English words or phrases by remembering their location on the page or on a board.	Between Groups	4.731	3	1.577	1.567	.198
	Within Groups	261.629	260	1.006		
	Total	266.360	263			
I say or write new English words several times	Between Groups	3.319	3	1.106	.833	.477
	Within Groups	345.166	260	1.328		
	Total	348.485	263			
I first skim an English passage (read over the passage quickly) then go back and read carefully	Between Groups	9.594	3	3.198	2.039	.109
	Within Groups	407.735	260	1.568		
	Total	417.330	263			
To understand unfamiliar English words, I make guesses	Between Groups	1.761	3	.587	.441	.724
	Within Groups	346.205	260	1.332		
	Total	347.966	263			
When I can't think of a word during a conversation in English, I use gestures	Between Groups	3.920	3	1.307	.794	.498
	Within Groups	428.076	260	1.646		
	Total	431.996	263			
I read English without looking up every new word	Between Groups	11.216	3	3.739	2.367	.071
	Within Groups	410.602	260	1.579		

TABLE 4.7

Equality of Means Between the Use of Strategies and Different Major Fields of Study (cont'd)

ANOVA						
		Sum of Squares	**df**	**Mean Square**	**F**	**Sig.**
	Total	421.818	263			
If I cannot think of an English word, I use a word or phrase that means the same thing	Between Groups	4.368	3	1.456	1.377	.250
	Within Groups	274.890	260	1.057		
	Total	279.258	263			
I try to relax whenever I feel afraid of using English	Between Groups	3.719	3	1.240	.782	.505
	Within Groups	411.974	260	1.585		
	Total	415.693	263			
I give myself a reward or treat when I do well in English	Between Groups	9.606	3	3.202	1.459	.226
	Within Groups	570.515	260	2.194		
	Total	580.121	263			
I talk to someone else about how I feel when I am learning English	Between Groups	8.050	3	2.683	1.676	.173
	Within Groups	416.314	260	1.601		
	Total	424.364	263			
I ask for help from English speakers	Between Groups	11.037	3	3.679	2.042	.108
	Within Groups	468.402	260	1.802		
	Total	479.439	263			
I try to learn about the culture of English speakers	Between Groups	5.711	3	1.904	.990	.398
	Within Groups	499.830	260	1.922		
	Total	505.542	263			

Table 4.7 indicated that all the F-values are not statistically significant at the 0.05 level as the computed F-ratio is less than 2.63. Thus, there were no significant differences in

the means of the above strategies used by the EFL learners with regard to major field of study.

4.2.2 At the Category Level

Analysis of the data obtained from the SILL at the category level, using descriptive statistics is summarized in the following table. The results indicated significant differences in the means of the strategy categories used by the EFL learners with regard to major field of study. Table 4.8 shows the mean scores of the strategy categories used by EFL students according to different major fields of study.

TABLE 4.8

Mean Scores of Strategy Categories Used by EFL Students According to Different Major Fields of Study
(See table 4.4, page 113 for strategies covered in each part)

Major field	Part A Memory	Part B Cognitive	Part C Compensation	Part D Meta-cognitive	Part E Affective	Part F Social
Medicine	3.5	3.6	3.4	4.1	3.5	3.5
English Language	3.0	3.5	3.4	3.9	3.2	3.2
Biology	2.9	3.0	3.5	3.3	2.8	2.9
Computer Science	2.8	3.1	3.1	3.6	2.9	3.1

Table 4.8 shows that Medical students reported the highest use of all strategy categories except for “Compensating for missing knowledge” which was used at a medium level. English majors used two of the categories at a high level and the rest at a medium level. Computer Science majors ranked third in terms of frequency of usage, where most of the categories were used at a medium level, except for “Organizing and evaluating your learning” which was used at a high level and finally, the least frequent categories were used by Biology majors, who reported a medium use of all the categories, except for “Compensating for missing knowledge” which was used at a high level.

Another analysis using ANOVA as illustrated in Table 4.9 shows that EFL students employed different categories of strategies with different major fields of study.

TABLE 4.9

Significant Variation in the Use of Strategy Categories and Major Fields of Study by EFL Students

ANOVA						
		Sum of Squares	**df**	**Mean Square**	**F**	**Sig.**
Remembering more effectively	Between Groups	15.381	3	5.127	15.869	.000
	Within Groups	84.003	260	.323		
	Total	99.384	263			
Using all your mental processes	Between Groups	17.726	3	5.909	19.648	.000
	Within Groups	78.191	260	.301		
	Total	95.918	263			
Compensating for missing Knowledge	Between Groups	3.458	3	1.153	2.911	.035
	Within Groups	102.981	260	.396		
	Total	106.439	263			
Organizing and evaluating your learning	Between Groups	27.863	3	9.288	25.296	.000
	Within Groups	95.463	260	.367		
	Total	123.326	263			
Managing your emotions	Between Groups	14.051	3	4.684	11.921	.000
	Within Groups	102.150	260	.393		
	Total	116.201	263			
Learning with others	Between Groups	9.965	3	3.322	5.515	.001
	Within Groups	156.589	260	.602		
	Total	166.554	263			

Table 4.9 shows significant differences in the means of the EFL students with regard to major field of study at the category level. The results indicated that the computed F-ratio exceeds 2.63; therefore, it is statistically significant at the 0.05 level. The post-hoc Scheffe test as illustrated in Table 4.10 specifies where significant differences lay.

TABLE 4.10

Significant Variation in the Use of Strategy Categories and Major Fields of Study by EFL Students - Post Hoc Tests (cont'd)

Multiple Comparisons Scheffe							
			Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
Dependent Variable	**(I) Major**	**(J) Major**				**Lower Bound**	**Upper Bound**
Remembering more effectively	Medicine	English Language	.51(*)	.11	.000	.22	.81
		Biology	.62(*)	.10	.000	.33	.90
		Computer Science	.74(*)	.12	.000	.41	1.07
	English Language	Medicine	-.51(*)	.11	.000	-.81	-.22
		Biology	.10	8.69E-02	.707	-.14	.35
		Computer Science	.23	.11	.205	-7.01E-02	.52
	Biology	Medicine	-.62(*)	.10	.000	-.90	-.33
		English Language	-.10	8.69E-02	.707	-.35	.14
		Computer Science	.12	.10	.696	-.17	.41
	Computer Science	Medicine	-.74(*)	.12	.000	-1.07	-.41
		English Language	-.23	.11	.205	-.52	7.01E-02
		Biology	-.12	.10	.696	-.41	.17
Using all your mental processes	Medicine	English Language	.15	.10	.546	-.14	.43
		Biology	.64(*)	9.90E-02	.000	.36	.92
		Computer Science	.50(*)	.11	.000	.18	.82
	English Language	Medicine	-.15	.10	.546	-.43	.14
		Biology	.49(*)	8.38E-02	.000	.26	.73

TABLE 4.10

Significant Variation in the Use of Strategy Categories and Major Fields of Study by EFL Students - Post Hoc Tests (cont'd)

Multiple Comparisons Scheffe							
			Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
Dependent Variable	**(I) Major**	**(J) Major**				**Lower Bound**	**Upper Bound**
		Computer Science	.35(*)	.10	.008	6.62E-02	.64
	Biology	Medicine	-.64(*)	9.90E-02	.000	-.92	-.36
		English Language	-.49(*)	8.38E-02	.000	-.73	-.26
		Computer Science	-.14	9.90E-02	.566	-.42	.14
	Computer Science	Medicine	-.50(*)	.11	.000	-.82	-.18
		English Language	-.35(*)	.10	.008	-.64	-6.62E-02
		Biology	.14	9.90E-02	.566	-.14	.42
Compensating for missing Knowledge	Medicine	English Language	-3.59E-02	.12	.992	-.36	.29
		Biology	-.12	.11	.775	-.44	.20
		Computer Science	.21	.13	.450	-.16	.58
	English Language	Medicine	3.59E-02	.12	.992	-.29	.36
		Biology	-8.37E-02	9.62E-02	.860	-.35	.19
		Computer Science	.25	.12	.207	-7.80E-02	.58
	Biology	Medicine	.12	.11	.775	-.20	.44
		English Language	8.37E-02	9.62E-02	.860	-.19	.35
		Computer Science	.33(*)	.11	.037	1.35E-02	.65

