

## Dictionary use Strategies of Saudi EFL Students across Educational Level and University Major

**Dr. Eid Alhaisoni**

Department of English, University of Ha'il

***Abstract:** This study examined the use of dictionary while reading by Saudi EFL learners at high school and university level in Saudi Arabia. The subjects are 372 male Saudi students learning English at two levels of education: high school, and university and three different majors at university (English major, medicine and non-medicine) and a range of levels of vocabulary proficiency.*

*Three research methods were used to achieve the aim of the study. First, a questionnaire was used with questions regarding different items related to dictionary use. The questionnaire respondents were asked to report their use of dictionary on a five-point scale. The second method was semi-structured interview which aimed to support the questionnaire data. The analysis of the questionnaire revealed that University students use dictionaries more than high school students. The results showed that Saudi EFL students reported using all the strategies we asked about while reading. It has been found that the students were very much concerned with using specific strategies which they think will help them to understand the text. Selecting the suitable sense, guessing the word before referring to the dictionary and using the dictionary to confirm guessing were the most popular strategies among our subjects especially MD students*

*Significant differences in terms of educational level, VL, and major were found in the use of the dictionary. Medicine students were found to use DUS while reading more than other groups. In addition to further results, implications for teaching vocabulary and teaching and training students how to use DUS are presented, along with suggestions for further research.*

### 1. Introduction

The importance of English as an international language has resulted in the rapid rise of dictionaries over the past decades. This boom reflects the tremendous need and demand for learners' dictionaries in EFL and ESL learning settings. Dictionaries are considered by many EFL learners as useful and helpful in learning English, and dictionary use is fairly common and probably necessary in language learning (Huang, 2003). Dictionaries are among the most

successful and significant books about languages. They play a vital role not only in native language acquisition but also in foreign language learning (Li, 1998). The process of foreign language learning usually involves considerable use of dictionaries. Furthermore, dictionaries of different types have long been indispensable tools in language use for various purposes (e.g. reading, writing, and translating) (Violet, 2003). Dictionaries are useful not only to foreign learners, but also to non-native teachers of the language in coping with their teaching and marking needs. Even native speaker teachers use them to find good examples, check collocations, etc. (Alhaisoni, 2008).

The study of dictionary use is most closely associated with reading because there is insufficient time to consult a dictionary for speaking and listening and teaching dictionary use for writing is less common than for reading (Tono, 2001). So, we find that many studies that investigated dictionary use relied on dictionary use while reading rather than other activities. Hence, this study investigates dictionary strategies that Saudi EFL students use to get the meaning of unfamiliar words while reading.

## 2. Literature Review

There are many studies that investigated the use of dictionary while reading. The first detailed study of procedures adopted by EFL learners when using dictionaries was conducted by Neubach and Cohen (1988). They used oral think-aloud reports and post-task interviews to investigate the search strategies and problems encountered. The subjects were six students at the pre-academic centre of the Hebrew University of Jerusalem. Two students each were selected from high, intermediate and low-level EFL classes. Each student was required to complete two tasks individually and each task required using a dictionary. In the first task, which is relevant to this review, participants were given ten sentences, each one with an underlined polysemic word. They were required to look these words up, first in a monolingual dictionary and then in a bilingual dictionary, so that the problems students had in choosing the correct entry from a number of alternatives could be better understood. In my view, this is a very artificial and controlled study. It would have been better if they gave the students a continuous text and nothing underlined and gave the students the choice to use the type of dictionary they want. They forced their subjects to use specific types which may affect their performance especially if the students are not familiar with such dictionary types. Furthermore, they did not mention if they checked if the words were unknown or not.

While they were looking the words up, participants had to give an oral report of their search process. These protocols were tape-recorded and then analyzed. Finally, the participants were required to translate the underlined words into Hebrew, and explain why they had selected particular meanings from the range available in the dictionaries they had used.

The study found that students tended to read only the first definition and failed to read beyond the first definition in a long entry. The participants also tried to gather information about the new word from context before looking it up; no one used a dictionary directly without regard for context and we expect it to be used by our subjects. In addition, only the more advanced students seemed to benefit from dictionary use. These students formed semantic field expectations before they looked words up, they used the dictionary only to deepen this understanding.

The low proficiency students used ineffective skills and encountered problems such as problems with the format and the dictionary entry itself. They felt frustrated during the search because they often could not understand the definition and they had to spend much time looking up words. Another essential finding is that the effect of contextual clues on search success. Words with more “easy to understand” contextual clues seemed to produce the largest number of correct hypotheses prior to a word search and eventually led to a successful search. In contrast, words with fewer contextual clues produced more incorrect expectations and eventually led to a faulty search.

Another study was conducted on university students, which is similar to our subjects, by Bareggi (1989) through using direct observation. In our study, we did not observe the students as we noticed that they were not happy to be observed. The findings of the study showed, as Neubach and Cohen found, that the students were unable to use contextual clues to locate the appropriate sense in the polysemous entries of their monolingual dictionaries. Students like Neubach and Cohen’s subjects had the tendency to adopt the strategy of retrieving the first sense. So, students do not go through all the definitions that are available in the entry. For example, Scholfield (1982) gives the example of a learner who wanted to look up the word ‘bracelets’ after reading the sentence ‘You needn’t put the bracelets on,’ said the inspector as the thief was led away’ (p.193). The Oxford Advanced Learner’s Dictionary has the definition ‘ornamental band worn on the wrist or arm’. Scholfield argues that the error some learners may make is to take this definition without trying to understand where there is any metaphorical or pragmatic knowledge involved. Hence, they may not look up other definitions.

Tono (1984) proposed a study to investigate the reference skills of 402 Japanese students at Tokyo Gakugei University, of whom 63 were English major. They were asked to translate English passages from American magazines into Japanese using eight different sets of bilingual dictionaries. Seven different pieces of information were selected to see if the subjects used them properly: grammatical information, verb patterns, countable vs. uncountable nouns, glosses, collocations, idioms, and run-ons. Questionnaires were also used to double check the users’ reference skills to retrieve different types of information. The subjects were asked to describe the process of information retrieval from their dictionaries. It is not clear the reason behind choosing these seven different pieces of information since the aim of the task is to investigate reference

skills and this can be obtained from the students' translation. Furthermore, students were not required to use specific dictionary types.

The study found that these users tended to choose the first definition of an entry. Only if the information in the dictionary indicated the inappropriacy of the first definition did they move to the next one. When the second one was also inadequate, they moved to the third one and so forth. Tono argued that this was the case when the given information was properly used. On the other hand, when the subjects did not use the given information, they just chose the first definition. The subjects seemed not to read whole entries but would rather stop searching for the required meaning as soon as possible.

Blachowicz et al. (1990) found that their fourth grade students used this strategy of choosing the first listed sense in a translation task. He also found that some of his students did not fit the chosen dictionary meaning into the context sentence. The data was collected by means of observation, interview, and test. It should be mentioned here that it is not clear if the fourth grade related to university or high school as the researchers did not clarify this.

The results of the study indicated that the students used different skills for looking up the target words. The students seemed to adopt the strategy of formulating a possible word meaning before starting the look-up (see Alseweed, 2000; Al-Fuhaid, 2004, Almuzainy, 2005). When locating the headword, the students either adopted the skill of plodding through each entry letter page by page or ignored it. They found that the students also used one of the following strategies:

- 1- As found by Tono (1984) mentioned above, they searched for a meaning that seemed to fit the target sentence and stopped as soon their criteria were met without looking past the definition they chose (in some cases they stopped after reading the first definition).
- 2- They read through each and all definitions and then went back and choose the one thought to have the best fit.
- 3- They read all the definitions but proceeded to formulate their own definitions which encompassed all the definitions, looking for something in common among the definitions. In the current study, we expect to find these strategies.

Nesi and Meara (1994) asked adults learners to compose sentences with unfamiliar words they had looked up in monolingual dictionaries. Their subjects were 51 Portuguese undergraduates studying English at tertiary level in Portugal and 44 Malaysian undergraduates studying English at tertiary level in Malaysia. Both groups of subjects were studying in Faculties of Education, and intended to become English teachers which are similar to our subjects who are English major students. By examining the errors in these sentences they found that almost a quarter were caused by 'Kidrule'. This strategy means that users pick up a familiar word from the entry and insert it in the text.

