

# The Arab University Students' Use of English General Service and Academic Vocabulary: A Lexical Development Study

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## Abstract

In recent years, a number of studies have attempted to assess the English vocabulary knowledge of high-school students and undergraduate university students in contexts where English is a foreign language (EFL). The present paper explores the lexical development of Arab undergraduates at a Saudi University where EFL is the medium of instruction. The study employed a quantitative methodology. The lexical knowledge of 150 participants from different college years and fields of specialization was assessed both receptively and productively. The assessment focused on the participants' knowledge of the General Service List (GSL) and the Academic Word List (AWL) due to their prime importance for lexical competence in English. The results confirmed earlier findings that the lexical competence of EFL Arab university students is below the required level for coping with the demands of studying in an English-medium university. Findings also showed that production-based instruction may accelerate lexical development on the short-term, but on the long-term both input-based and production-based instruction support lexical development of EFL learners. The study concludes that lexical development of EFL learners needs to be carefully assessed to ensure the learners' ability to cope with the lexical demands of their educational programs. Hence, the study highly emphasizes the importance of enhanced English language support for students at all levels in Saudi universities.

**Keywords:** vocabulary studies, second language learning, teaching English as a foreign language, English language as a medium of instruction

## 1. Introduction

Vocabulary knowledge is at the heart of language competence. This should come as no surprise since it is extremely difficult to communicate one's ideas without words. Second language (L2) learners often experience difficulties engaging in interactions because of their poor command of vocabulary. Hence, studies on L2 learners' lexical competence are increasingly on the rise. Apart from differences in design, such studies vary widely in terms of their target population, the dimensions of word knowledge in focus, the type of vocabulary examined, etc. A common underlying theme for a large number of studies in this context, however, is assessing the vocabulary size of EFL learners and examining the lexical development through language exposure. This has raised many relevant questions including 1) What type/dimension of vocabulary develops faster? 2) What could facilitate or hinder lexical development? and 3) How can instruction influence vocabulary knowledge?

Whereas the present study shares the same interest in the lexical competence of L2 learners, it is designed along particular parameters. First, the participants are Arab university students who study English as a foreign language (EFL). They are enrolled at a Saudi university where English is the medium of instruction and where a large number of instructors are natives or near natives. Second, the aspects of vocabulary knowledge under study are related to the type of words and vocabulary use. This comparative study is carefully designed to examine the vocabulary knowledge of EFL Arab university students throughout their undergraduate years. It examines the learners' knowledge of general service and academic vocabulary. Furthermore, it assesses the learners' competence using this vocabulary both receptively and productively. It is anticipated that these points of reference will give a well-rounded view of the learners' lexical competence. In addition, lexical development is addressed in the study by examining learners' vocabulary knowledge across different stages of university education; that is, the preparatory year, second year and fourth year of their university education. Finally, the study compares the development of learners' vocabulary across two university majors; one major that

emphasizes language production and another with much less focus on the production aspect. This approach will allow the researcher to gauge the effectiveness of instruction on lexical development. The findings of the study will be particularly revealing for higher education professors and policy makers in Saudi Arabia in particular. Replications may prove useful in other educational contexts around the world.

## 2. Statement of Research Problem

It seems a global trend to offer university education in English in different parts of the world. A growing number of universities, including the university under examination in the present paper, offer their educational programs in English despite the fact that their students are non-native speakers of the language and may have actually completed their high-school education in their own native language. This trend reflects the realization that English is becoming the world lingua franca in addition to being the main language used for science, technology and innovation nowadays. A main relevant question is; are the students enrolled in these programs linguistically prepared to cope with the study requirements in this context?

The present paper aims to address the abovementioned question in the Saudi context through examining the lexical competence of EFL Arab University students at a Saudi university. It is believed that assessing the students' vocabulary knowledge will be most revealing due to the strong relationship between second language learners' lexical competence and their language proficiency in general (e.g., Shen, 2008) and their reading skills in particular (e.g., Nation, 1990). Besides, academic reading, a skill seriously required at universities, largely relies on lexical competence as it is estimated that second language learners need to understand 95% of the vocabulary of texts for comprehension (Laufer, 1989) and 98-99% to read for pleasure (Nation, 2006). Academic reading would in fact be hindered if the size of the second language learner's vocabulary knowledge was less than 20,000 words (Nation & Webb, 2011).

In order to obtain a comprehensive picture of the students' lexical competence, the study assesses the students' vocabulary knowledge at different stages of their university education and also at different areas of specialization. The present study assesses the vocabulary knowledge of students at the end of the preparatory year program, at the end of their second year of study and at the end of their fourth year of study. This means that students' vocabulary is assessed upon entry to their university majors, mid-way through their majors and towards completing their programs. This allows an understanding of the nature of the students' vocabulary knowledge at different stages of university education. This also reveals how this vocabulary knowledge develops with increased language exposure. The study also addresses the influence of language use/instruction on the development of the participants' vocabulary knowledge through comparing the lexical development of students in two university programs; namely, the English Department and the Interior Design and Architecture Department. Whereas the English Department focuses on students producing quality output in English, the Interior Design and Architecture Department does not share the same focus. Hence, comparing the two programs will help to better understand the vocabulary knowledge of university students.

## 3. Practical Importance of the Study

In addition to the contribution that the present study will make in the field of vocabulary research and second language learning, it is also significant to highlight the practical importance of the study. The paper shall prove relevant to a large number of universities around the world that offer their educational programs exclusively in English, a foreign language in their countries. It is hoped that the results may allow educators and decision makers in these universities to better realize the challenge students are facing to adapt to the study requirements at their universities, not only at the preparatory year stage but also throughout their university education. The results may urge these universities to assess their students' lexical competence similar to the present study and also consider effective ways to support their students along their study path.