TABLE 4.10

Significant Variation in the Use of Strategy Categories and Major Fields of Study by EFL Students - Post Hoc Tests (cont'd)

Multiple Comparisons Scheffe							
			Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
Dependent Variable	**(I) Major**	**(J) Major**				**Lower Bound**	**Upper Bound**
	Computer Science	Medicine	-.21	.13	.450	-.58	.16
		English Language	-.25	.12	.207	-.58	7.80E-02
		Biology	-.33(*)	.11	.037	-.65	-1.35E-02
Organizing and evaluating your learning	Medicine	English Language	.16	.11	.570	-.16	.47
		Biology	.81(*)	.11	.000	.50	1.12
		Computer Science	.51(*)	.13	.001	.15	.87
	English Language	Medicine	-.16	.11	.570	-.47	.16
		Biology	.65(*)	9.26E-02	.000	.39	.91
		Computer Science	.35(*)	.11	.022	3.50E-02	.67
	Biology	Medicine	-.81(*)	.11	.000	-1.12	-.50
		English Language	-.65(*)	9.26E-02	.000	-.91	-.39
		Computer Science	-.30	.11	.060	-.61	8.38E-03
	Computer Science	Medicine	-.51(*)	.13	.001	-.87	-.15
		English Language	-.35(*)	.11	.022	-.67	-3.50E-02
		Biology	.30	.11	.060	-8.38E-03	.61

TABLE 4.10

Significant Variation in the Use of Strategy Categories and Major Fields of Study by EFL Students - Post Hoc Tests (cont'd)

Multiple Comparisons Scheffe							
			Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
Dependent Variable	**(I) Major**	**(J) Major**				**Lower Bound**	**Upper Bound**
Managing your emotions	Medicine	English Language	.28	.12	.126	-4.75E-02	.61
		Biology	.63(*)	.11	.000	.31	.95
		Computer Science	.51(*)	.13	.002	.14	.88
	English Language	Medicine	-.28	.12	.126	-.61	4.75E-02
		Biology	.35(*)	9.58E-02	.004	8.37E-02	.62
		Computer Science	.23	.12	.264	-9.44E-02	.56
	Biology	Medicine	-.63(*)	.11	.000	-.95	-.31
		English Language	-.35(*)	9.58E-02	.004	-.62	-8.37E-02
		Computer Science	-.12	.11	.765	-.44	.20
	Computer Science	Medicine	-.51(*)	.13	.002	-.88	-.14
		English Language	-.23	.12	.264	-.56	9.44E-02
		Biology	.12	.11	.765	-.20	.44
Learning with others	Medicine	English Language	.35	.14	.116	-5.32E-02	.75
		Biology	.56(*)	.14	.001	.17	.96
		Computer Science	.45	.16	.055	-6.07E-03	.90

TABLE 4.10

Significant Variation in the Use of Strategy Categories and Major Fields of Study by EFL Students - Post Hoc Tests (cont'd)

Multiple Comparisons Scheffe							
			Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
Dependent Variable	(I) Major	(J) Major				Lower Bound	Upper Bound
	English Language	Medicine	-.35	.14	.116	-.75	5.32E-02
		Biology	.21	.12	.370	-.12	.54
		Computer Science	9.84E-02	.14	.925	-.31	.50
	Biology	Medicine	-.56(*)	.14	.001	-.96	-.17
		English Language	-.21	.12	.370	-.54	.12
		Computer Science	-.11	.14	.887	-.51	.28
	Computer Science	Medicine	-.45	.16	.055	-.90	6.07E-03
		English Language	-9.84E-02	.14	.925	-.50	.31
		Biology	.11	.14	.887	-.28	.51
* The mean difference is significant at the .05 level.							

Table 4.10 shows significant variations in the use of strategy categories in relation to major field of study. Medical students reported the highest use of the memory strategy category "Remembering more effectively" and this was due to the large amount of terminology they had to memorize in their study; thus it was easy for them to transfer the use of memory strategies to learning English. This extensive use of the memory strategy category might show that Medical students are aware of the importance of this category for language learning. It indicated that they know well how to enter, store and retrieve information. Also, Medical majors used the social strategy category "Learning

with others" more significantly than did Biology students. In addition to that, both Medical and English majors reported the use of the following cognitive and meta-cognitive strategy categories "Using all your mental process" and "Organizing and evaluating your learning" more frequently than did the Biology and Computer Science students. The use of more cognitive and meta-cognitive strategies by the Medical and English majors can be attributed to the students' need to self organization as well as deep processing, forming and revising internal mental models to receive and produce the language. Finally, Biology majors reported higher use of the strategy category, "Compensating for missing knowledge" than did Computer Science students. Maybe this was due to Biology majors' limited exposure to the English language as the language of instruction at the Biology Department is Arabic.

4.2.3 Overall Strategy Use

ANOVA was used to determine the differences in the overall strategy use of the EFL learners according to major field of study. The results as illustrated in Table 4.11 indicated that the computed F-ratio exceeds 2.63; therefore, all the F-values are statistically significant at the 0.05 level. Thus, there were significant differences in the means of the EFL students' overall strategy use with different major fields of study. The post-hoc Scheffe test as illustrated in Table 4.12 specifies where significant differences lay.

TABLE 4.11

Variation in the Means of EFL Students' Overall Strategy Use With Different Major Fields of Study

ANOVA Overall					
	Sum of Squares	**df**	**Mean Square**	**F**	**Sig.**
Between Groups	10.278	3	3.426	17.630	.000
Within Groups	50.527	260	.194		
Total	60.806	263			

TABLE 4.12

Variation in the Means of EFL Students' Overall Strategy Use With Different Major Fields of Study- Post Hoc Tests (cont'd)

Multiple Comparisons Dependent Variable: Overall Scheffe						
		Mean Difference (I-J)	**Std. Error**	**Sig.**	**95% Confidence Interval**	
(I) Major	**(J) Major**				**Lower Bound**	**Upper Bound**
Medicine	English Language	.24(*)	8.16E-02	.041	6.23E-03	.47
	Biology	.52(*)	7.96E-02	.000	.30	.75
	Computer Science	.49(*)	9.19E-02	.000	.23	.75
English Language	Medicine	-.24(*)	8.16E-02	.041	-.47	-6.23E-03
	Biology	.29(*)	6.74E-02	.001	9.81E-02	.48
	Computer Science	.25(*)	8.16E-02	.025	2.18E-02	.48
Biology	Medicine	-.52(*)	7.96E-02	.000	-.75	-.30
	English Language	-.29(*)	6.74E-02	.001	-.48	-9.81E-02
	Computer Science	-3.63E-02	7.96E-02	.976	-.26	.19

TABLE 4.12

Variation in the Means of EFL Students' Overall Strategy Use With Different Major Fields of Study- Post Hoc Tests (cont'd)

Multiple Comparisons Dependent Variable: Overall Scheffe						
		Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
(I) Major	(J) Major				Lower Bound	Upper Bound
Computer Science	Medicine	-.49(*)	9.19E-02	.000	-.75	-.23
	English Language	-.25(*)	8.16E-02	.025	-.48	-2.18E-02
	Biology	3.63E-02	7.96E-02	.976	-.19	.26
* The mean difference is significant at the .05 level.						

Tables 4.11 and 4.12 show that there are significant variations in the overall strategy use in relation to major field of study. The results showed that Medical majors reported the highest mean scores in the use of overall strategy (mean: 3.6), followed by English majors (mean: 3.4), then both Computer Science and Biology majors (mean: 3.1) who received the minimum mean scores. Furthermore, when the key for understanding the averages proposed by Oxford (1990) (See page103) was applied to the data, Medical majors reported high use of overall strategy (i.e. they used the strategies "Always" or "Almost Always"); while English, Biology and Computer Science majors reported medium use (i.e. they used the strategies "Sometimes"). The reason for Medical majors recording the highest mean score in the use of overall strategy may be due to the high academic grade required for entry into the Medical Department. Another possible explanation is that the intensive specialized courses given to Medical majors require students to use a wide range of strategies to cope with their studies and thus they transfer the use of these strategies to learning English.