Mullich (1990) found the same strategy amongst his senior high school subjects who were asked to translate a text from French or English into German. He also found that his subjects take notice only of the first meaning in dictionary entries of polysemous words.

Huang (2003) conducted a study to find out dictionary use strategies among Chinese university English major students. Although I do not agree with most of the items she included in her questionnaire as DUS while reading she included some interesting strategies. Her subjects reported using various dictionary strategies while reading. One of the most frequent strategies is selecting one most suitable sense when a word has several meanings rather than picking one randomly without differentiation in order to understand the text they are reading. She found that 95% of her subjects claimed to use this strategy. Furthermore, the results showed that highly proficient students are able to read, understand, and choose the most suitable sense to fit the context according to what their report in the questionnaire. Furthermore, 86% of the subjects claimed to copy the Chinese glosses of the word into the margins of the English passage they were reading whereas copying English glosses was less frequently used. This study is relevant to the current study in that her subjects were English majors and our subjects are English majors. She used a questionnaire which is the main instrument in our study.

Wingate (2004) conducted a study to investigate how intermediate learners of German use bilingual and monolingual dictionaries for reading comprehension. The learners were university students who study German semi-intensively as a major component of their degree course. She aimed to find out the strategies that the subjects use when they look up in their dictionaries. The subjects read the texts in individual sessions with the researcher and were asked to think aloud during the process of identifying unknown words and looking them up in the dictionary.

The data revealed different strategies used by the subjects. She found that the subjects had a tendency to read the beginning of the entries without scanning the whole entry for the appropriate meaning. She also observed that they ignore any other information in the entry. Furthermore, she claimed that the most common strategy across different dictionary types was searching for equivalents that could replace the unknown word in the reading text. Moreover, the data revealed that 'Kidrule' accounted for 23% of the unsuccessful dictionary consultations.

Almuzainy (2005) conducted a study to investigate DUS among Saudi students in UK universities and English schools. His subjects were different from our subjects as our subjects are Saudi EFL learners whereas his subjects are Saudi ESL learners. Although, he used only a questionnaire and a few subjects he ended up with interesting DUS while reading. His Saudi students claimed not to refer to their dictionaries unless they cannot guess the meaning of the unknown word. This strategy has been found to be one of the most common dictionary use strategies while reading. Al-Fuhaid (2004) found similar results where his Saudi EFL university subjects in Saudi Arabia consider guessing as the first step before consulting a dictionary. Lin (2003) also found similar results. She conducted a study to investigate the strategies that Chinese university students use to arrive at the meaning of unknown words. She found that the majority of her subjects referred to their dictionaries when they failed to guess the meaning of the word. The rest of the strategies that Almuzainy found are as follow in a descending order on a 1-5 scale. Asking for help

when cannot find the meaning in a dictionary (3.48), searching in another dictionary (3.27), copying the Arabic glosses into the margins (3.1.3), consulting a dictionary as a first solution directly when encountering a new word (3.10), ignoring the word when one cannot retrieve the meaning in a dictionary (2.39), and finally copying the English glosses into the margins (2.34).

As it can be noticed from the above findings, reading only the first sense was found in most of the studies reviewed above. Moreover, the studies reviewed above have come up with different strategies and used different instruments in order to find out such strategies. Table 2.1 shows the strategies identified in the above studies. In the current study, we will use two instruments (questionnaire and interview) aiming to find out the DUS that Saudi EFL students use when reading an English text.

Table 2.1: List of the strategies reported in the previous studies

No	Strategies	Researchers
1	Reading the first sense only	Neubach and Cohen, 1988; Bareggi, 1989; Tono, 1984; Blachowicz et al, 1990; Mullich (1990); Wingate 2004;
2	Referring to the context before resorting to the dictionary	Neubach and Cohen, 1988, Alfuhaid, 2004; Lin, 2003; Almuzainy, 2005
3	Formulating a possible word meaning before starting the look up	Blachowicz et al, 1990; Almuzainy, 2005; Alfuhaid, 2004; Lin, 2003;
4	Searching for a meaning that seemed to fit the target sentence and stopped as soon their criteria were met	Blachowicz et al, 1990, Tono, 1984; Thumb, 2004
5	Reading through each and all definitions and then went back and choose the one thought to have the best fit.	Blachowicz et al, 1990
6	Reading all the definitions but proceeded to formulate their own definitions which were more encompassing of all the definitions, looking for something in common among the definitions.	Blachowicz et al, 1990
7	Kidrule	Nesi and Meara, 1994; Mullich (1990); Wingate, 2004
8	selecting one most suitable sense when a word has several meanings rather than picking one randomly without differentiation in order to understand the text they are reading	Huang, 2003;
9	Copying English glosses	Huang, 2003, Almuzainy, 2005
10	Copying L1 glosses	Huang, 2003; Almuzainy, 2005
11	Searching for equivalents that could replace the unknown word in the reading text	Wingate, 2004, Thumb, 2004
12	Searching in another dictionary	Almuzainy, 2005
13	Consulting a dictionary as first solution directly when encountering a new word	Almuzainy, 2005

14	Ignoring the word when cannot retrieve the meaning in a dictionary	Almuzainy, 2005
15	Ask for help	Almuzainy, 2005
16	Look up problems words in definition	Neubach and Cohen, 1988
17	Plodding alphabetical search	Blachowicz et al, 1990
18	Read ancillary information	Thumb, 2004
19	Make own definition from dictionary and context	Thumb, 2004
20	Reword chosen definition	Thumb, 2004

### 3. Methods

#### 3.1 Variables of the study

There are many variables that may affect dictionary use strategies but no study can include all of them. We decided to focus mainly on three independent variables, which are vocabulary proficiency level, student's major or speciality (English major and non-English major) and level of education for the following reasons:

There are few studies which have tried to compare English majors and non-English majors in terms of dictionary use. The first researcher who investigated this issue was Baxter (1980) when he investigated Japanese university students and he found that there are differences between the two groups. Tono (1984) and Al-Ajmi (1992) investigated this as well. So, we want to investigate the effect of the major on dictionary use strategies to see if it confirms the findings of the studies mentioned above or not.

Level of education was chosen to allow us to investigate dictionary use across two levels of education in Saudi Arabia, high school and university level. This study is the first study that fully investigates dictionary use across two levels of education. Hartmann (1983) investigated high school and university level but he focused only on bilingual dictionary use. On the other hand Laufer and Melamed (1994) and Laufer and Kimmel (1997) investigated high school and university level but they used different instruments from ours.

Vocabulary proficiency was chosen because it seems to be the aspect of proficiency that is most relevant to dictionary use. In dictionary studies, Fan (2000) was the only study that used VLT to measure the students' proficiency level. The rest of the studies used different proficiency tests such as year of study and Michigan General English Proficiency Test.

#### 3.2 Subjects

The original set of subjects in the survey for this study consisted of 372 males randomly chosen from Saudi undergraduate English majors, non-English majors and high school students to participate in the vocabulary level test and the questionnaire. 31 out of the 372 students provided

interviews. In the interview, university level (English major and non-English major) and high-school students were included.

Table 0-1: Subjects

<i>Level of Education</i>		<i>Number</i>	<i>Age Average</i>	<i>Years of learning English</i>
High School		128	18	5
University	English major	123	23	9
	Non-medicine students	73	22	10
	Medicine students	48	20	10
<b>Total</b>	<b>372</b>			

The high school subjects were from different towns in the same province but the English majors and non-English majors come from different cities across the whole of Saudi Arabia. All subjects speak the same native language (Arabic). Their EFL background was as follows: They had all started to learn the target language from the first stage of their intermediate schooling. So, the high school students had studied English for three years in intermediate school and another two years in high school as they had just started the third year, a total of five years. On the other hand, the English majors had studied English for 9 years as they are in the third year of university while third-year non-English majors had studied English for ten years as they had studied a foundation year before they started their programme in the university.