The present and similar studies will also be relevant for Saudi universities in particular. As stated in Al-Masrai and Milton (2012), research questions the expectations of the Saudi Ministry of Education (MOE) that high-school graduates reach a vocabulary size of around 3,000 words. Although this size may not support students to pursue their university education in English, the studies conducted on the graduates of Saudi high schools report lower vocabulary sizes. Two example studies cited in Al-Masrai and Milton (2012) clearly point in this direction. In the first study (Al-Hazemi, 1993) graduates from Saudi high schools scored between 800 and 2000 words in vocabulary knowledge, and the mean was around 1000. The second study (Al-Bogami, 1995) further confirmed these results and highlighted the disappointing vocabulary scores of high school graduates. This is expected to reflect negatively on university education at English-speaking universities in Saudi Arabia. Hence, assessing the situation at Saudi universities is essential.

#### 4. Theoretical Background

The assessment of EFL learners' vocabulary knowledge involves a number of important concepts and key distinctions. Of prime importance is the definition of vocabulary knowledge itself since the design of vocabulary tests is contingent upon the test designer's understanding of the concept. Language learning researchers have approached the concept of "vocabulary knowledge" differently. Some have focused on the subknowledges involved, including morphological knowledge, grammatical knowledge, connotative and associative knowledge, etc. (e.g., Nation, 2001; Ringbom, 1987). Others, however, have described vocabulary knowledge in terms of a continuum comprising progressive degrees of knowledge, such as Henriksen (1999) who describes lexical knowledge in terms of three continua; partial to precise knowledge, shallow to deep knowledge and receptive to productive knowledge. The present study assesses the EFL learners' lexical knowledge as per the last distinction between receptive and productive vocabulary knowledge. Receptive vocabulary refers to the items understood and instantly recognized by the language user whereas productive vocabulary refers to the items that the language learner can use in production. For adult L2 learners, receptive vocabulary is generally larger and develops faster than productive vocabulary. L2 learners may understand a large number of words which they cannot produce in speaking or writing.

Another relevant distinction is the type of lexical items under examination. Nation (2001) divided vocabulary into four categories; high frequency, academic, technical and low frequency. The most famous list for English high frequency words is the General Service List (GSL) which consists of more than 2,000 headwords, each of which represents a word family. The list was first devised by Michael West in 1956, and has since constituted the vocabulary items used in graded readers. Regarding the English academic words, a reliable list is Coxhead's Academic Word List (AWL) which was first introduced by Averil Coxhead in 1998. The list consists of 570 semi-technical word heads that follow the General Service List in frequency in English-language academic texts. The list was compiled based on an analysis of academic texts from diverse fields of study including the Arts, Commerce, Law and the Sciences (El-Dakhs, 2011). Therefore, the AWL is essential for L2 learners who study in an academic institution where English is the medium of instruction. It is well-acknowledged that knowing the GSL and AWL words will allow learners to understand almost 90% of the running words in academic texts (Cobb, undated). Hence, the present study focuses on assessing the EFL learners' knowledge of these lists in particular due to their obvious importance.

A third relevant concept is the nature of language use/instruction in university education. The study assesses the vocabulary knowledge of students enrolled in two academic departments in order to assess the influence of language use/ instruction on the students' lexical development. Thus, a distinction between input-based instruction and production-based instruction is essential. The input-based instruction has its origins in Krashen's Input Hypothesis that was developed in the 1970s and 1980s. The Hypothesis claims that comprehensible input is the only mechanism for enhancing a L2 learner's language competence, overruling any contribution by language production to L2 acquisition. In other words, a L2 learner's understanding of rich spoken and written input is the only source for boosting their L2 acquisition. Based on this hypothesis, input-based instruction focuses on providing the learner with intensive opportunities of rich comprehensible input without much focus on quality output.

Contrary to Krashen's Input Hypothesis, the Output Hypothesis, developed by Merrill Swain in the 1980s and 1990s, proposes a significant role for language production in enhancing L2 acquisition. It is assumed that L2 learners improve their language competence when they encounter difficulties in production. Unable to express one's ideas clearly, fluently or accurately, raises the learner's awareness of knowledge gaps that need to be overcome. Hence, it is deemed useful to "push" for L2 production to support acquisition. The Output Hypothesis constitutes the basis for the production-based instruction which places emphasis on pushing learners to use the target language in speaking or writing. It is worth noting that production here does not entail mere speaking and writing, but pushing learners beyond their limits and stretching their full linguistic capacity. The present study compares the effect of input-based instruction with production-based instruction through comparing the lexical development of English Department students with that of the Interior Design and Architecture Department students. While the English Department instructors pay special attention to the learners' quality output in English, the Interior Design and Architecture Department represents the focus on comprehensible input since the latter students are not generally pushed to produce quality English output. They are more exposed to quality input without having to engage in extensive production.

## 5. Literature Review

In recent years, a number of studies have attempted to assess the English vocabulary knowledge of high-school students and undergraduate university students in different parts of the world in order to support the education programs offered in English, particularly in EFL contexts. These studies have produced important implications for language/content instructors, textbook writers and policy makers. One study that attempted to assess the vocabulary knowledge of high-school students in their final years was carried out in Murcia, Spain. Olmos (2009) measured the students' vocabulary size using Nation's Vocabulary Levels Test in order to assess if the students' vocabulary would support their language competence. The results came much poorer than expected. At the 1,000 word level, the average score was 26.51 while the pass score is 34. Similarly, at the 2,000 word level, the average score was 15.29 whereas the pass score is 26. Examining the scores of individual students, it was found out that only 3 students passed the 1,000 word level and 1 student the 2,000 word level out of 49 participants. As for the 3,000 word level, the result was more disappointing. The average score was 12.76 whereas the pass mark is 26, and no student managed to pass the test. The results were quite alarming considering the school years the students were studying English.

At the university level, an interesting study comes from Iran. Khodabakhshi et al. (2014) assessed the receptive vocabulary knowledge of Iranian undergraduate students who study English for academic purposes. Using Nation's (1983) Receptive Vocabulary Levels Test Version B and classroom observation, the results showed that the total vocabulary size for Engineering students was 4593.75, Humanities students 3432.5581 and Sciences students 3188. The study thus concluded that the vocabulary knowledge of the students did not reach an acceptable level for studying at a university level. It was also noted that studying at the College of Engineering offered the best supportive context for vocabulary development. Different reasons were discussed in this regard, including that the use of technical English was more accentuated in such Engineering courses. It is worth mentioning that the students' year of study was not controlled for. The participants were from different academic years: freshmen, sophomore, junior and senior students.