4.3 The Influence of Year level on the Choice of Language Learning Strategies

4.3.1 At the Individual Level

Descriptive analysis of the data obtained from the SILL reported that there was some agreement as well as some differences in the means of EFL students' strategy use with regard to year level. Table 4.13 illustrates the strategy used at a high level by first year undergraduate students that received medium use by second year undergraduate students.

TABLE 4.13

Type, Mean Score and Level of the Most Frequent Individual Strategies Used by First Year Undergraduate Students That Received Medium Use by Second Year Undergraduate Students

Descriptive Statistics					
Strategy	Type	1st Year		2nd Year	
		Mean Score	Level	Mean Score	Level
I try not to translate word-for- word	Cognitive	3.7	High	3.1	Medium

Table 4.13 shows that first year undergraduates "Usually" do not use the strategy of "Word-for-word translations" while second year undergraduates use this strategy "Sometimes". The data obtained from observing first year students yielded similar results as the students never used the strategy of word for word translations in the nine lessons observed. On the other hand, the data obtained from interviewing 32 students; 16 students from the first year and 16 students from the second year, indicated that 13 (81.3%) out of 16 first year students and 12 (75%) out of 16 second year students, used to translate word for word to understand any passage. It can be understood from the triangulation of the data obtained from the SILL, observations and interviews that

students were not encouraged to use the strategy of “Word for word translation” in the classroom but still they used it when studying alone outside the classroom.

On the contrary, differences are apparent in the use of some strategies; first year students showed medium use of some strategies while second year students showed a high level of using these strategies. Table 4.14 lists such differences.

TABLE 4.14

Type, Mean Score and Level of the Most Frequent Individual Strategies Used by Second Year Undergraduate Students That Received Medium Use by First Year Undergraduate Students

Descriptive Statistics					
Strategy	**Type**	**1st Year**		**2nd Year**	
		Mean Score	**Level**	**Mean Score**	**Level**
I think of relationships between what I already know and new things I learn in English	Memory	3.1	Medium	3.5	High
I remember a new English word by making a mental picture of a situation in which the word might be used	Memory	3.3	Medium	3.5	High
I watch English language TV shows spoken in English	Cognitive	3.3	Medium	3.7	High
I try to find patterns in English	Cognitive	2.5	Medium	3.5	High
To understand unfamiliar English words, I make guesses	Compensation	3.4	Medium	3.6	High
I make up words if I do not know the right ones in English	Compensation	2.9	Medium	3.5	High
I try to find as many ways as I can to use my English	Meta-cognitive	3.3	Medium	3.7	High

Table 4.14 shows that second year undergraduates more frequently relate their background knowledge with new knowledge, make guesses and make up new words in a high level, watch English language TV shows to improve their English and practise their English whenever possible, unlike first year undergraduates who used the above strategies less frequently.

The data gathered from the observation revealed that the most frequent strategies used by first year students were guessing to understand unfamiliar English words 12 (9.16%), and making up words if they did not know the right ones in English 9 (6.87%). These findings might indicate that teachers try their best in encouraging students to guess and make up words instead of using dictionaries when they are stuck with difficult words. Furthermore, the data obtained from the observation yielded different results as first year students indicated that they used the strategy of "Making a mental picture of a situation to remember new words" least frequently 3 (2.29%) .However, the finding obtained from the SILL is more reliable; making a mental picture is a mental strategy that cannot be observed except when the teacher directly instructs students to use this strategy.

Likewise, there were some variations in the use of strategies; while first year undergraduates used some strategies at a medium level, second year undergraduates used them at a low level and vice versa as illustrated in Tables 4.15 and 4.16.

TABLE 4.15

Type, Mean Score and Level of the Least Frequent Individual Strategies Used by Second Year Undergraduate Students That Received Medium Use by First Year Undergraduate Students

Descriptive Statistics					
Strategy	Type	1st Year		2nd Year	
		Mean Score	Level	Mean Score	Level
I use rhymes to remember new English words	Memory	2.8	Medium	2.4	Low
I physically act out new English words	Memory	2.9	Medium	2.4	Low

TABLE 4.16

Type, Mean Score and Level of the Least Frequent Individual Strategies Used by First Year Undergraduate Students That Received Medium Use by Second Year Undergraduate Students

Descriptive Statistics					
Strategy	Type	1st Year		2nd Year	
		Mean Score	Level	Mean Score	Level
I read for pleasure in English	Cognitive	2.4	Low	2.6	Medium
I write notes, messages, letters, or reports in English	Cognitive	2.4	Low	2.7	Medium
I make summaries of information that I hear or read in English	Cognitive	2.4	Low	2.6	Medium
I try to learn about the culture of English speakers	Social	2.4	Low	2.5	Medium

Tables 4.15 and 4.16 show that first year students learn new English words "Sometimes" by using rhymes and physically acting out these words. On the other hand, second year students "Generally do not use" the above strategies in learning new

vocabulary. The data obtained from the interviews indicated that 15 (93.8) out of 16 first year students and all of the 16 (100%) second year students do not use rhymes or physically acting out the new words, rather they use repetition most often to remember new English words. Furthermore, the data obtained from the SILL indicated that second year students can write summaries or messages and letters in English and they are interested in reading for pleasure in English and in reading about the culture of English speakers; while first year undergraduate students "Generally" do not use these strategies. The data obtained from the observation yielded similar results as first year students never used the strategy of learning about the culture of English speakers. Furthermore, they used the strategies of writing notes and messages 4 (3.05%) and making summaries 6 (4.58%) least frequently. Similarly, the data obtained from the interviews indicated that all of the 16 (100%) first year students do not read for pleasure in English and only 2 (12.5) out of 16 second year students read for pleasure in English. The infrequent use of this strategy indicated that students should be encouraged to develop the strategy of "Reading for pleasure in English" as it may help in improving the students' reading skill.

Although, there were some differences in the use of some individual strategies in relation to year level, there was also some agreement as illustrated in Table 4.17. The analysis indicated that the following strategies were most frequently used at a high level by both first and second year students.

TABLE 4.17

Type and Mean Score of the Most Frequent Individual Strategies Used by Both First and Second Year Undergraduate Students (cont'd)

Descriptive Statistics					
Strategy	**Type**	**1st Year**		**2nd Year**	
		Mean Score	**Level**	**Mean Score**	**Level**
I connect the sound of a new English word and an image or picture of the word to help me remember the word	Memory	3.9	High	3.6	High
I remember new English words or phrases by remembering their location on the page or on a board.	Memory	4.3	High	4.1	High
I say or write new English words several times	Cognitive	3.7	High	3.8	High
I try to talk like native English speakers	Cognitive	3.8	High	3.7	High
I first skim an English passage, then go back and read carefully	Cognitive	3.9	High	3.8	High
I look for words in my own language that are similar to new words in English	Cognitive	4.0	High	3.8	high
I find the meaning of an English word by dividing it into parts that I understand	Cognitive	3.8	High	4.3	High
When I cannot think of a word during a conversation in English , I use gestures	Compensation	3.5	High	3.7	High
If I cannot think of an English word, I use a word or phrase that means the same thing	Compensation	4.0	High	4.1	High
I notice my English mistakes and use that information to help me do better	Meta-cognitive	4.1	High	4.1	High

TABLE 4.17

Type and Mean Score of the Most Frequent Individual Strategies Used by Both First and Second Year Undergraduate Students (cont'd)

Descriptive Statistics					
Strategy	**Type**	**1st Year**		**2nd Year**	
		Mean Score	**Level**	**Mean Score**	**Level**
I pay attention when someone is speaking English	Meta-cognitive	4.3	High	4.6	High
I try to find out how to be a better learner of English	Meta-cognitive	4.6	High	4.4	High
I have clear goals for improving my English skills	Meta-cognitive	3.8	High	3.7	High
I think about my progress in learning English	Meta-cognitive	4.1	High	4.3	High
I try to relax whenever I feel afraid of using English	Affective	3.5	High	3.5	High
I encourage myself to speak English even when I am afraid of making a mistake	Affective	3.5	High	3.6	High
I talk to someone else about how I feel when I am learning English	Affective	3.9	High	3.7	High
If I do not understand something in English, I ask the other person to slow	Social	3.9	High	3.8	High