The high school subjects were chosen from three high schools in Madinah in Saudi Arabia. High schools in Saudi Arabia study the same curriculum and they receive the same teaching prescribed by the Ministry of Education. Provided the schools represent a mix of social levels of students typical of SA as a whole, we can claim that the high school students in this study represent all Saudi high school students.

The university students (English major and non-English major) are in third year. We chose the third year as the students are expected to have acquired higher English proficiency as they have been studying English for nine years for English majors and 10 years for non-English majors. Non-English majors were from the community college which is a branch of King Fahad

University for Petroleum and Minerals (now University of Ha'il) and from the College of Medicine at Taibah University.

### 3.3 The instruments of this study

Three data gathering instruments were used in the study: The Vocabulary Level Test, Questionnaire and Interview. The instruments were administered in the order they are described in the following subsections.

#### 3.3.1 Vocabulary proficiency level test

Nation's multiple-choice receptive levels test was used for our study (Appendix A). It is a new version of Nation's (1983, 1990) vocabulary level tests (VLT) developed by Schmitt (2000). Nation (2001: 416) commends Schmitt's new versions of the VLT, and considers them a "major improvement to the original test". This test was used to measure the students' level of English lexical proficiency to enable us to see if there is a relationship between their proficiency level and dictionary use.

**Table 0-2: Results of the VLT for all learners**

LED and Major	Level	N	Minimum	Maximum	Mean	SD
University	2000	244	2.00	30.00	16.6230	7.03118
High School		128	.00	27.00	4.9063	5.37629
EM		123	2.00	30.00	15.2439	7.17617
NMD		73	4.00	30.00	16.4384	7.02374
MD		48	12.00	30.00	20.4375	5.14433
Total		372	.00	30.00	14.1883	8.22629
University	3000	244	1.00	29.00	11.2049	5.98343
High School		128	.00	16.00	2.2031	3.43983
EM		123	1.00	29.00	11.4309	6.07208
NMD		73	1.00	26.00	10.3425	5.77643
MD		48	4.00	27.00	11.9375	6.03679
Total		372	.00	29.00	9.3344	6.64049
University	5000	244	3.00	28.00	8.5533	4.35290

High School		128	.00	15.00	.9922	2.16448
EM		123	3.00	28.00	8.1463	4.41993
NMD		73	3.00	22.00	7.5890	3.65086
MD		48	3.00	23.00	11.0625	4.30441
Total		372	.00	28.00	6.9821	5.03658
University	Academic word level	244	.00	35.00	14.3115	9.04819
High School		128	.00	18.00	1.2578	2.99933
EM		123	.00	35.00	11.7967	7.55847
NMD		73	1.00	33.00	13.3151	9.53339
MD		48	1.00	35.00	22.2708	7.27789
Total		372	.00	35.00	11.5990	9.72884
University	10000	244	.00	15.00	2.3156	2.92618
High School		128	.00	5.00	.1797	.71468
EM		123	.00	15.00	2.6829	3.04695
NMD		73	.00	10.00	1.7808	2.63653
MD		48	.00	14.00	2.1875	2.95106
Total		372	.00	15.00	1.8718	2.76119
University	Total	244	11	134	53.0082	24.87235
High School		128	0	69	9.5391	12.23581
EM		123	11	134	49.3008	24.07227
NMD		73	12	108	49.4658	24.53177
MD		48	24.00	129.00	67.8958	22.14867
Total		372	0	134	43.9756	28.83304

The scores of the five levels in the above table show a more or less consistent pattern of declining scores from the most to the least frequent English words. We can observe clear

differences among the tests. The results show that our subjects did better in the 2000-word level (mean=14.18) than other levels. The differences between the scores were corroborated through one-way repeated measure ANOVA, which showed significant differences among the scores ( $F=359.750$ ,  $p=.001$ ). To know where the difference lies among the test scores, Bonferroni adjusted comparisons multiple was performed as shown in 3.6 below.

**Table 0-3: Post hoc paired comparison following repeated measures ANOVA showing the p value of differences in the test scores.**

Level	2000	3000	5000	academic	10000
2000		p=.001			
3000			p=.001		
5000				p=.001	
academic				p=.001	

This pattern therefore supports previous work on the validity of Schmitt's version of VLT as it showed a declining pattern across four of the five vocabulary levels. It also showed an expected improving pattern across level of education as the mean for university level is 53 whereas for high school it is 9.53.

### 3.3.2 Questionnaire

The questionnaire was constructed on the basis of a careful examination of previous questionnaires such as Tomaszczyk, 1979; Baxter, 1980; Bejoint, 1981; Atkins and Knowles, 1988; Diab, 1990; Battenburg, 1991; Al-Ajmi, 1992; Taylor and Chan, 1994; Alseweed, 1996; Hartmann and et al, 1998; Li, 1998; Nakamura, 2000; Kent, 2000; Fan, 2001; Alhaisoni, 2004; Chow, 2004; Alqahtani, 2005 and had some content validation of items by external reviewer. The questionnaire measures how often the Saudi students report using the dictionary while reading whether in class or outside the class. It was written in English and then translated into Arabic to make sure that the students could fully understand each question.

#### 3.3.2.1 Internal reliability

The internal reliability analysis was performed using alpha to determine the extent to which the items in our questionnaire are related to each other. Alpha shows the internal consistency, based on the average inter-item correlation. The internal reliability for our questionnaire was .9457, which is excellent

### 3.3.2.2 Data analysis

Quantitative analysis of the data was performed using the SPSS program. Students' background such as level of education, major and vocabulary test score were transformed into numerical codes, and also entered into SPSS. Responses to the dictionary-use questionnaire were scored on a 5-point scale: from (1) never, (2) seldom, (3) sometimes, (4) often, to (5) always. The statistical methods employed for the analysis of data were Descriptive statistics, t-test, one way ANOVA, two way repeated measures ANOVA, Chi-Square and Correlation. The reasons for choosing these data analysis methods stem from the research design, the purpose of which is to determine whether or not there are statistically significant relationships, at level of  $p < .05$ , between the independent and dependent variables in the questionnaire items and to determine which of IVs, major, vocabulary score or level of education, has the dominant effect on frequency of dictionary use.

### 3.3.3 Interview

The researcher interviewed 31 students. Eleven learners were from high schools and 12 were from EM and 8 from NMD. The interviews took place in the libraries of high school students and in the language lab for the EM and NMD students and each interview lasted between 15 and 20 minutes.

At the beginning of each interview there was a brief conversation in Arabic to help to create a relaxed atmosphere. Each subject was informed that he could choose the language of interview (Arabic or English) and that they could be taped. Only two university students were interviewed in English. The researcher followed his guidelines and checked that the wording of the questions was easy and understandable.

#### 3.3.3.1 Data analysis

Although some interesting points were drawn to our attention, what the subjects said in the interviews was less significant than the researcher had expected. One of the main difficulties was the shyness of some of the high school subjects, especially as the interviews were being recorded and the researcher was a stranger to them, which caused some difficulties.

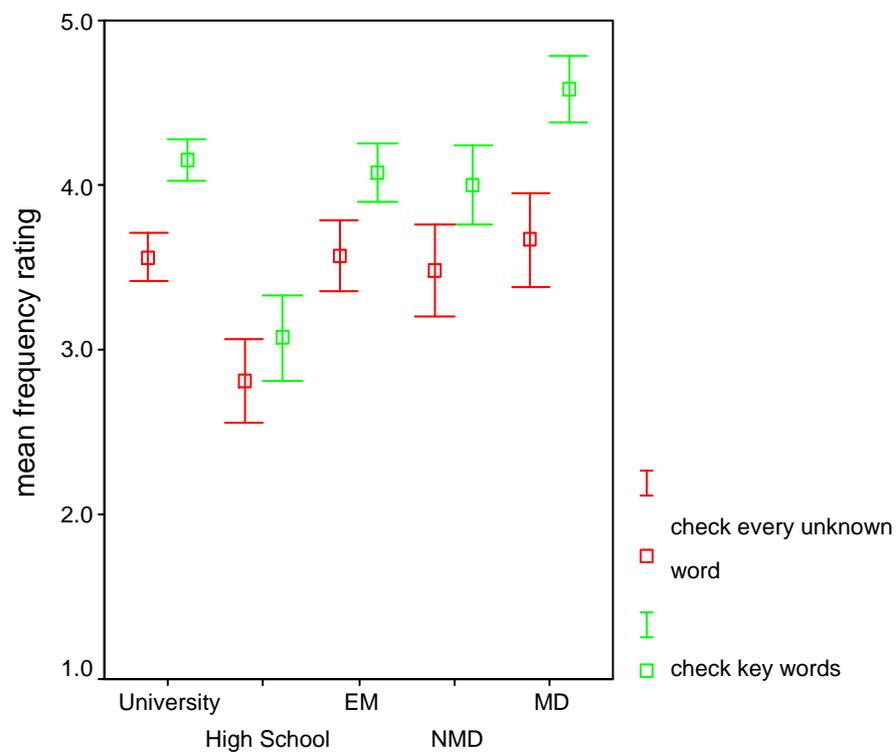
The data collected from the interviews was less than the data collected from the questionnaire. Therefore, and due to the lack of space, the information elicited from interviews with students was neither coded nor quantified. It was used primarily as supplementary or supportive evidence for the interpretation of the results of the questionnaire.