Another relevant study was conducted in Spain; Angel (2012) measured the receptive and productive vocabulary knowledge of senior students in an English language teaching program. Using Schmitt's 2001 and Nation's 2007 receptive vocabulary tests, the study showed that the participants achieved significant progress in their receptive vocabulary knowledge across their years of study. On average, the students scored 91.5% at the 1,000 word level, 85.2% at the 2,000 word level and 100% at the 3,000 word level which includes the academic word list. However, the results of the Laufer's 1999 productive vocabulary tests were disappointing. The vocabulary size was notably under the required level even at the 3,000 word level. Although it is well known in the literature that the learner's productive knowledge lags behind their receptive knowledge, the discrepancy observed in this study was beyond expectations. Hence, the researcher supported the common belief that the teaching of de-contextualized vocabulary could boost the receptive vocabulary knowledge of learners but would not be reflected in their language use.

Likewise, Mokhtar et al. (2010) attempted to assess the Malaysian tertiary students' level of passive and controlled active vocabulary. For the passive vocabulary, Nation's 1990 Passive Vocabulary Test was used. The majority of the 360 participants were categorized in the weak vocabulary area for the 2000 word level, 3000 word level and the University Word List. As for the controlled active vocabulary, Laufer and Nation's 1995 Controlled Active Vocabulary Test was employed, and again the majority of participants fell in the weak category at the three vocabulary categories. The study concludes that the students attained frail passive and active English vocabulary despite having been exposed to the English language at schools for 13 years. The study, hence, questioned the students' language competence in general.

The final study in this survey comes from Saudi Arabia. Al-Marsai and Milton (2012) investigated the vocabulary knowledge of EFL university students in an English teaching program at different phases (i.e. near the start and near the end of the program; namely year 1 and year 5 students). Two vocabulary tests were used for the purpose of the study; (1) Meara and Jones's 1990 Eurocentres Vocabulary Size Test and (2) Al-Marsai's XK\_Lex Test. The findings of the study showed that Saudi students possess a vocabulary size of 2000-3000 words on average on entry to university and a size of around 5000 words on exit. Al-Marsai & Milton conclude that "Knowledge of 3000 words or so on entry to university suggests that these learners will be far from fluent and will struggle to understand authentic texts without considerable support..... A vocabulary size of around 5000 words at about the time of graduation suggests learners will be competent rather than fluent users of English," (p. 18). It is intriguing to know if the present study will confirm or contradict Al-Marsai and Milton's (2012) conclusions.

Examining the previous studies, a number of conclusions can be drawn that serve as hypotheses for future studies. First, high school graduates in different EFL contexts may lack the required lexical competence to pursue their university education in English. Second, the productive vocabulary knowledge of EFL learners lags behind their receptive knowledge. Third, lexical competence aptitude enhances with increased language exposure throughout the university years of study. Fourth, certain specializations (e.g., Engineering) may support lexical development more than other specializations within the same university. Finally, word frequency highly influences the lexical competence of EFL learners, but this may not be the rule of thumb in university contexts where academic vocabulary is emphasized.

Of particular relevance to the present study is the hypothesis that certain university specializations may support lexical development more than others. The present study compares the lexical competence of the English Department students with the Interior Design and Architecture Department students. It is generally believed that the English Department students will have better mastery of the language and increased vocabulary knowledge because they are continuously pushed to produce quality English output in their speaking and writing. This makes the English Department a good example for production-based instruction which relies on Swain's output hypothesis. However, the Interior Design and Architecture Department, in comparison, reflects much less emphasis on quality output. In fact, the students are most probably receiving more quality input. Hence comparing the lexical competence of the two specializations may inform the on-going debate between the Input Hypothesis and the Output Hypothesis. For summaries on relevant studies to the debate, refer to Morgan Short and Bowden (2006); Rassaei (2012); Shintani (2011) and Zhang (2014).

## 6. Research Questions

The current study addresses the following questions regarding EFL Arab university students:

- 1) What is the nature of their vocabulary knowledge at different stages of university education?
- 2) How does their vocabulary knowledge develop with increased language exposure?
- 3) How does the nature of language use/instruction influence the development of their vocabulary knowledge?

## 7. Methodology

### 7.1 Participants

The study participants consist of 150 Arab female students who study at a private Saudi university. Their ages range between 17 and 26, and they have learned English in an EFL context. The participants belong to three stages of undergraduate education; 1) preparatory year, 2) second year or sophomore and 3) fourth year or senior. The sample can be classified as follows:

Table 1. The distribution of participants across academic year and major

Preparatory Year	Second Year		Fourth Year	
	English Dept.	ID & Arch Dept.	English Dept.	ID & Arch Dept.
30	30	30	30	30

The preparatory year program in Saudi Universities is a program specifically designed to prepare students for college education through intensive English language teaching in addition to instruction in other areas, including computers and general sciences. Students at the preparatory year can be at one of three English language levels; beginners, elementary or pre-intermediate. The lower the proficiency level, the more academic semesters the students have to register for. The present study targeted the last stage of the preparatory year, which is the pre-intermediate stage. It is worth noting that at the preparatory year, students are grouped in classes regardless of their future majors.

As for the second and fourth-year students, they were recruited from the English Department and the Interior Design & Architecture Department. The English Department represents production-based instruction since students are always engaged in production tasks that require relatively high quality of output. For instance, the Department policy requires evaluating the students' language competence during oral or written exams, even in content courses. The students are aware of this policy and are regularly informed of the marks they gained or lost for their language fluency/accuracy during assignments or exams. Besides, the Department has more academic writing courses, where students are expected to demonstrate their language command. Writing is also practised

in a number of other courses where essay questions are common. The Interior Design and Architecture Department has been selected as opposed to the English Department since much less focus is placed on language production. The Department does not assign marks for language competence in assignments and exams, does not expect the same level of writing competence as the English Department, and offers fewer academic writing courses to students. Besides, a number of courses require students to submit drawing projects. In such courses, students receive a great deal of input from the instructors, but their language output is minimal.