Table 4.17 shows that both first and second year undergraduates used the above strategies most frequently. In other words, they used them "Always" or "Almost Always". Most of these strategies were cognitive and meta-cognitive which received equal attention followed by affective, next, memory and compensation and finally, social. The data obtained from the observation yielded similar results; 22 (16.79%) first year students indicated that they pay attention most frequently, and 9 (6.87%) use words that mean the same when they do not remember a word. Similarly, the data obtained

from the interviews indicated that 15 (93.8%) out of 16 first year students and 14 (87.5%) out of 16 second year students use the strategy of “Repetition” to remember new English words. Furthermore, all of the 16 (100%) first year students and 14 (87.5%) second year students indicated that they use both of gestures and words and phrases that have the same meaning when they are stuck with some words. Finally, 14 (87.5%) out of 16 first year students and all of the 16 (100%) second year students indicated that they are interested in improving their English language proficiency. However, the observational method does not provide adequate data on the learners’ strategies used, as language learning strategies are generally internal or mentalistic processes. The data obtained from observing first year students contradicted the data obtained from the SILL. The observational data indicated that first year students used skimming, learnt from their mistakes, asked others to slow down and used gestures least often. Based on the personal communication of the researcher with the language instructors, the researcher found that students were not encouraged to use gestures to compensate obstacles to communication; rather they were encouraged to use other compensation strategies such as using other words that mean the same thing.

A medium use of some individual strategies by both first and second year undergraduate students is reported in Table 4.18. This table shows the type, mean score and level of each strategy used.

TABLE 4.18

Type and Mean Score of the Strategies Used at a Medium Level by Both First and Second Year Undergraduate Students (cont'd)

Descriptive Statistics					
Strategy	**Type**	**1st Year**		**2nd Year**	
		Mean Score	**Level**	**Mean Score**	**Level**
I use new English words in a sentence so I can remember them	Memory	2.8	Medium	2.7	Medium
I review English lessons often	Memory	3.2	Medium	2.9	Medium
I practise the sounds of English	Cognitive	3.4	Medium	3.4	Medium
I use the English words I know in different ways	Cognitive	3.0	Medium	3.1	Medium
I start conversations in English	Cognitive	2.7	Medium	2.8	Medium
I read English without looking up every new word	Compensation	2.7	Medium	3.1	Medium
I try to guess what the other person will say next in English	Compensation	3.3	Medium	3.3	Medium
I plan my schedule so I will have enough time to study English	Meta-cognitive	2.8	Medium	2.6	Medium
I look for people I can talk to in English	Metacognitve	3.1	Medium	3.2	Medium
I look for opportunities to read as much as possible in English	Meta-cognitive	2.8	Medium	2.8	Medium
I give myself a reward or treat when I do well in English	Affective	2.8	Medium	2.6	Medium

TABLE 4.18

Type and Mean Score of the Strategies Used at a Medium Level by Both First and Second Year Undergraduate Students (cont'd)

Descriptive Statistics					
Strategy	**Type**	**1st Year**		**2nd Year**	
		Mean Score	**Level**	**Mean Score**	**Level**
I notice if I am tense or nervous when I am studying or using English	Affective	2.8	Medium	3.2	Medium
I ask English speakers to correct me when I talk	Social	3.4	Medium	3.1	Medium
I practise English with other students	Social	2.7	Medium	2.8	Medium
I ask for help from English speakers	Social	3.4	Medium	3.4	Medium
I ask questions in English	Social	3.3	Medium	3.1	Medium

Table 4.18 shows that both first and second year undergraduates used the above strategies "Sometimes". Most of these strategies were of the social type followed by the cognitive and meta-cognitive types and finally, the memory, compensation and affective types which received equal attention. Data obtained from the observation revealed that first year students used the following strategies least often: "Start a conversation in English" 4 (3.05%), "Try to guess what the other person will say next in English" 5 (3.82%), "Ask for help from English speakers" 2 (1.53%), and finally, "Ask questions in English" 3 (2.29%). These findings contradicted the data obtained from the SILL which state that the students used these strategies at a medium level. However the data based on the observation was inadequate to identify learners' mental strategies, besides the students had few opportunities to engage in active learning with observable strategies because the classes were teacher directed.

The least frequently used individual strategies by both first and second year undergraduates are displayed in Table 4.19 with the mean score of each strategy.

TABLE 4.19

Type and Mean Score of the Least Frequent Individual Strategies Used by both First and Second Year Undergraduate Students

Descriptive Statistics					
Strategy	**Type**	**1st Year**		**2nd Year**	
		Mean Score	**Level**	**Mean Score**	**Level**
I use flashcards to remember new English words	Memory	1.6	Low	1.6	Low
I write down my feelings in a language learning diary	Affective	1.6	Low	2.1	Low

Table 4.19 shows that the least popular strategies used by both first and second year undergraduates were “I use flashcards to remember new English words” and “I write down my feelings in a language learning diary”.

In summary, the findings indicated that out of the 50 strategies that are included in the SILL, first year undergraduates used 19 (38%) strategies most frequently, 25 (50%) strategies at a medium level and 6 (12%) strategies least frequently. On the other hand, second year undergraduates used 25 (50%) strategies most frequently, 21 (42%) strategies were used at a medium level and 4 (8%) strategies were used least frequently. In other words, second year undergraduates used strategies more frequently than did first year undergraduates. These findings might indicate that as students progress in their language learning, their language learning strategy uses increase.

Based on the analysis of the data obtained from the SILL at the individual item level using ANOVA, Table 4.20 shows that there was significant relationship between the use of strategies and the year level.

TABLE 4.20

Significant Variation in the Use of Strategies at the Individual Item Level and Year Level by EFL Undergraduate Students (cont'd)

ANOVA						
		Sum of Squares	**df**	**Mean Square**	**F**	**Sig.**
I think of relationships between what I already know and new things I learn in English	Between Groups	5.152	1	5.152	4.109	.044
	Within Groups	328.481	262	1.254		
	Total	333.633	263			
I use rhymes to remember new English words	Between Groups	9.341	1	9.341	5.208	.023
	Within Groups	469.897	262	1.794		
	Total	479.239	263			
I physically act out new English words	Between Groups	18.136	1	18.136	8.442	.004
	Within Groups	562.860	262	2.148		
	Total	580.996	263			
I remember new English words or phrases by remembering their location on the page or on a board.	Between Groups	4.368	1	4.368	4.368	.038
	Within Groups	261.992	262	1.000		
	Total	266.360	263			
I watch English language TV shows spoken in English	Between Groups	11.746	1	11.746	5.761	.017
	Within Groups	534.160	262	2.039		
	Total	545.905	263			
I write notes, messages, letters, or reports in English	Between Groups	8.082	1	8.082	4.946	.027
	Within Groups	428.085	262	1.634		
	Total	436.167	263			
I look for words in my own language that are similar to new words in English	Between Groups	5.568	1	5.568	4.171	.042
	Within Groups	349.792	262	1.335		
	Total	355.360	263			
I try to find patterns in	Between Groups	64.188	1	64.188	40.430	.000

TABLE 4.20

Significant Variation in the Use of Strategies at the Individual Item Level and Year Level by EFL Undergraduate Students (cont'd)

ANOVA						
		Sum of Squares	**df**	**Mean Square**	**F**	**Sig.**
English	Within Groups	415.960	262	1.588		
	Total	480.148	263			
I find the meaning of an English word by dividing it into parts that I understand	Between Groups	13.336	1	13.336	9.871	.002
	Within Groups	353.993	262	1.351		
	Total	367.330	263			
I try not to translate word-for-word	Between Groups	27.419	1	27.419	16.047	.000
	Within Groups	447.672	262	1.709		
	Total	475.091	263			
I make up new words if I do not know the right ones in English	Between Groups	27.655	1	27.655	15.308	.000
	Within Groups	473.300	262	1.806		
	Total	500.955	263			
I read English without looking up every new word	Between Groups	10.400	1	10.400	6.623	.011
	Within Groups	411.418	262	1.570		
	Total	421.818	263			
I try to find as many ways as I can to use my English	Between Groups	8.667	1	8.667	6.217	.013
	Within Groups	365.272	262	1.394		
	Total	373.939	263			
I pay attention when someone is speaking English	Between Groups	5.463	1	5.463	8.468	.004
	Within Groups	169.022	262	.645		
	Total	174.485	263			
I notice if I am tense or nervous when I am studying or using English	Between Groups	11.900	1	11.900	6.806	.010
	Within Groups	458.085	262	1.748		
	Total	469.985	263			
I write down my feelings in a language learning diary	Between Groups	17.379	1	17.379	12.548	.000
	Within Groups	362.860	262	1.385		
	Total	380.239	263			

Table 4.20 shows that there were significant differences at the individual item level in the means of EFL students with regard to year level. Results indicated that the computed F-ratio exceeds the 3.87 and is therefore statistically significant.