## 4. Dictionary use strategies while reading

Table 0-1: Dictionary use strategies while reading an English text.

Dictionary use strategies while reading	Descriptive Statistics					Inferential statistics				
	LED&Major			Mean	SD	Total		Exp V	r/t/f	p
					Mean	SD				
<b>Strategies related what words/how many looked up</b>										
While reading, I use dictionary for every unknown word	University			3.56	1.14	3.30	1.29	VL	.181	.001
	High school			2.81	1.43			LED	5.114	.001
	University	Major	EM	3.56	1.18			Major	.391	.677
			MD	3.66	.974					
			NMD	3.47	1.17					
I check a word that I feel might be a key word	University			4.18	.980	3.77	1.28	VL	.349	.001
	High school			3.07	1.47			LED	7.473	.001
	University	Major	EM	4.07	.984			Major	6.177	.002
			MD	4.58	.709					
			NMD	4.00	1.05					
<b>Strategies related when words are looked up</b>										
I use the dictionary when I cannot guess the word	University			3.98	1.01	3.57	1.29	VL	.353	.001
	High school			2.78	1.40			LED	8.569	.001
	University	Major	EM	3.96	.991			Major	1.944	.145
			MD	4.22	.881					
			NMD	3.86	1.12					
I use the dictionary to confirm guessing	University			3.71	1.11	3.38	1.33	VL	.281	.001
	High school			2.75	1.47			LED	6.412	.001
	University	Major	EM	3.83	1.11			Major	1.558	.213
			MD	3.56	1.00					
			NMD	3.60	1.18					

<b>I check a word after reading a paragraph several times</b>	University		2.93	1.12	2.73	1.23	VL	.219	.001	
	High school		2.36	1.36			LED	4.004	.001	
	University	Major	EM	2.91			1.20	Major	.194	.824
			MD	3.02			1.02			
			NMD	2.90			1.04			

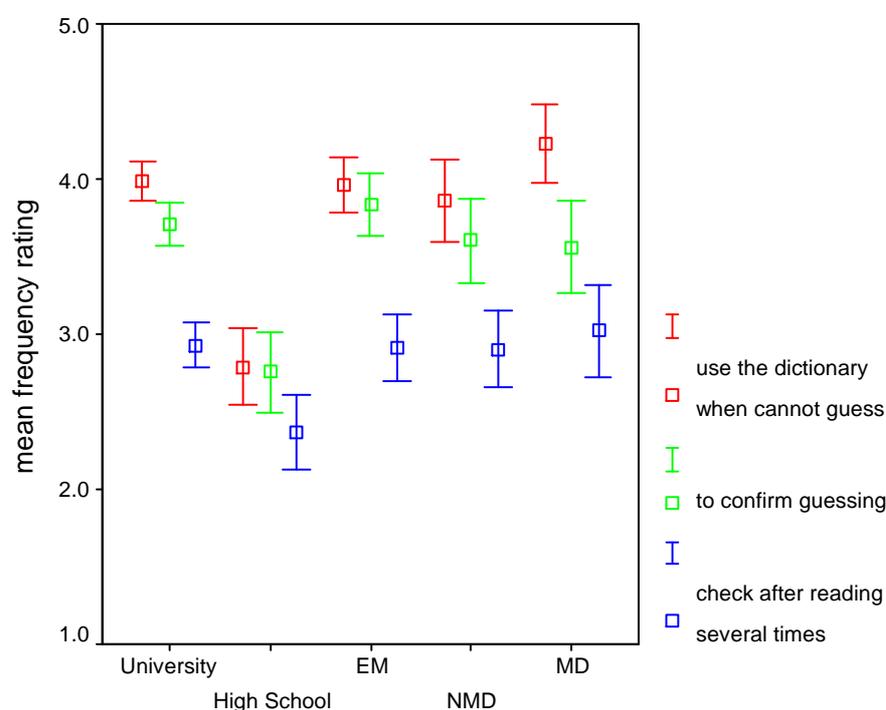


**Figure 0-1: The frequency with which all the subjects check a word in the dictionary that might be a key word and use a dictionary for every unknown words across LED and Major**

With regard to strategies related to choosing to look up a word, Table 4.1 and figure 4.1 show that ‘Using the dictionary while reading to check a word that might be a key word’ was reported

to be used significantly more than ‘while reading, I use dictionary for every unknown word’ and this result is significant according to the t-test ( $t=-7.212$ ,  $p=.001$ ). This result agrees with Alseweed (1996) who found that Saudi graduate ESL students at the University of Essex check their dictionaries while reading when they feel that the word might be a key word. With respect to EVs, high proficiency students reported using this strategy significantly more than low proficiency ones ( $r=.349^{**}$ ,  $p=.001$ ). This parallels what Alseweed (1996) and Alhaisoni (2004) and Hulstijn (1993) and Knight (1994) found among their students. The reason seems to be that the vocabulary knowledge of high proficiency students helps them to distinguish and realize if the word is a key word or not as they are able to understand the text more than low proficiency ones. LED has a significant relationship with this strategy ( $t=7.473$ ,  $p=.001$ ); university students were found to use the dictionary when they feel that the word might be a key word more than high school students. The results also showed that there are significant differences among students according to their major ( $F=6.177$ ,  $p=.001$ ). According to the Tamhane test, the difference is between MDs on the one hand and EMs and NMDs on the other. MDs reported using their dictionary when they feel that this word might be a key one more frequently than EMs and NMDs. MDs’ vocabulary knowledge might enable them to be more aware if the word is a key word or not.

‘While reading, I use the dictionary for every unknown word’ is reported to be used by our subjects with a frequency rating 3.30 and SD 1.29, which indicates that the subjects sometimes use this strategy. 48.1% of the subjects reported using this strategy often or always. This agrees with Almuzainy (2005). Huang (2003) found that about half of the participants expressed a tendency to check out an unknown word’s meaning immediately in a dictionary whenever they came across the word in reading. The Pearson correlation shows that those with greater vocabulary knowledge use this strategy more than those with low vocabulary knowledge ( $r=.180$ ,  $p=.001$ ) but with a lower correlation than ‘Using the dictionary while reading to check a word that might be a key word’. It could be argued that those with higher VL scores will meet fewer unknown words so may be it is viable for them to look them up. On the other hand, those with lower VL scores meet more such words so these cannot look them all up. With respect to LED ( $t=5.114$ ,  $p=.001$ ), university students were found to use this strategy more than high school students. The reason seems to be that as high school students are very low proficiency learners according to VLT, so, they face a lot of unknown words when they read an English text and it is time consuming to refer to the dictionary to resolve these words. Another reason is that university students might be more concerned to understand the text they read than high school students. A third possible reason is that high school students are more likely rely on their teachers’ explanation and ask their teachers. It should be noted here that no significant differences were found between university students according to their major.