### *7.2 Procedure*

The study assessed the participants' receptive as well as productive vocabulary knowledge. The receptive knowledge was assessed through a gap-fill task (see Appendix A). The task consisted of 30 sentences, each of which with a missing word. Every ten sentences were grouped together, and the students were provided with a list of the missing words in addition to two distracters to complete the gaps. The missing words for the first 10 sentences belonged to the first 1,000 most frequent words of the General Service List, the missing words of the second 10 sentences to the second 1,000 most frequent words of the General Service List and the missing words of the last 10 sentences belonged to the Academic Word List.

The productive knowledge of the participants was assessed through two tasks. The first task (see Appendix B) was another gap-fill, but this time the participants had to complete words of which they could already read the first part (e.g., di- for direction). The task consisted of 30 sentences, each of which included one incomplete word. The incomplete words in the first 10 sentences belonged to the first 1,000 most frequent words in the General Service List, the second 10 sentences belonged to the second 1,000 most frequent words in the General Service List and the incomplete words of the last 10 sentences belonged to the Academic Word List.

In addition to this controlled gap-fill exercise, the participants' productive knowledge was also assessed through a free production task (see Appendix C). The participants were asked to write a paragraph explaining why an increasing number of people try to learn English. They were required to write at least 12 sentences, and were not provided with a specific time limit. The choice of 12 sentences was recommended by the preparatory year instructors based on their assessment of their students' writing ability. The topic was kept very general to allow comparing the production of the participants from the two majors. The participants were allowed to complete the writing task at their leisure in order not to influence their vocabulary choice.

It is worth noting that the tasks used were prepared with utmost care. First, the target words in the controlled exercises were reviewed by English language instructors to ensure that they match the proficiency level required by the students at the preparatory year stage, and hence at the other stages. Second, the sentences in the controlled tasks were extracted from dictionaries in which example sentences were taken from authentic texts. Some sentences were, however, provided with extensions to ensure clarity of meaning. Third, the exercises were reviewed by a number of English language instructors, and their recommended modifications were implemented. Finally, a pilot study was conducted to check the participants' adaptability with the instructions and the comprehension of sentences.

## **8. Results**

The results section is categorized based on the research questions of the study.

### *8.1 Research Question (1)*

What is the nature of EFL Arab university students' vocabulary knowledge at different stages of university education?

#### *8.1.1 Receptive Knowledge*

The first dimension of word knowledge that was assessed at different stages of university education was the receptive knowledge through the gap-fill exercise in Appendix A. The exercise was straightforward to mark. Any correct choice from the words in the list was given one mark whereas any incorrect choice was given a zero. The marks were added up for every type of vocabulary; 1) the first 1,000 most frequent GSL words, 2) the second 1,000 most frequent GSL words and 3) the AWL words. Hence, every participant had a score out of 10 for each type of vocabulary. The scores were compared across the preparatory year, second year and fourth year students. Table 2 and Figure 1 below offer a summary of the results:

Table 2. Results of the receptive knowledge exercise

Student Level	Dept.	1,000GSL	2,000GSL	AWL
Preparatory Year		79.3	63.7	31.3
Second Year	English	98.3	93	77
	ID & Arch	91	81.3	59.7
Fourth Year	English	98.3	94.7	76
	ID & Arch	95.7	90.7	74.7

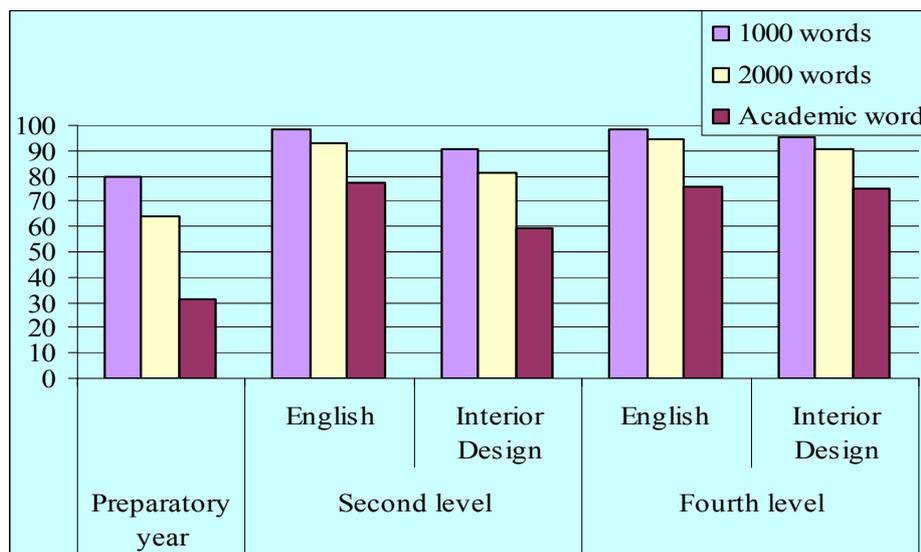


Figure 1. Results of the receptive vocabulary knowledge exercise

Table 2 and Figure 1 show the nature of receptive English vocabulary of the undergraduate participants. At the preparatory year program, the vocabulary knowledge is notably low. The participants scored approximately 80% at the 1,000-level GSL words, 64% at the 2,000-level GSL words, and the figure stoops much lower to almost 32% for the AWL words. The second-year participants demonstrate clear improvement in their receptive vocabulary. They score in the 90s for the first 1,000 GSL words, in the 90s or 80s for the second 1,000 GSL words and in the 70s or 60s for the AWL words. The level remains almost the same for the fourth-year participants who score in the 90s, 90s and 70s for the three lists of words respectively.