Although there were some significant differences in the use of some strategies and year level, there were also some similarities. Table E4 (See Appendix E) shows the similarities in the use of strategies by EFL students with different year level. The results showed that the F-values are not statistically significant at the 0.05 level. Thus, there were no significant differences in the means of most of EFL students' strategy use with regard to year level.

4.3.2 At the Category Level

Descriptive statistical analysis of the SILL categories used by EFL first and second year undergraduates indicated some variation and similarities. Tables 4.21 and 4.22 show the mean score, rank and level of each strategy category of both first and second year undergraduates.

TABLE 4.21

Mean Score, Rank and Level of Strategy Categories of First Year Undergraduate Students

Part	Strategy Category	Mean Score	Rank	Level
D	Organizing and evaluating your learning	3.6	1	High
C	Compensating for missing knowledge	3.3	2	Medium
B	Using all your mental processes	3.2	3	Medium
F	Learning with others	3.2	3	Medium
A	Remembering more effectively	3.1	4	Medium
E	Managing your emotions	3.0	5	Medium

Table 4.21 shows that first year undergraduates are meta-cognitive strategy users, they learn best by organizing and evaluating their learning. All the rest of the categories

received equal attention by first year students such as “Compensating for missing knowledge” (Compensation), followed by “Using all your mental processes” (Cognitive) and “Learning with others” (Social); then “Remembering more effectively” (Memory) and finally, “Managing your emotions” (Affective). The low score in the affective area compared to higher result in cognitive strategy use would suggest that first year students are more thinking oriented rather than feeling-oriented in their style. They make decisions based on logic and analysis.

Data based on the observation revealed nearly similar results to that obtained from the SILL; First year students used the strategy category of “Compensating for missing knowledge” 40 (30.53%) more than the strategy category of “Using all your mental processes” 29 (22.14%).In addition, the data obtained from the SILL indicated that first year students used the affective strategy category of “Managing your emotions”, least frequently and the observation data showed that it was not used at all. However it must be pointed out that the affective strategy category is related to emotions that cannot be observed. Furthermore, the data gathered from observation indicated that both of the memory strategy category, “Remembering more effectively” 19 (14.50%) and the social strategy category, “Learning with others” 18 (13.74) were used nearly equally. The only difference was that the meta-cognitive strategy category, “Organizing and evaluating your learning” 25 (19.08%) was used less than both of the compensation 40 (30.53%) and cognitive strategy categories 29 (22.14%). This is contradictory to the SILL data which indicated that this meta-cognitive strategy category was used most frequently.

TABLE 4.22

Mean Score, Rank and Level of Strategy Categories of Second Year Undergraduate Students

Part	Strategy Category	Mean Score	Rank	Level
D	Organizing and evaluating your learning	3.7	1	High
C	Compensating for missing knowledge	3.5	2	High
B	Using all your mental processes	3.3	3	Medium
E	Managing your emotions	3.1	4	Medium
F	Learning with others	3.1	4	Medium
A	Remembering more effectively	2.9	5	Medium

Table 4.22 shows that second year undergraduate students used both "Organizing and evaluating your learning" (Meta-cognitive) and "Compensating for missing knowledge" (Compensation) strategy categories most frequently, followed by "Using all your mental processes" (Cognitive), then, "Managing your emotions" (Affective) and "Learning with others" (Social) and finally, the least frequent strategy category was "Remembering more effectively" (Memory). The low score in the use of memory strategy category may suggest that second year students should be trained to know how to store and retrieve information by making mental linkages, applying images and sounds or employing actions. All of these memory strategies are vital in language learning.

In summary, the findings indicated that both first and second year undergraduate students used the meta-cognitive strategy category "Organizing and evaluating your learning" most frequently. This indicated that both groups know well how to keep themselves on track by planning, setting goals and monitoring their progress. All the rest of the strategy categories were used at a medium level by both first and second year undergraduates except for the compensation strategy category "Compensating for

missing knowledge" which was used most frequently by second year undergraduates. Furthermore, the least used strategy category by first year undergraduates was the affective one "Managing your emotions" while second year students used "Remembering more effectively", the memory strategy category least often. However, the uses of both types: the affective and memory strategy categories are essential to language learning in offering continuous emotional support and providing the necessary intellectual tools.

Likewise, the ANOVA results in Table 4.23 indicated that there was no significant difference in the use of strategy categories and year level of the EFL undergraduates except for "Compensating for missing knowledge". This strategy category was used most frequently by second year undergraduates and this may be due to their extensive use of English. Second year undergraduates study much more specialized courses than first year students. Thus, they have to use the language a lot and make up for an inadequate repertoire of grammar and vocabulary.

TABLE 4.23

Similarities in the Use of Strategy Categories and Year Level by EFL Undergraduate Students

ANOVA						
		Sum of Squares	**df**	**Mean Square**	**F**	**Sig.**
Remembering more effectively	Between Groups	1.316	1	1.316	3.517	.062
	Within Groups	98.068	262	.374		
	Total	99.384	263			
Using all your mental processes	Between Groups	1.117	1	1.117	3.088	.080
	Within Groups	94.800	262	.362		
	Total	95.918	263			
Compensating for missing Knowledge	Between Groups	3.685	1	3.685	9.396	.002
	Within Groups	102.754	262	.392		
	Total	106.439	263			
Organizing and evaluating your learning	Between Groups	.256	1	.256	.544	.461
	Within Groups	123.071	262	.470		
	Total	123.326	263			
Managing your emotions	Between Groups	.775	1	.775	1.759	.186
	Within Groups	115.426	262	.441		
	Total	116.201	263			
Learning with others	Between Groups	.619	1	.619	.977	.324
	Within Groups	165.935	262	.633		
	Total	166.554	263			

The results indicated that students showed significant relationship between the use of “Compensating for missing knowledge” strategy category and the year level as the calculated F-ratio exceeds 3.87 at the 0.05 level. On the contrary, the results indicated that there were no significant relationship in the use of the rest of the strategy categories and the year level.

4.3.3 Overall Strategy Use

In determining the differences or similarities in the overall strategy use among the EFL undergraduates according to year level, the ANOVA results in Table 4.24 indicated that there were no significant differences between the means of the overall strategy use of the EFL undergraduates with the different year levels.

TABLE 4.24

Equality of Means of EFL Students' Overall Strategy Use With Different Year Levels

ANOVA Overall					
	Sum of Squares	**df**	**Mean Square**	**F**	**Sig.**
Between Groups	.164	1	.164	.708	.401
Within Groups	60.642	262	.231		
Total	60.806	263			

Table 4.24 shows that there were no statistically significant differences in the means of first year undergraduates (mean: 3.2) and second year undergraduates (mean: 3.3). On the other hand, according to the key to understand the averages proposed by Oxford (1990) (See page 103), both first and second year undergraduate students reported medium overall strategy use as their means were 3.2 and 3.3 respectively, which indicated that these overall strategies were used "Sometimes".