**Figure 0-2: The frequency with which all the subjects use the dictionary when they cannot guess, to confirm guessing and checking a word after reading paragraph several times**

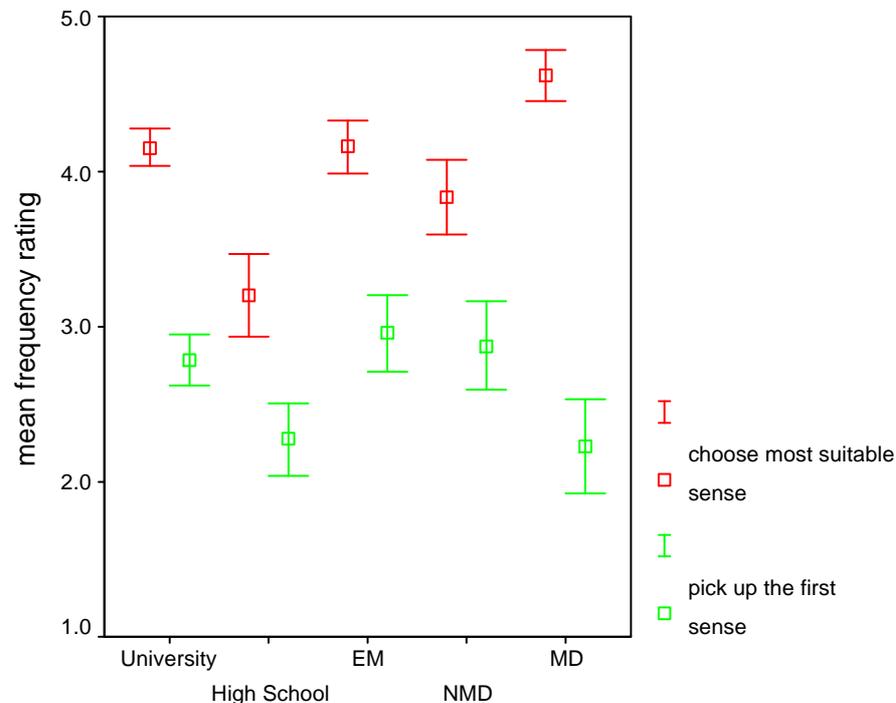
Table 4.1 and figure 4.2, with regard to the strategies related to when words are looked up, show that 'I use a dictionary, when I cannot guess the word' is the most used strategy that Saudi EFL students use while reading with a mean frequency rating 3.57 and SD 1.29. According to one-way repeated measures ANOVA, our result is significant ( $F=76.475$ ,  $p=.001$ ). In order to know where the differences lie between these strategies, multiple comparisons with Bonferroni adjustment were performed. The results showed that this strategy is significantly different from the other two strategies ( $p=.001$ ). This result indicates that guessing the meaning is the first choice of the students. Guessing is a widely used word-attacking strategy. It is also categorized as one of the most used vocabulary learning strategies by students (Schmitt, 1997). There are many studies reporting that students do not decide to look up in the dictionary as the first choice. Al-Fuhaid (2004) found that his Saudi subjects consider guessing as the first step before consulting a dictionary. Furthermore, Alseweed (1996) found that his Saudi subjects in general use guessing more than any other strategies for dealing with unknown words in reading. Lin (2003) conducted a study to investigate the strategy that Chinese students use to arrive at the meaning of the unknown words. She found that the majority of her subjects refer to their dictionaries when they fail to guess the meaning of the word. With respect to EVs, it was found that VL and LED have a significant relationship with the use of dictionary when one cannot guess the meaning of a word, whereas major failed to show any significant relationship with this

strategy. According to the Pearson correlation ( $r = .353$ ,  $p = .001$ ), those who have greater vocabulary knowledge refer to their dictionary when they cannot guess the word more frequently than those with lower vocabulary knowledge. This agrees with Hosenfeld (1979) in that high proficient L2 learners appeal for assistance as their last choice. Alseweed (2000) also found that his high proficiency Saudi students did not refer to their dictionary unless unable to guess the word that they do not decide to use look-up as their first choice. In another study, Al-Fuhaid (2004) argued that his high proficiency students try to guess new words and use their dictionaries only if they were not sure or failed to guess them. Gu and Johnson (1996) argued that the higher the L2 proficiency of learners, the more likely they are to use guessing strategies, since students at lower level lack basic language skills in the target language to make sense of new words in their context, which would lead to much more difficulty using guessing strategies to learn new words incidentally. With regard to LED, the t-test showed that university students reported using this strategy significantly more than high school students ( $t = 8.569$ ,  $p = .001$ ). This seems to be consistent with Alqahtani (2005), who found that university students use guessing strategies more than intermediate and high school students. The reason seems to be due to the fact that university students' vocabulary knowledge helps them to use guessing strategies more than high school students. Hosenfeld (1979) found that referring to a dictionary is the first choice for low proficiency students. Another possible reason is that the results reflect a situation where at lower levels teachers translate all new words and their books provide pictures of new words, so there is no need to guess, while at higher levels more words are met out of class and students do not totally rely on the teachers as in the lower levels (Alqahtani, 2005).

Using a dictionary to confirm guessing is reported to be used by Saudi EFL students, with a mean frequency rating 3.38 and SD 1.33. This agrees with Alseweed (2000) who found that L2 learners use their dictionary to confirm their guesses but not as the first choice strategy. Regarding our EVs, it was found that VL and LED have a significant relationship with the use of a dictionary to confirm guessing. These significant relationships suggest that the higher the vocabulary knowledge, the higher the LED and the more use of a dictionary in order to confirm guessing. This suggests that high proficiency students prefer to use the dictionary when it is allowed which makes them more confident about the meanings they get through guessing (Alseweed, 2000). In another words, we could argue that using dictionary more often in addition to guessing is a successful reading strategy. Hulstijn (1993) found that students with a high level of inferencing ability look up words not because they do not understand the meaning but because they want to verify their inference.

Checking a word after reading a paragraph several times ranked next with mean frequency rating 2.73 and SD, 2.93. This means that this strategy is not popular among Saudi EFL learners. It shows that they do not often look up after using global clues. This agrees with Alseweed (2000) who found that Saudi students use local clues more than global clues. Furthermore, Alhaisoni (2004) found that Saudi ESL students use global clues infrequently. With regard to EVs, the data

showed that VL ( $r=.291$ ,  $p=.001$ ) and LED ( $t=4.004$ ,  $p=.001$ ) have a significant relationships with the use of this strategy. This means that the greater the vocabulary knowledge, the greater the LED, and the greater use of this strategy. This in line with Huang (2003), who found that high proficiency students tend to read a paragraph several times before consulting their dictionaries. This also supports what we mentioned earlier that high proficiency learners refer to their dictionaries when they cannot guess the meaning of a word (for more details about global clues see, Chern, 1993, Haynes, 1993, Hosenfeld, 1979, Alseweed, 2000). Alqahtani (2005) found that global clues were reported to be used more frequently by university students than high school students. This means the greater the LED of the students the greater likelihood of their rereading the sentences or paragraphs and trying to exploit any meaning relevant to the unfamiliar vocabulary item making use of their previous knowledge and experience. Oxford et al (2004) concluded that high-proficiency learners more often tended to use “top-down” strategies.