#### 8.1.2 Productive Knowledge (Gap-Fill Exercise)

The gap-fill exercise (Appendix B) was marked based on the rater's ability to read the written word, even if the spelling is slightly misspelled. Every correct word was assigned a mark whereas the wrong answer a zero. Similar to the receptive knowledge exercise, the scores were added up across the same three categories. Then, comparisons were made as shown in Table 3 and Figure 2 below:

Table 3. Results of the gap-fill productive vocabulary knowledge exercise

Student Level	Dept.	1,000GSL	2,000GSL	AWL
Foundation Year		48	23.3	49.3
Second Year	English	81	53	73
	ID & Arch	64.7	29	67
Fourth Year	English	81.3	57	79
	ID & Arch	76	45	76.7

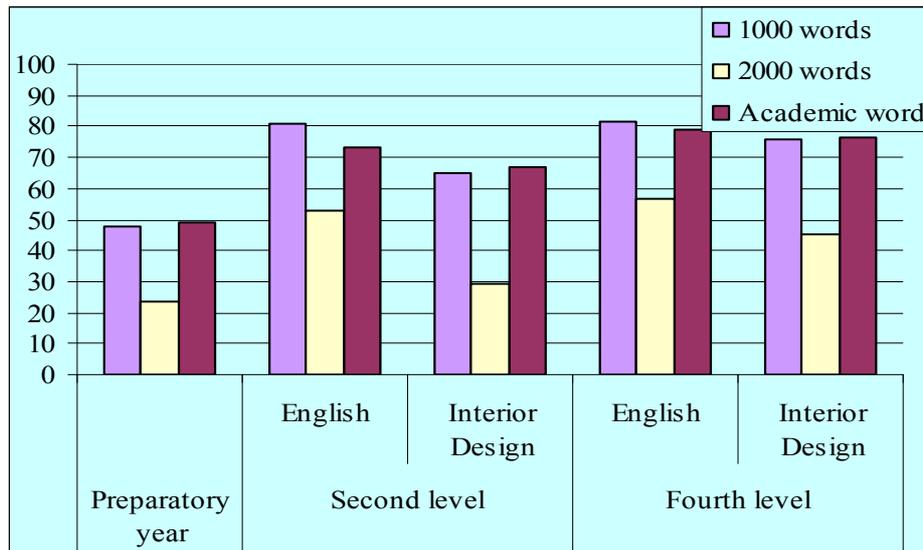


Figure 2. Results of the gap-fill productive knowledge exercise

Table 3 and Figure 2 clearly show that the productive vocabulary knowledge of the EFL participants is not satisfactory at all stages of university education. At the first 1,000 GSL words, the lowest score was 48% for preparatory year students and the highest 82% for English Department fourth-year students. The score was worse, as expected, for the second 1,000 GSL words. The lowest reached a score of 24% for the preparatory year participants and the highest 57% for English Department fourth year participants. The score was also low for the AWL words with an average score of 69% across all the participants. Comparing the scores between the receptive and the productive tasks, two patterns can be observed. The first pattern is that the scores went lower for all GSL words in the productive task, which is compatible with general results in the literature. However, the second pattern is unexpected. The scores for the AWL words improved in the productive exercise very slightly for the second and fourth year students, but significantly better for the preparatory year students. This improvement, however, is still not very satisfactory. The preparatory year participants, for instance, barely scored 50% for the AWL component.

### 8.1.3 Productive Knowledge (Paragraph-Writing)

In addition to the gap-fill task, the participants' productive vocabulary knowledge was also assessed through their writing. Students' paragraphs (minimum of 12 sentences) were examined using the Vocabulary Profiler to identify the percentages of GSL (1000-level or 2000-level) and AWL words. The percentages were compared across the participants, and the results are summarized in Table 4 and Figure 3.

Table 4. Results of the paragraph-writing productive knowledge exercise

Student Level	Dept.	1,000GSL	2,000GSL	AWL
Foundation Year		94.1	2.6	2.4
Second Year	English	89.7	2.9	4.4
	ID & Arch	91.9	2.6	3.4
Fourth Year	English	90.3	2.8	4.2
	ID & Arch	90.1	3.1	4.2

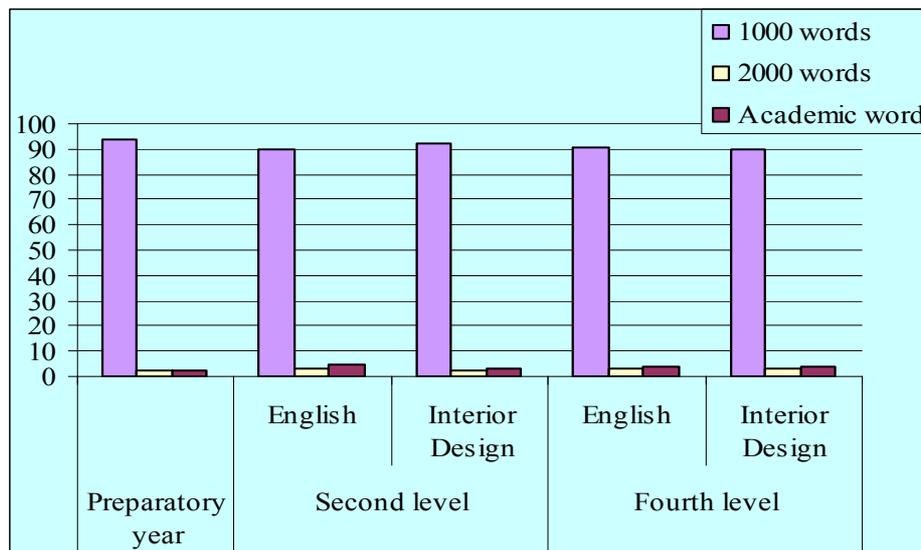


Figure 3. Results of the paragraph-writing productive knowledge exercise

As shown above, the first 1000 GSL words dominated the scene with percentages of 89%-94%. The scores were similar across the second and fourth year participants, but somehow higher for the preparatory year participants. Percentages were very similar across all participants for the second 1,000 GSL words. Percentages ranged between 2.6% and 3.1%. As for the AWL words, two observations can be made. First, more AWL words were identified in the writing of the second and fourth year participants than the second 1,000 GSL words. For example, 4.4% of the writing of second year English Department participants came from the AWL words whereas the percentage of the 2000-level GSL words stood at 2.9%. Second, the use of the preparatory year participants of AWL words in their writing was the lowest (2.4%) among the three groups of participants, and was also the lowest in comparison with the other two levels of the GSL words (94.1% and 2.6% respectively).