4.4 The Influence of Achievement Level on the Choice of Language Learning Strategies

In order to determine the relationship between the use of language learning strategy and language performance, the students' language performance was gauged by administering an achievement test on Saudi second year Biology undergraduates which included all the four skills- Listening, Speaking, Reading and Writing (See appendix F).

The SILL was distributed to the same students who took the achievement test. The data obtained from the SILL that measures the student's strategy use in terms of individual, overall and strategy categories was compared with the data obtained from the achievement test.

4.4.1 At the Individual Level

Descriptive statistical analysis of the data obtained from the SILL is summarized in Table E5 (See Appendix E). It illustrates the variation and similarities in the use of strategies at the individual level with regard to proficiency level, their mean scores, level and type.

The results showed that the most frequent individual strategies that were always used by the students with "Excellent" grade were "I pay attention when someone is speaking English", and "I try to find out how to be a better learner of English". Likewise, the students with "Very Good" grade used only one strategy "I try to find out how to be a better learner". On the other hand, the students with "Good" grade did not use any of the strategies "Always" or "Almost always". These findings indicated that paying attention in the classroom and evaluating one's own progress are the most important strategies students need in order to be excellent.

Table E5 (See Appendix E) also shows that the students with "Excellent" grade "Never" used the strategy "I use flashcards to remember new English words", but the students with "Good" grade "Never" used the other strategy "I write down my feelings in a language learning diary". On the contrary, the students with "Very Good" grade "Never" used both of the above strategies employed by the students with "Excellent" grade and the students with "Good" grade.

In summary, the findings indicated that out of the 50 strategies that were included in the SILL, the students with “Good” grade used 19 (38%) strategies (Usually), followed by the students with “Excellent” grade who used 16 (32%) strategies at a high level (i.e. Always or Usually) and finally, the students with “Very Good” grade who used 14 (28%) strategies most frequently (i.e. Always or Usually).

On the other hand, the students with “Excellent” grade used 26 (52%) strategies at a medium level (i.e. Sometimes Used), followed by the students with “Good” grade who used 24 (48%) strategies and finally, the students with “Very Good” grade used 23 (46%) strategies at the medium level.

The students with “Very Good” grade used 13 (26%) strategies least frequently, followed by the students with “Excellent” grade who used 8 (16%) strategies, and then the students with “Good” grade who used 7 (14%) strategies at a low level (i.e. Generally Not Used). Although the strategies that were never used by the undergraduates with “Excellent” and “Good” grades were different, they were still limited in number. On the other hand, the students with “Very Good” grade “Never” used a bigger number of strategies than either the students with “Good” grade or the students with “Excellent” grade. A possible explanation is that the differences in the use of strategies in relation to achievement level are influenced by the quality of the strategies used, not the quantity as it is confirmed by Reiss (1983) cited in Kaylani (1996). She suggests that the difference between successful and unsuccessful language learners is not so much the quantity but the quality of learning strategies used. Successful learners employ strategies that are appropriate to their age, stage of learning and purpose of learning the language.

Based on the analysis of the data obtained from the SILL at the individual item level, Saudi Biology students employed similar strategies in relation to their achievement test except with some strategies. The ANOVA results revealed that there were some significant differences in the use of language learning strategies at the individual level among the students with grades: “Excellent”, “Very Good”, and “Good”. Table 4.25 shows, F values, degree of freedom and significance level for each strategy.

TABLE 4.25

Strategies at the Individual Level Showing Variation by Proficiency Level

ANOVA						
		Sum of Squares	**df**	**Mean Square**	**F**	**Sig.**
I write notes, messages, letters, or reports in English	Between Groups	7.633	2	3.816	5.530	.006
	Within Groups	37.954	55	.690		
	Total	45.586	57			
When I can't think of a word during a conversation in English, I use gestures	Between Groups	14.844	2	7.422	4.317	.018
	Within Groups	94.553	55	1.719		
	Total	109.397	57			
I make up new words if I do not know the right ones in English	Between Groups	18.163	2	9.082	5.581	.006
	Within Groups	89.492	55	1.627		
	Total	107.655	57			
If I cannot think of an English word, I use a word or phrase that means the same thing	Between Groups	8.546	2	4.273	3.160	.050
	Within Groups	74.368	55	1.352		
	Total	82.914	57			
I try to relax whenever I feel afraid of using English	Between Groups	11.900	2	5.950	3.254	.046
	Within Groups	100.582	55	1.829		
	Total	112.483	57			
I write down my feelings in a language learning diary	Between Groups	4.914	2	2.457	3.283	.045
	Within Groups	41.155	55	.748		
	Total	46.069	57			
	Total	12.901	57			

Table 4.25 shows that there was some significant relationship between the use of individual strategies and proficiency level as the computed F-ratio is more than 3.23. The post-hoc Scheffe test as illustrated in Table 4.26 specifies where significant differences lay.

TABLE 4.26

Strategies at the Individual Level Showing Variation by Proficiency Level – Post Hoc Tests (cont'd)

Multiple Comparisons Scheffe							
	Achievement Test		Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
Dependent Variable	(I)	(J)				Lower Bound	Upper Bound
I write notes, messages, letters, or reports in English	Excellent	Very Good	.90(*)	.28	.008	.20	1.59
		Good	.75(*)	.30	.050	1.26E-03	1.49
	Very Good	Excellent	-.90(*)	.28	.008	-1.59	-.20
		Good	-.15	.25	.842	-.79	.49
	Good	Excellent	-.75(*)	.30	.050	-1.49	-1.26E-03
		Very Good	.15	.25	.842	-.49	.79
When I can't think of a word during a conversation in English, I use gestures	Excellent	Very Good	.99	.43	.082	-9.90E-02	2.09
		Good	-3.97E-02	.47	.996	-1.22	1.14
	Very Good	Excellent	-.99	.43	.082	-2.09	9.90E-02
		Good	-1.03(*)	.40	.044	-2.05	-2.27E-02
	Good	Excellent	3.97E-02	.47	.996	-1.14	1.22
		Very Good	1.03(*)	.40	.044	2.27E-02	2.05
I make up new words if I do not know the right ones in English	Excellent	Very Good	1.14(*)	.42	.032	7.90E-02	2.21
		Good	3.17E-02	.45	.998	-1.11	1.18
	Very Good	Excellent	-1.14(*)	.42	.032	-2.21	-7.90E-02
		Good	-1.11(*)	.39	.023	-2.10	-.13
	Good	Excellent	-3.17E-02	.45	.998	-1.18	1.11
		Very Good	1.11(*)	.39	.023	.13	2.10

TABLE 4.26

Strategies at the Individual Level Showing Variation by Proficiency Level – Post Hoc Tests (cont'd)

Multiple Comparisons Scheffe							
	Achievement Test		Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
Dependent Variable	(I)	(J)				Lower Bound	Upper Bound
I try to relax whenever I feel afraid of using English	Excellent	Very Good	.31	.45	.784	-.81	1.44
		Good	-.74	.48	.317	-1.95	.47
	Very Good	Excellent	-.31	.45	.784	-1.44	.81
		Good	-1.05(*)	.41	.048	-2.09	-8.04E-03
	Good	Excellent	.74	.48	.317	-.47	1.95
		Very Good	1.05(*)	.41	.048	8.04E-03	2.09
* The mean difference is significant at the .05 level.							

Table 4.26 shows that there were some significant differences between the use of strategies at the individual level and proficiency level. The students with "Excellent" grade reported the use of the strategy "I write notes, messages, letters or reports in English" more than did the students with "Very Good" and "Good" grades. Furthermore, they used the strategy "I make up words if I do not know the right ones in English" more frequently than did the students with "Very Good" grade. Finally, the students with "Good" grade used the following strategies more than did the students with "Very Good" grade: "When I can not think of a word during a conversation in English, I use gestures", "I make up new words if I do not know the right ones in English" and "I try to relax whenever I feel afraid of using English". These findings might indicate that writing notes, messages, letters or reports in English are very important for students in order to be excellent.