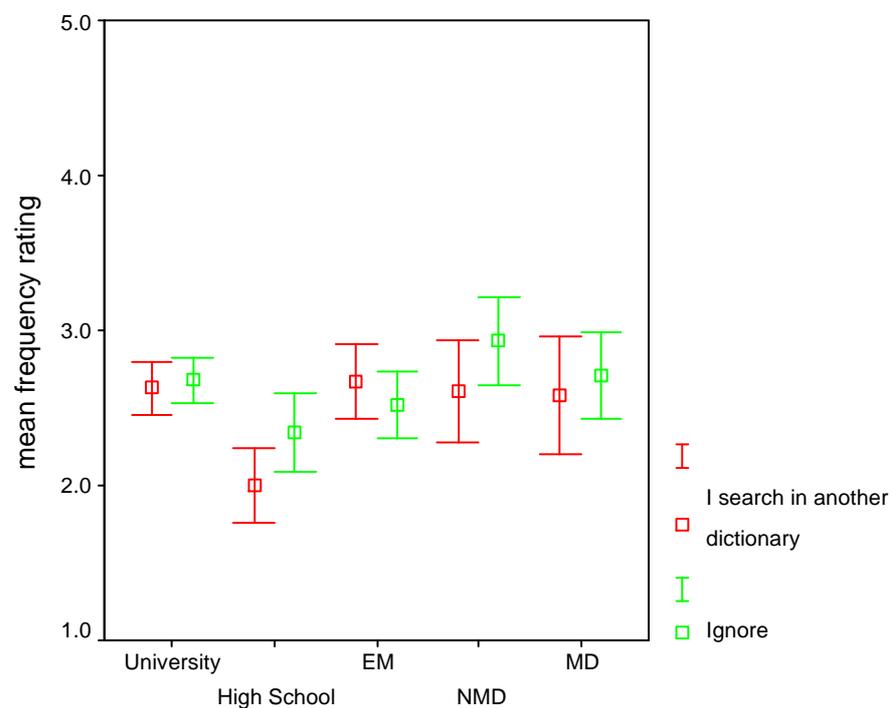
**Figure 0-3: The frequency with which all the subjects choose the most suitable sense for the text and picking up the first sense.**

Table 4.1 and figure 4.3 show that ‘selecting one most suitable sense when a word has several meanings’ is used significantly ( $13.965$ ,  $p=.001$ ) differently from ‘picking up the first sense’ with a mean frequency rating  $3.82$  and  $SD 1.27$ . The preference for this strategy is supported by the findings of Huang (2003) who found that approximately 95% of her subjects tried to select one most suitable sense, rather than pick one randomly without differentiation, to understand the

text they were reading if an English dictionary gave several senses for an English word they were looking up. In another study, Blachowicz et al (1990) found that one of the strategies that their subjects used was to read through each and all definitions and then go back and choose the one thought to have the best fit. EVs showed a significant relationship with this strategy. VL had a significant effect ( $r = .360$ ,  $p = .001$ ) meaning that high proficiency students claim to select the most suitable sense for the text among several senses more than low proficiency ones. Tono (1991) suggested that a good dictionary user could retrieve necessary information from the entry faster, understand the dictionary conventions better, have sufficient language proficiency to understand the content of the entry and have the ability to choose the right sense to look up. Huang (2003) found that there is a positive correlation between selecting the most suitable sense and proficiency level. She argued that high proficiency students are able to read, understand and choose the most suitable sense to fit the text. In his study of Saudi students, Al-Fuhaid (2004) found that high proficiency students were more successful in selecting the most suitable meanings from the dictionary. It could be argued that high proficiency students have enough vocabulary knowledge to help them to be able to understand the text and this helps them to choose the most suitable sense as they have ability to recognise if it fits the text or not. With regard to LED, university students reported using this strategy significantly more than high school students ( $t = 6.382$ ,  $p = .001$ ). The reason seems to be that university students' vocabulary knowledge enables them better to choose the sense that fits the context. Based on the VLT, there is a significant difference between university (mean, 53) and high school (mean, 9.5) students' scores in the VLT ( $t = 22.583$ ,  $p = .001$ ). The data obtained from ANOVA showed that there is a significant difference among university students according to their major ( $F = 10.561$ ,  $p = .001$ ). According to the Tamhane test, the significant difference is between MD students on the one hand and EMs and NMDs on the other, such that MDs reported using this strategy more frequently than EMs and NMDs. This might be due to the fact that MDs' vocabulary knowledge is greater than that of EMs and NMDs ( $F = 11.643$ ,  $p = .001$ ). According to the Tukey test, MDs' score is significantly different from EMs' and NMDs'. Another possible reason is that medical terms tend not to have many different meanings anyway.

On the other hand, picking up the first sense if the learner is not sure which sense fits the context is reported to be used infrequently by Saudi EFL students (mean 2.61; SD 1.33). This result supports the frequent use of 'selecting the most suitable sense' discussed above. This agrees with what the students demonstrated in the interview. The majority of the interviewees claimed that they do not pick up the first sense even if they failed to select the one that fits the context. One of the proficient informants pointed out that he searches in another dictionary or tries to read the sentence and the paragraph again in order to be able to choose the sense that fits the context. On the other hand, two low proficiency learners claimed that they usually pick up the first sense if they are not sure which sense fits the context. LED and major have a significant relationship with the use of this strategy whereas VL failed to show any significant relationship. University students reported using this strategy significantly more than high school students ( $t = 3.612$ ,

$p=.001$ ) which may be a bit surprising for university students specially those who are majoring English. They should have an ability to find another strategy that helps them to solve this problem. With respect to the effect of major on this strategy, data obtained from ANOVA showed that there is a significant difference ( $F=5.897$ ,  $p=.003$ ). To know where these differences lie, we ran the Tamhane test. The results showed that the difference is between MDs on the one hand and EMs ( $p=.001$ ) and NMDs ( $p=.007$ ) on the other. MD students are able to find out and use another strategy (i.e. selecting the most suitable sense) to solve such problems. This also supports what we found earlier that MDs use guessing strategies more than EMs and NMDs.

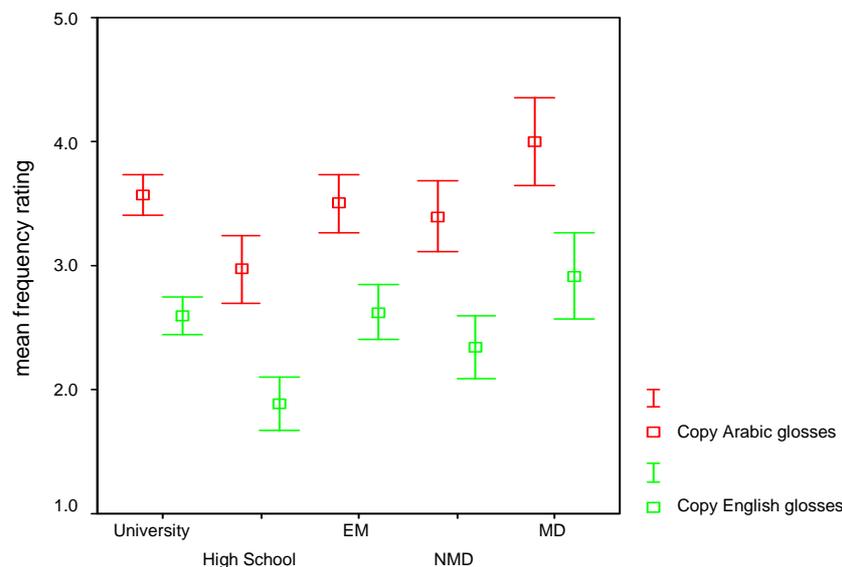


**Figure 0-4: The frequency with which all the subjects search in another dictionary or ignore when they cannot find the suitable meaning or understand it across LED and Major.**

‘Ignoring the word if I cannot understand the meaning of a word in the dictionary’ was reported to be used infrequently by our subjects with a mean frequency rating 2.56 and SD 1.27. This agrees with Alseweed (2000) who found that skipping was not a common strategy among his university subjects. He argues that students do not have the courage to skip words because they think that their general understanding might be affected. Huckin and Bloch (1993) found that their subjects did not try to ignore any unknown word out of 44 unknown words in their study although ignoring was not disallowed. Our results showed that the greater the vocabulary knowledge, and the higher the level of education, the greater use of the ignoring strategy. This

agrees with Alseweed (2000) and Alhaisoni (2004) who found that high proficiency students use the ignoring strategy more than low proficiency ones. Alqahtani (2005) found that university level students use the skipping strategy more than intermediate and high school students. This might be due to the fact that they are able to decide what words to skip.