### 8.2 Research Question (2)

How does the vocabulary knowledge of EFL Arab university students develop with increased language exposure?

In order to answer this question, the one-way analysis of variance (F-test) was applied to examine the difference between and among groups. This was followed by the Scheffee multiple range test to identify the source of any statistical significance based on the participants' level of undergraduate study. The comparisons were categorized into 1) the receptive test, 2) the gap-fill production test and 3) the paragraph-writing production test.

#### 8.2.1 The Receptive Test

Regarding the receptive vocabulary knowledge, the mean difference between the preparatory year participants and the second year participants is significant at the .050 level, in favor of the second year participants. The same significance is noted between the preparatory year participants and the fourth year participants in favor of the fourth year participants. This significant difference has been observed across the 1,000 GSL, 2,000GSL and AWL. As for comparisons between the second year participants and the fourth year participants, the mean difference did not reach significance. Figure 4 shows the comparisons in a visual form.

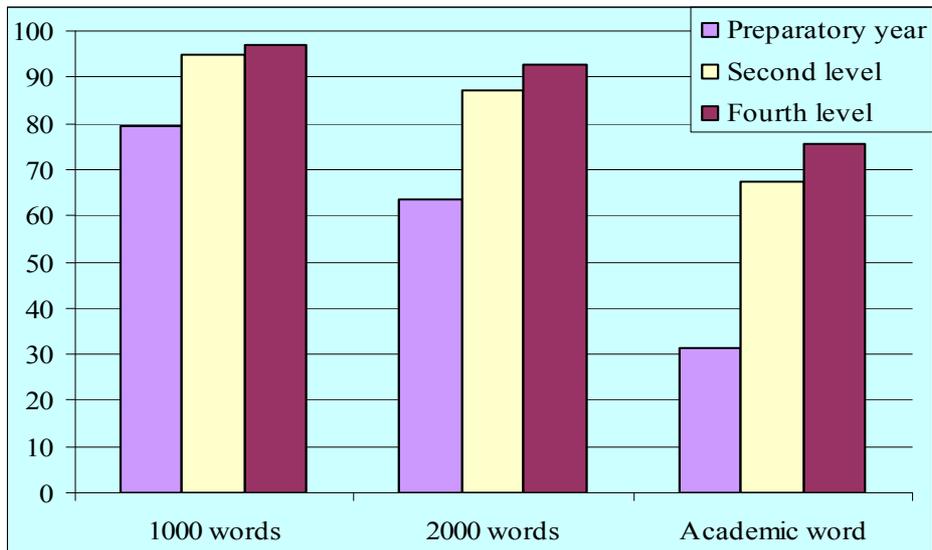


Figure 4. The results of the receptive tests across the study years

8.2.2 The Gap-Fill Productive Test

The results of the gap-fill productive exercise came identical with the receptive exercise. The mean difference reached significance at the 0.050 level between the preparatory year participants and the second year participants in favor of the latter. Similarly, the fourth year participants' answers were significantly better than the preparatory year participants at the 0.050 level. The difference was noted for the GSL words at both the 1000 and 2000 levels and also for the AWL words. However, no significant difference was observed between the scores of the second and fourth year participants. The results are visually illustrated in Figure 5.

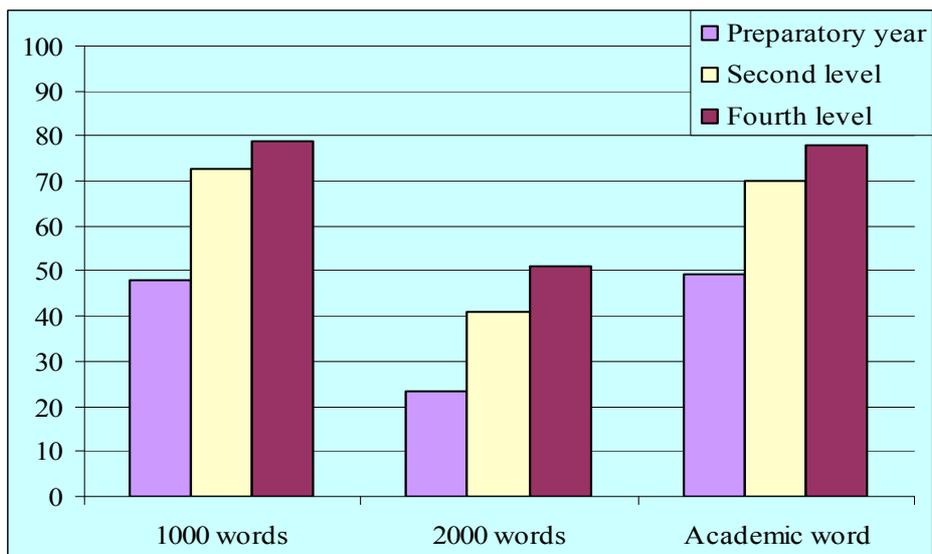


Figure 5. The results of the gap-fill productive exercise

### 8.2.3 The Paragraph-Writing Productive Test

The scores of the paragraph-writing productive test were significant only at two levels; the GSL 1,000 words and the AWL words. Regarding the GSL 1,000 words, the preparatory year students' use of the words came statistically higher at the level of 0.050 than the second year students' use and the fourth year students' use. As for the AWL words, the second year participants and the fourth year participants used more AWL words in their writing than the preparatory year participants at the level of 0.050. No significant difference was noted between the word choice of the second year and fourth year participants. Figure 6 reflects the comparisons of the paragraph-writing exercise.