4.4.2 At the Category Level

Descriptive statistics reported that students with “Excellent” grade used the compensation strategy category most (mean:3.6), followed by the meta-cognitive strategy category (mean:3.4), the cognitive strategy category (mean:3.2), the social strategy category (mean:3.1), the memory strategy category (mean:3.0) and finally, the affective strategy category (mean:2.9). The low score of the affective strategy category reported by students with “Excellent” grade does not necessarily deemphasize the importance of these strategies to language learning. The infrequent use of these strategies maybe because students are not familiar with paying attention to their own feelings as part of the language learning process.

Likewise, students with “Very Good” grade preferred the same categories of strategies used by the students with “Excellent” grade, in the same order, except for the meta-cognitive strategy category, which was used most frequently by the students with “Very Good” grade. According to the students with “Very Good” grade, the meta-cognitive strategy category (mean: 3.3) was used most frequently, followed by the compensation strategy category (mean: 3.2), then the cognitive (mean: 3.0), next, the social and memory strategy categories (mean: 2.9 for each) and finally, affective strategy category (mean: 2.8) which was used least often.

Like the students with “Excellent” grade, the students with “Good” grade used the compensation strategy category (mean: 3.6) most frequently followed by the meta-cognitive strategy category (mean: 3.4), but they differ in the ranking of other strategy categories such as the social, memory, and affective ones (mean: 3.2 for each) and finally the cognitive strategy category (mean: 3.1) which was used least often. The unpopularity of the cognitive strategy category by students with “Good” grade indicated

that the students were not aware of the importance of certain strategies to language learning such as practice, reasoning, analyzing, summarizing, taking notes, and transferring information.

In general, the compensation and meta-cognitive strategy categories were popular among all the students with different levels of proficiency. It is natural for EFL students to make greater use of compensation strategies as these can help them guess the meaning of what they have heard or read or help them remain in the conversation despite their limited grammatical and vocabulary knowledge. Moreover, EFL students used to take charge of their learning, organizing, planning and evaluating their progress in language learning. The affective strategy category was recorded as the least frequently used except among students with “Good” grade. These students used the cognitive strategy category least often. These results indicated that the students can be excellent even if they could not manage their emotions. On the other hand, they may get a lower grade if they do not use their mental process. Furthermore, both the students with “Excellent” and “Very Good” grades used almost the same strategy categories.

In examining the relationship between proficiency and language learning strategy use, ANOVA was used as illustrated in Table 4.27.

TABLE 4.27

Similarities in the Use of Strategy Categories in Relation to the Achievement Level

ANOVA						
		Sum of Squares	**df**	**Mean Square**	**F**	**Sig.**
Remembering more effectively	Between Groups	.503	2	.251	1.028	.365
	Within Groups	13.449	55	.245		
	Total	13.952	57			
Using all your mental process	Between Groups	.189	2	9.431E-02	.237	.790
	Within Groups	21.865	55	.398		
	Total	22.054	57			
Compensation for missing knowledge	Between Groups	1.932	2	.966	2.300	.110
	Within Groups	23.107	55	.420		
	Total	25.039	57			
Organizing and evaluating your learning	Between Groups	7.477E-02	2	3.739E-02	.075	.928
	Within Groups	27.566	55	.501		
	Total	27.641	57			
Managing your emotions	Between Groups	2.276	2	1.138	3.002	.058
	Within Groups	20.848	55	.379		
	Total	23.125	57			
Learning with others	Between Groups	.763	2	.381	.655	.523
	Within Groups	32.017	55	.582		
	Total	32.780	57			

Table 4.27 shows no significant differences in the use of strategy categories and students' English language achievement level. The computed F-ratio is less than 3.23. Thus, it is statistically insignificant.

4.4.3 Overall Strategy Use

The analysis of the data obtained from the SILL, and the students' results in the English language achievement test, revealed that Saudi undergraduates employed similar overall strategy, with regard to differences in the English language achievement levels, as illustrated in Table 4.28.

TABLE 4.28

Similarities in the Overall Strategy Use in Relation to Achievement Level

ANOVA Overall					
	Sum of Squares	**df**	**Mean Square**	**F**	**Sig.**
Between Groups	.642	2	.321	1.441	.246
Within Groups	12.259	55	.223		
Total	12.901	57			

Table 4.28 shows no significance differences between the overall strategy use and proficiency level. Furthermore, according to the key to understand the averages proposed by Oxford (1990) (See page 103), students reported medium use of overall strategy with regard to differences in the achievement level. Thus, the findings may indicate that the relationship between overall strategy use and achievement level was influenced by the quality of the strategies and not the quantity.

4.5 The Language Learning Strategies Associated With the Four Language Skills

This section discusses the language learning strategies that were associated with each of the four language skills. The data obtained from the observation by the use of observation scale is shown in Table 4.29. This observation scale lists the frequencies

and percentages of each strategy used by EFL students with each of the four language components, listening, speaking, reading and writing.

TABLE 4.29

The Language Learning Strategies Used With the Four Language Skills (cont'd)

		Listening		Speaking		Writing		Reading	
		Frequency	Percentage	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage
	Memory strategy category: 14.50%								
1	I think of relationships between what I already know and new things I learn in English					3	2.29	3	2.29
2	I use new English words in a sentence so I can remember them							10	7.63
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			3	2.29				
5	I use rhymes to remember new English words								
6	I use flashcards to remember new English words								
7	I physically act out								

TABLE 4.29

The Language Learning Strategies Used With the Four Language Skills (cont'd)

		Listening		Speaking		Writing		Reading	
		Frequency	Percentage	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage
	new English words								
8	I review English lessons often								
9	I remember new English words or phrases by remembering their location on the page or on a board.								
	Cognitive strategy category: 22.14%								
10	I say or write new English words several times			3	2.29			5	7.63
11	I try to talk like native English speakers								
12	I practise the sounds of English.								
13	I use the English words I know in different ways								
14	I start conversations in English			4	3.05				
15	I write paragraphs, notes, letters, or reports in English					4	3.05		
16	I first skim an English passage (read over the passage quickly) then go back and read carefully							3	2.29

TABLE 4.29

The Language Learning Strategies Used With the Four Language Skills (cont'd)

		Listening		Speaking		Writing		Reading	
		Frequency	Percentage	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage
17	I look for words in my own language that are similar to new words in English								
18	I try to find patterns in English			4	3.05				
19	I find the meaning of an English word by dividing it into parts that I understand								
20	I translate word-for-word								
21	I make summaries of information and analyse expressions	3	2.29					3	2.29
	Compensation strategy category: 30.53%								
22	To understand unfamiliar English words, I make guesses	2	1.53					10	7.63
23	When I can't think of a word during a conversation in English, I use gestures			5	3.82				
24	I make up new words if I do not know the right ones in English			5	3.82	4	3.05		
25	I read English with								

TABLE 4.29

The Language Learning Strategies Used With the Four Language Skills (cont'd)

		Listening		Speaking		Writing		Reading	
		Frequency	Percentage	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage
	looking up every new word								
26	I try to guess what the other person will say next in English	1	0.76					4	3.05
27	If I cannot think of an English word, I use a word or phrase that means the same thing			5	3.82	4	3.05		
	Meta-cognitive strategy category: 19.08%								
28	I try to find as many ways as I can to use my English								
29	I notice my English mistakes and use that information to help me do better					3	2.29		
30	I pay attention when someone is speaking English	6	4.58	6	4.58	3	2.29	7	5.34
31	I look for people I can talk to in English								
	Social strategy category: 13.74%								
32	If I do not understand something in English, I ask the other person to slow down or say it again	3	2.29	2	1.53				

TABLE 4.29

The Language Learning Strategies Used With the Four Language Skills (cont'd)

		Listening		Speaking		Writing		Reading	
		Frequency	Percentage	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage
33	I ask English speakers to correct me when I talk								
34	I practise English with other students			4	3.05			4	3.05
35	I ask for help from English speakers					2	1.53		
36	I ask questions in English.			1	0.76	1	0.76	1	0.76
37	I try to learn about the culture of English speakers								
	Total 131=100%	**15**	**11.45**	**42**	**32.06**	**24**	**18.32**	**50**	**38.17**

4.5.1 Listening Strategies in Foreign Language Acquisition

EFL students used the following variety of listening strategies (for examples of classroom activities that include the use of these strategies see Appendix D):

1. The cognitive strategy of "Creating structure for input and output" was used by summarizing information students hear in English, analyzing expressions and reasoning.
2. The meta-cognitive strategy of "Centring learning" was used by paying attention.
3. The compensation strategy of "Guessing intelligently" was used by using linguistic and other clues to understand unfamiliar English words, and to know what the other person will say next in English.