'If I cannot find the suitable meaning of a word in one dictionary to fit into a reading context, I keep searching in another or other dictionaries' is reported to be used infrequently by Saudi EFL students even less than ignoring. This agrees with Alhaisoni (2008) who found that his Saudi students reported to use this strategy infrequently. This agrees with Huang (2003), who found that this strategy was not popular among her Chinese subjects. It could be argued that the students might feel bored because of the time needed to search in another dictionary. Furthermore, the students may use different strategies such as referring to the text and trying to guess the meaning of the word or might seek help from their peers or teachers. Regarding our EVs, the results indicate that those who have greater vocabulary knowledge use this strategy more frequently than those with less knowledge ( $r = .224$ ,  $p = .001$ ). A possible reason for this could be that low proficiency learners can ask their teachers or classmates whereas high proficiency learners might feel shy and embarrassed to ask. Furthermore, high proficiency may have higher motivation to learn English than low proficiency one, so, they try to use different strategies and search in another dictionary when they cannot find the suitable meaning in the dictionary they are searching in. With regard to LED, university students reported using this strategy more frequently than high school students ( $t = 4.282$ ,  $p = .001$ ).



**Figure 0-5: The frequency with which all the subjects copy the Arabic and English glosses of the word in the margins of the passage when they use dictionaries across LED and Major**

'Copying the Arabic glosses of the word in the margin of the passage' is reported to be a popular dictionary use strategies while reading (mean, 3.36, SD, 1.40). On the other hand, 'Copying of the English glosses of the word in the margin of the passage' is reported to be used infrequently (mean, 2.35, SD, 1.25). This is consistent with Huang (2003) who found that a great majority of participants (86%) always or often when they check out meanings of an English word from a dictionary, copy the Chinese glosses of the word into the margins of the English passage they were reading. Almuzainy (2005) also found that his ESL Saudi students reported using copying of Arabic glosses more frequently than copying English glosses. The difference between the two strategies is significant according to the Paired-Sample t Test ( $t=12.658$ ,  $p=.001$ ). Subjects on average use the strategy of copying Arabic glosses (mean 3.36) more than copying English glosses (mean 2.35). It should be noted here that the difference between E-A bilingual dictionaries and monolingual dictionaries is significant according to the Paired-Sample t Test ( $t=18.500$ ,  $p=.001$ ,  $df.371$ ). The results also show that our EVs have significant relationships with these two strategies. It is clear that those with higher vocabulary knowledge use these two strategies more than those with lower vocabulary knowledge but they use copying English glosses more than Arabic glosses. This seems to be consistent with Alhaisoni (2008) who found that Saudi high proficiency students use E-A bilingual and monolingual dictionaries more frequently than low proficiency ones but they use monolingual more than bilingual. Furthermore, this partially supports the findings of Almuzainy (2005) who found that intermediate level students use the copying Arabic glosses strategy more than the copying English glosses strategy whereas advanced students use the latter more. University students also reported using the two strategies significantly more than high school students. Furthermore, there is a significant difference among the university students according to their major for the copying Arabic glosses strategy ( $F=3.597$ ,  $p=.29$ ) and for the copying English glosses strategy ( $F=3.422$ ,  $p=.032$ ). According to the Tukey test, for the copying Arabic glosses, the difference is between MDs and NMDs ( $p=.030$ ) Furthermore, the difference between MDs and EMs is marginally significant ( $p=.058$ ), MDs use it more frequently than EMs or NMDs. This is line with the difference between the three groups in terms of using E-A bilingual dictionaries such that MDs were found to use E-A bilingual dictionaries significantly more than EMs and NMDs (see, 4.3.1). In turn, for the copying English glosses strategy, the difference was found to be between MDs and NMDs ( $p=.027$ ) where no difference was found between EMs and MDs or between EMs and NMDs.

## Conclusion

The purpose of this study was to explore the DUS of Saudi EFL students and to investigate factors that have been found to affect DUS such as proficiency level, level of education and major to obtain additional insights from the students' statements about their own strategy use.

The results showed that Saudi EFL students reported using all the strategies we asked about while reading. It has been found that the students were very much concerned with using specific

strategies which they think will help them to understand the text. Selecting the suitable sense, guessing the word before referring to the dictionary and using the dictionary to confirm guessing were the most popular strategies among our subjects especially MD students. With regard to the effect of EVs, it can be understood from the above finding that LED more than VL and major is the dominant factor in the DUS while reading. In other words, the upper level students in the present study show increasing frequency of DUS while reading. From this it could be assumed that the number of years learning English might be a factor in improving students' achievement levels which, in turn, could help them to decide which DUS while reading could help them to understand the unfamiliar words in the text.

### **Limitations of the study**

It is hoped the current study has presented valuable information to the study of dictionary use by Saudi EFL learners of English at two different levels of education and a cross three different university majors. As with any other study there are some limitations, but none of them is a threat to the validity of the research. However, these limitations seem to provide suggestions for future researchers on how the use of dictionary might be further investigated. The limitations of this study were as follows:

1. As the questionnaire was the main instrument in this study, its data is based on self-report and thus it is possible in a strategy questionnaire that the respondents overestimate or underestimate the frequency with which they use certain strategies (Cohen (1998).
2. The subjects of the study were male only. The results would be more generalisable if both sexes were included in the study. But because the education system in Saudi Arabia does not allow mixed sexes, it was impossible for the researcher to conduct it on female students.
3. As the students' participation in our study was voluntary, as they were allowed to refuse to take part, and therefore, findings are affected by motivation bias.
4. The study set out to investigate the use of the dictionary by Saudi EFL learners of English while reading across two levels of education (high school and university) and three different university majors, both in and out of the classroom. This is not to deny that factors other than LED, major and VL may also be relevant and affect the use of dictionary. Hence, the present study is not an account of all the possible factors.
5. The number of MD students who participated in the questionnaire was only 48. The reason is that the number of the third year of MD students was only 49 and one student did not want to participate. It would have been better if we had had more MD students to be able to have more reliable results.

6. Although we did our best to make the Arabic version of the questionnaire very clear by giving the translated version and an English version to a professor of translation in the Department of Foreign Languages at Taibah University and then giving the translated version to a professor of Arabic languages, we recognised that some of the students found it difficult to understand some of the questionnaire items.

### **Recommendations for further research**

Researchers interested in dictionary use may wish to see some recommendations for future research.

1. It has been a problem comparing this study's findings with other studies due to the ambiguity of each study regarding the proficiency level and how it is measured. In most studies, the researcher tried to differentiate between high and low proficiency subjects but the problem is in what proficiency level we are talking about and whether the high and low level in a particular study is the same as those levels in another study. On this issue, Alseweed (2000) argued that there is a need for agreement among researchers on an international proficiency test allowing comparison between studies at least in the literature. This test might give researchers more accurate results about the subjects' real proficiency levels in different studies. This would be better than what is obtained from teachers' evaluation, the study exam results or other local tests done by the researcher. In the current study, we used Nation's receptive vocabulary test in order to be able to measure our subjects' vocabulary proficiency level accurately but we found that most of the studies conducted in dictionary research used different ways of classifying the students into high and low proficiency levels.
2. A replication of the present study with different university and high school students whether in Saudi Arabia or in other countries and in various settings might show different results. It is also recommended to investigate a lower level such as intermediate school students whether in Saudi Arabia or in another country. This might yield different results. Furthermore, it is very important to compare the results of intermediate school students with high school and university students.
3. A researcher might include in his/her study females to gather some results concerning whether gender can affect dictionary use or not.
4. Investigating the effect of training on dictionary use including successfulness of use would be a vital issue to take into consideration in further research.

### Implications for L2 teaching

Although the main burden of this thesis is not about teaching dictionary use, we think that it will be useful to provide some general suggestions for teaching dictionary use based on our major findings and teaching experience.

1. A close relationship between learners and their dictionaries should be developed. Teachers should try to make the use of a dictionary enjoyable. They could use a dictionary as the basis for discussion, debate, or role-play (Wright, 1998). This could involve the problems faced by students when looking up words, such as not finding the entry. Learners could compete in looking up words in a reading task, for instance, and in discovering the relevant meaning. There are, indeed, a number of activities that can be arranged in a classroom which encourage learners to use a dictionary. Teachers should pay attention to such activities in order to strengthen the relationship between learners and their dictionaries and develop their dictionary use strategies.
2. The results of the questionnaire showed that high school students do not use the dictionary so much and explained that the reason is that the students rely heavily on their teachers' explanation. It is very important that teachers should do less explaining and force the students to use dictionaries in class to get practice using them. It should be mentioned here that schools do not provide students with dictionaries and the students have to have their own. Hence, we recommend that schools have their own dictionaries, which students can use in schools.