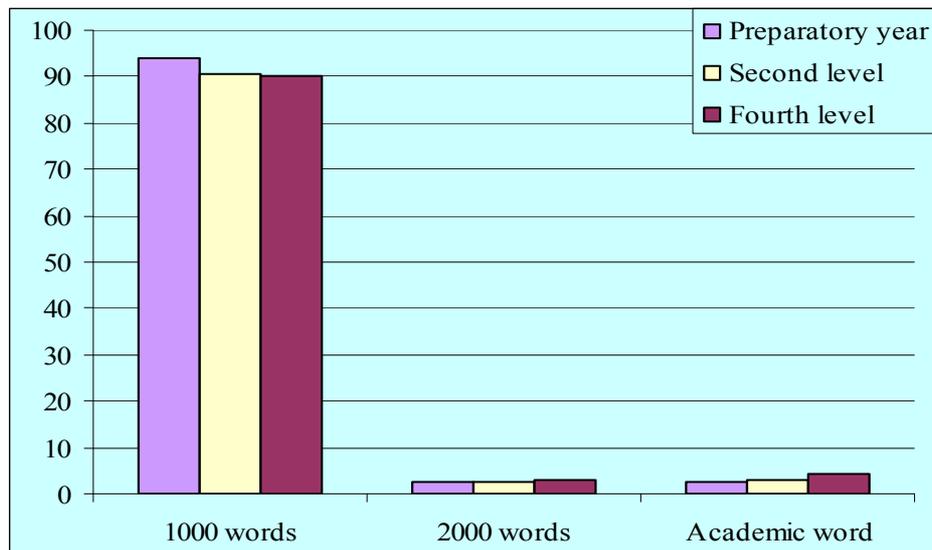


Figure 6. The results of the paragraph-writing task

### 8.3 Research Question (3)

How does the nature of language use/instruction influence the development of the EFL Arab university students' vocabulary knowledge?

The answer to this question required comparing the scores of the English Department participants versus the Interior Design & Architecture Department participants. As mentioned earlier, the participants of the English Department better exemplify the production-based instruction model since they are required to produce more oral and written texts in English than the other participants, and the quality of their output is carefully monitored throughout the courses. The comparisons between the second-year and the fourth year participants were conducted for the GSL words with its two levels and the AWL words.

#### 8.3.1 The Receptive Vocabulary Knowledge

The comparisons of the receptive knowledge came significantly in favor of the English Department students at the GSL 1,000 words, the GSL 2,000 words and the AWL words for the second year students. The difference was significant at the level of 0.050 and lower. As for the fourth year students, no statistical difference was noted. Figure 7 shows the comparisons.

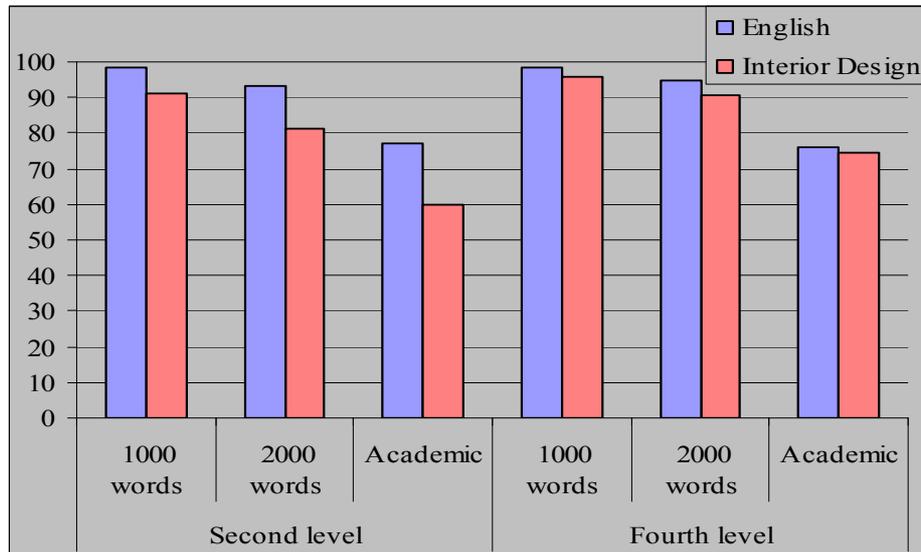


Figure 7. The results of the receptive knowledge exercise for the two departments

### 8.3.2 The Productive Knowledge (Gap-Fill)

Similar to the receptive exercise, no statistical difference was found between the scores of the English Department participants and the Interior Design and Architecture Department participants at the fourth year. The lack of significance applies to the GSL words and the AWL words. As for the second year students, the English Department students' knowledge of the GSL words with its 1,000 words and 2,000 words was significantly better than the Interior Design and Architecture Department students' knowledge at the 0.01 level and lower. There was no statistical difference though between their scores for the AWL words. Figure 8 shows the comparisons.

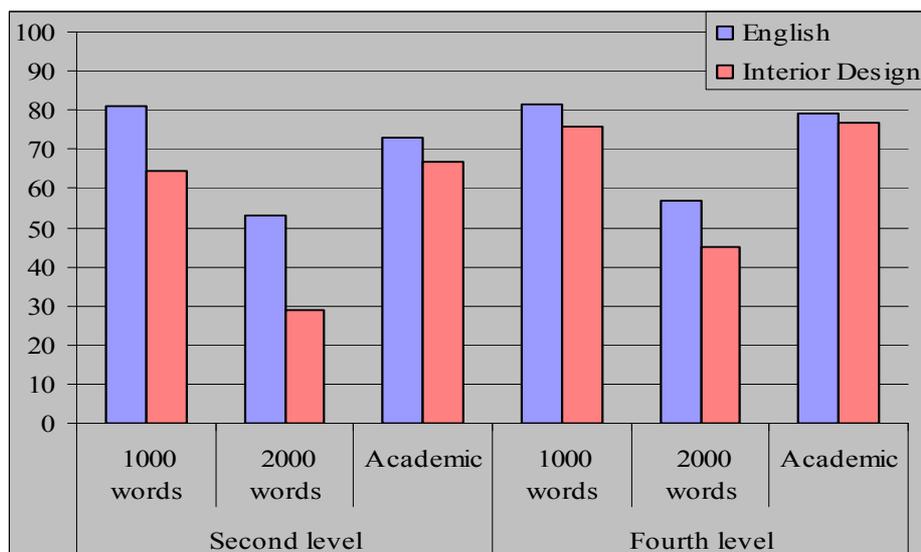


Figure 8. The results of the productive knowledge exercise for the two departments

### 8.3.3 The Productive Vocabulary Knowledge (Paragraph Writing)

Similar to the receptive exercise and the productive gap-filling exercise, the scores of the paragraph writing task did not show any statistically significant difference between the second year and the fourth year participants at all types of GSL and AWL words. Statistical difference was only noted between the second year participants of

the English Department and the Interior Design and Architecture Department. The English Department participants used much fewer GSL 1,000 words in their writing than the Interior Design and Architecture Department participants. However, no difference was noted comparing the GSL 2,000 words and the AWL words. Figure 9 summarizes the comparisons.