4. The social strategy of “Asking questions” was used by asking for clarification or verification.

The data based on the observation indicated that the strategy used most frequently with the listening skill was to pay attention when someone is speaking in English 6 (4.58%). The data based on the SILL supports this finding as students reported that they used this strategy at a high level. This result is realistic as students have to pay a lot of attention to understand any listening practice; they need to listen more carefully to be able to differentiate the pronunciation of words, stresses, accents and labels.

4.5.2 Speaking Strategies in Foreign Language Acquisition

EFL students used the following variety of speaking strategies (for examples of classroom activities that include the use of these strategies see Appendix D):

1. The cognitive strategy of “Practising” in English was used by recognizing, using formulas and patterns and by repeating.
2. The meta-cognitive strategy of “Centring learning” was used by paying attention.
3. The compensation strategy of “Overcoming limitations in speaking” was employed by using gestures, coining words and using a circumlocution or synonym.
4. The social strategies of “Asking questions” and “Cooperating with others” were used by asking for clarification or verification, and by cooperating with peers.
5. The memory strategy of “Creating mental linkages” was used by associating and elaborating.

The data based on the observation revealed that the strategies most frequently used with the speaking skill were “I pay attention when someone is speaking English” 6 (4.58%), “If I cannot think of an English word, I use a word or phrase that means the same thing” 5 (3.82%), “When I cannot think of a word during a conversation in English I use gestures” 5 (3.82%), “I make up new words if I do not know the right ones in English” 5 (3.82%). The data obtained from the SILL yielded the same results as all of the strategies above were used at a high level except the last one, “Making up words” which was used at a medium level. In addition, the data obtained from the interviews also yielded the same results as all of the 16 (100%) first year students used words or phrases that have the same meaning when they did not remember a word while speaking and they used a lot of gestures as well. Thus, consciousness is important in learning English as a foreign language, students have to pay a lot of attention in order to learn how to speak. Furthermore, the extensive use of gestures by first year students means that a lot of effort is needed to develop the students’ vocabulary, so that they may reduce the use of this strategy.

4.5.3 Writing Strategies in Foreign Language Acquisition

EFL students used the following variety of writing strategies (for examples of classroom activities that include the use of these strategies see Appendix D):

1. The cognitive strategy of “Practising” was used by writing guided paragraphs, notes, or reports in English.
2. The meta-cognitive strategies of “Evaluating learning” and “Centring learning” were used by self evaluating and paying attention.
3. The compensation strategy of “Overcoming limitations in writing” was used by coining words and using a circumlocution or synonym.

4. The social strategies of “Asking questions” and “Cooperating with others” were used by asking questions for clarification and cooperating with proficient users of the new language.
5. The memory strategy of “Creating mental linkage” was used by associating and elaborating.

The data based on the observation indicated that the strategies most frequently used with the writing skill were: “I write guided notes, and reports in English” 4 (3.05%), “I make up new words if I do not know the right ones in English” 4 (3.05%), and “If I cannot think of an English word, I use a word or phrase that means the same thing” 4 (3.05%). The data based on the SILL indicated that first year students used the strategy of “Writing notes, messages or reports in English” at a low level. This result may be due to the use of this strategy with the writing skill only. On the other hand, both of the other two strategies “Making up words” and “Using words or phrases that mean the same thing” were used by first year students in both writing and speaking skills. “Making up words” was used at a medium level while “Using words or phrases that mean the same thing” was used at a high level. These findings are convincing as students have to produce the target language in writing and speaking, so they need to make up words and use words or phrases that mean the same thing.

4.5.4 Reading Strategies in Foreign Language Acquisition

EFL students used the following variety of reading strategies (for examples of classroom activities that include the use of these strategies see Appendix D):

1. The cognitive strategy of “Practicing” was used by repeating, getting the idea quickly by skimming and scanning, creating structure for input and output by

summarizing and finally cognitive strategies were used by analysing expressions.

2. The meta-cognitive strategy of “Centring learning” was used by paying attention.
3. The compensation strategy of “Guessing intelligently” was used by using linguistic and other clues.
4. The social strategies of “Asking questions” and “Cooperating with others” were used by asking questions for clarification or verification and by cooperating with peers.
5. The memory strategy of “Creating mental linkages” was used by placing new words into a context” and reviewing well.

Finally, the data obtained from the observation revealed that the strategies most frequently used with reading were “Making guesses to understand unfamiliar words” 12 (9.16%) and “Using English words in sentences to remember them” 10 (7.63%). These strategies received medium use by first year students based on the data obtained from the SILL. On the other hand, the data obtained from the interviews revealed that 15 (93.8%) out of 16 students used the strategy of “Repetition” to memorize new English words and only 1 (6.3%) student used rhymes. This might indicate that students were encouraged to use words in sentences in the classrooms, but when they study by themselves, they use the strategy of “Repetition”.

In general, the data obtained from the observation revealed that first year students used the strategy of “Paying attention when someone is speaking English” with all the skills and most frequently with reading. These findings are supported by the SILL data which indicated that first year students used this strategy at a high level. These findings give an

implication that consciousness is important in learning a foreign language, and in using the strategies. The data obtained from the SILL indicated that first year students used the following strategies at a medium level: “To understand unfamiliar English words I make guesses” and “I use new English words in a sentence so I can remember them”. The data based on the observation revealed that first year students used them most frequently and especially with the reading skill. This means that the students were encouraged to guess the meaning of unfamiliar words in the classroom. This can help them refrain from turning to the dictionary immediately when they are stuck with some difficult words in reading and other skills. First year students practised using new words in sentences to remember them and not in isolation. They were trained to use the language communicatively.

According to the data obtained from the observation, two other strategies were used most frequently: “I make up new words if I do not know the right one in English” 9 (6.87%), and “If I cannot think of an English word, I use a word or phrase that means the same thing” 9 (6.87%). These two strategies were used more frequently with speaking than with writing. The data obtained from the SILL and interviews yielded the same results in that first year students always try to compensate obstacles to communication by using words or phrases that have the same meaning, but they differ in that students sometimes make up new words if they were stuck with difficult words.

The data based on the observation revealed that first year students used the following strategies least frequently: “I ask for help from English speakers” 2 (1.53%), which was used with the writing skill only, “I ask questions in English” 3 (2.29%) which was used with all the skills equally except listening, the strategy of “ I remember a new English word by making a mental picture of a situation in which the word might be used”

3 (2.29%), which was used with the speaking skill only; “I notice my English mistakes and use that information to help me do better” 3 (2.29%)which was used with the writing skill only. The data based on the SILL revealed that first year students used the same above strategies at a medium level, except the strategy of “Using mistakes to do better”, which was used at a high level. These differences may be because some of the strategies were unobservable ones such as: “Making a mental picture of a situation”, and, “Using own mistakes to do better”.

Moreover, most of the strategies observed were used with the reading skill 50 (38.17%), followed by the speaking 42 (32.06%), then the writing 24 (18.32%) and finally the listening 15 (11.45%). These findings indicated that the students should be trained to use as many of the strategies as possible to improve their reading and speaking skills. However, the writing and speaking skills may require the use of several mental strategies that cannot be observed.

In summary, this section focuses on identifying and diagnosing first year students’ strategies and their application to the four language skills. The observation technique was used as an instrument to collect the data supplemented with the SILL and interviews. However, class observations yielded limited information about the use of learning strategies because classes tended to be teacher directed and students had few opportunities to engage in active learning with observable strategies. Generally, there were some specific strategies used with each skill; furthermore, there were some general strategies used by the EFL learners with all skills. The following chapter will discuss the major findings generated from the data analysis and will suggest areas for further research.