### References

- Al-Fuhaid, M. (2004). *Vocabulary learning strategies: an empirical study of their use and evaluation by Saudi EFL learners majoring in English*. Unpublished PhD thesis, University of Durham.
- Al-Jarf, R. (1999). Use of electronic dictionaries in ESL classroom. *TESOL Arabia'99.5<sup>th</sup> Annual Conference entitled "Teaching, learning and technology"*. Conference Proceedings Vol.IV.
- Al-Jarf, R. (2000). Electronic Dictionaries and Translation. *Linguistica Communicatio; 10*.
- Atkins, B.T.S. and Varantoal, K. (1998). Monitoring dictionary use. In B. T. S. Atkins (Ed.), *Using dictionaries: studies of dictionary use by language learners and translators*. Tübingen: Niemeyer.
- Alqahtani, M. (2005), *The use of vocabulary learning strategies by EFL learners at three different educational levels*. Unpublished PhD thesis, University of Essex

Al-Smael, F. (2000). *A think-aloud protocols investigation of lexico-semantic problems and problem-solving strategies among trainee English-Arabic translators (BL)*. Unpublished PhD thesis. University of Durham.

Bareggi, C., (1989), Students and the dictionary: an inquiry among students of English following a degree course in modern foreign languages at the University of Turin, in: Prat Zagrebelsky (ed.). *Dal Dizionario ai Dizionari*, Turin: Terrenia Stampatori, pp. 155-190.

Blachowicz, C.L. et al (1990). Observing dictionary users: teachers look at fourth grade students. *Paper presented at the annual meeting of the American educational association*. Boston.

Cowie, A.P. (1999). *English dictionaries for foreign learners: A history*. Oxford: Clarendon Press.

Fan, M. Y. (2000). The dictionary look-up behaviour of Hong Kong students: A Large-scale survey. *Educational Journal*, 28(1), 123 – 138.

Diab, T. and Hamdan, M. (1999). Interacting with words and dictionaries: The case of Jordanian EFL learners. *International Journal of Lexicography*, 12(4), 281 – 305.

Garcia, S.S. (2006). ***Lexical strategies in L1 and L2 writing: a study with Mexican University EFL students***. Unpublished PhD thesis. University of Essex.

Hartmann, R. R. K. (1994). Bilingualized versions of learners' dictionaries. *Fremdsprachen Lehren und Lernen*, 23, 206-220.

Holzman, S. (2000). *Reading English as a foreign language with an electronic dictionary: an exploratory study of the processes of L2 classroom reading by L1 Hebrew speaking college students in Israel*. PhD dissertation. Indiana University of Pennsylvania.

Hosenfeld, C. (1977). A preliminary investigation of the reading strategies of proficient and unsuccessful second language learners. *System*, 5, 110-123.

Huang, D. (2003). *Taiwanese university English majors' beliefs about English dictionaries and their dictionary strategy use*. Unpublished PhD, University of Texas at Austin

Jakubowski, M. (2001). *The use of dictionaries by high school learners: the place of the monolingual and bilingual dictionary in the learning process*. MA dissertation. Adam Mickiewicz University.

Lew R. 2002. "Questionnaires in dictionary use research: A reexamination." In: Braasch, A. -- Povlsen, C. (eds.) *Proceedings of the 10th Euralex International Congress. EURALEX 2002, Copenhagen, Denmark*. Copenhagen: Center for Sprogteknologi, 267-71.

- Lew R. 2004. "[How do Polish learners of English rate bilingual and monolingual dictionaries?](#)." In: Williams, G. -- Vessier, S. (eds.) *Proceedings of the Eleventh EURALEX International Congress, EURALEX 2004, Lorient, France.*, Lorient: Université De Bretagne Sud, 697-706.
- Lew R. 2004. *Which dictionary for whom? Receptive use of bilingual, monolingual and semi-bilingual dictionaries by Polish learners of English* Laufer, B., & Kimmel, M. (1997). Bilingualized dictionaries: how learners really use them. *System*, 25(3), 361-369.
- Li, L. (1998). *A study of dictionary use by Chinese university learners of English for specific purposes*. Unpublished PhD thesis. University of Exeter.
- Mackintosh, K. (1998). An empirical study of dictionary use in L2-L1 translation. In B. T. S. Atkins (Ed.), *Using dictionaries: studies of dictionary use by language learners and translators*. Tübingen: Niemeyer.
- Nesi, H. (2000). *The use and abuse of EFL dictionaries*. Tübingen: Max Niemeyer.
- Tono, Y. (1984), *On the dictionary user's reference skills*. Bachelor of Education, Tokyo Gakugei University.
- Nesi, H., & Meara, P. (1994). Patterns of misrepresentation in the productive use of EFL dictionary definitions. *System*, 22(1).
- Neubach, A., and A.D. Cohen. (1988). Processing strategies and problems encountered in the use of dictionaries. *Dictionaries*, 10, 1-19.
- Ramos, M.M, (2005), Research on dictionary use by trainee translators. *Translation Journal*, 9(2).
- Scholfield, P. J. (1982a). The role of bilingual dictionaries in ESL/EFL: a positive view. *RELC Guidelines*, 4, 1, 84-98.
- Scholfield, P. (1982). The role of bilingual dictionaries in ESL/EFL: a positive view. *Guidelines*, 4(1), 84-98.
- Scholfield, P. (1987). Active and passive vocabulary: bilingual dictionaries' and teachers' judgments', *Bangor Research Papers in Linguistics* 2: 18-26.
- Scholfield, P. (1987). Criterion-referenced versus norm-referenced measurement of language', *Bangor Teaching Resource Materials in Linguistics* 1: 1-19.
- Scholfield, P. (1987). Lexical errors - a collector's guide', *Bangor Teaching Resource Materials in Linguistics* 1: 34-55.

Scholfield, P. (1987). Vocabulary problems in communication: what determines the learner's choice of strategy?', *Bangor Teaching Resource Materials in Linguistics* 1: 56-75.

Scholfield, P. (1997). Vocabulary reference works in foreign language learning. In N. Schmitt, & McCarthy, M. (Ed.), *Vocabulary: description, acquisition and pedagogy* (pp. 279-302). Cambridge: Cambridge University Press.

Scholfield, P. (1997). Why Shouldn't Monolingual Dictionaries be as easy to use as Bilingual or Semi-Bilingual ones? *English Teachers Network*.

Schofield, P. (1999). Dictionary use in reception. *International Journal of Lexicography*, 12(1), 13 – 34.

Snell-Hornby, M. (1987). Towards a learner's bilingual dictionary. In A.P.Cowie (ed.), *The dictionary and the language learner*. 159-170. Tübingen: Niemeyer.

Tono, Y. (1987), *Which word do you look up? A study of dictionary reference skills*. Unpublished MA dissertation, Tokyo Gakugei University.

Tono, Y. (1988). Assessment of the EFL learners' dictionary using skills. *JACET Bulletin*, 19, 103-126. *learning(LEXICOGRAPHICA Series Major 106)*. Tübingen: Max Niemeyer.

Tono, Y. (1989). Can a dictionary help one read better? In G. James (Ed.), *Lexicographers and their works* (pp. 192-200): University of Exeter.

Tono, Y. (2001). **Research on dictionary use in the context of foreign language learning: focus on reading comprehension**. Tübingen : Niemeyer

Thumb, Yin-fun Jenny (2004). *Dictionary look-up strategies and the bilingualised learner's dictionary: think-aloud study*. Tübingen : Niemeyer

Underhill, A. (1985). Working with the monolingual learners' dictionary. In Ilson, R. (ed). *Dictionaries, lexicography, and language learning*, 103-114. Oxford: Pergamon Press.

Violet K. M. (2003). *The impact of dictionary use in four different conditions on incidental vocabulary learning*. MA dissertation. Hong Kong University.

Wingate, U. (2004). Dictionary use –the need to teach strategies. *Language learning Journal*, No 29, 5 11.

Winkler, B. (2003), *The use of English learners' dictionaries in book and on CD-ROM*, Unpublished PhD thesis, Open University.