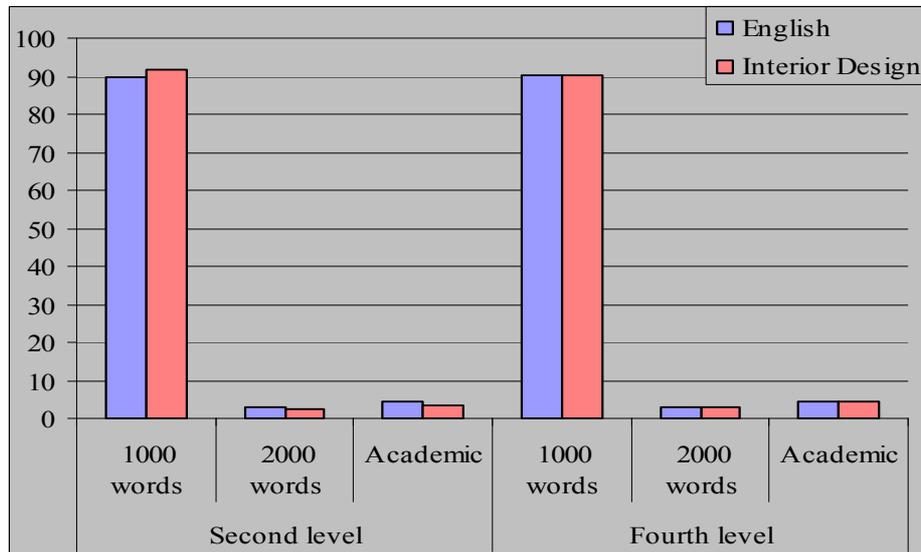


Figure 9. The results of the paragraph-writing task for the two departments

## 9. Discussion

The present study has addressed three questions. The first question is to examine the nature of Arab EFL university students' lexical competence. Examining the study results, it seems that graduates of Saudi high schools possess relatively poor vocabulary competence. Their scores at the receptive and productive exercises for the GSL and AWL words were disappointing. They even came lower than the expectations of the Saudi Ministry of Education that high school graduates are in command of 3,000 English words. These results confirm earlier studies in Saudi Arabia by Al-Hazemi (1993) and Al-Bogami (1995) (as cited in Al-Marsai & Milton, 2012). They are also compatible with similar studies in other parts of the world (e.g., Olmos, 2009) that doubt the preparedness of EFL high school graduates to pursue their university education in English comfortably. The scores of the second and fourth year students were significantly better than the preparatory year, but still did not match required standards for managing academic reading with ease (e.g., Nation, 2001). It is, hence, expected that students throughout their academic years would struggle reading through their English textbooks and references.

Two more findings are relevant to the first study question. One finding is related to the difference between receptive and productive vocabulary knowledge. The results show that the students' productive knowledge lags behind their receptive knowledge, a finding recurrently proven in the literature. However, the discrepancy is remarkably large in certain cases, which may be explained in terms of decontextualized vocabulary learning that does not emphasize the production of target vocabulary in actual language use. This is similar to other studies (e.g., Angel, 2012) in which participants scored higher on the receptive versus productive tests. Another interesting finding is about the AWL. It seems that the focus on the AWL in university settings has given it a special status. This is most obvious with the scores of the participants in productive tasks. In the gap-fill, the participants' scores for the AWL were higher than the GSL 2,000 level. Likewise, in the paragraph writing task, the participants in the second and fourth year students produced more AWL words than GSL 2,000 words. It seems that students joined the university without proper mastery of the GSL, but their AWL develops faster because the language and content courses highlight it more. For instance, the preparatory year program uses academic English textbooks that are based on the AWL.

The second study question examines the development of students' lexical competence with increased language exposure throughout the university study years. The results show that lexical competence improves with increased language exposure at the first years of university education. The preparatory year students' scores at

the receptive and productive tests were significantly lower than the second and fourth year students for the GSL and AWL. However, this progress seems to slow down after the second year. No significant difference between the scores of the second and fourth year students was noted in any of the exercises. A number of explanations may be offered for this finding. Probably, students in the third and fourth years will place more focus on their content courses than on improving their language. Another possible explanation is that some learners may be undergoing a restructuring phase where they are re-considering their language gains and organizing their knowledge better. At such phases, re-structuring may seem like lack of progress although it is in fact a preparatory phase for more progress (Ellis, 1997). This is an area that needs further research.

Examining the scores of the paragraph writing task is also revealing. The three stages seem to use the GSL 2,000 level words in the same way. No statistical difference is noted between any two stages. This further emphasizes the earlier observation that high school graduates do not master the GSL words. At university, they also fail to master them because focus is much more placed on the AWL. The students' paragraphs also show that students' receptive vocabulary knowledge may not translate into vocabulary production in authentic language use. The percentages of the AWL in the writing of all students are remarkably low. Notably, the scores on the gap-fill productive task do not predict the students' performance in the paragraph-writing task. For example, the preparatory year students scored almost 50% on the gap fill exercise, but in actual writing the percentage of the AWL was only 2.4%. This supports the earlier observation that receptive vocabulary knowledge may not translate into output in actual production tasks. It also emphasizes that controlled productive tasks may not reveal how students perform in free production.

The third and last study question examines the effect of instruction/language use on lexical development. As explained earlier, the English Department students are pushed to produce quality output unlike their Interior Design and Architecture counterparts. This difference influenced lexical development at the second year of study. The scores of the English Department students were significantly better than the Interior Design and Architecture students at the GSL words receptively and productively. However, the scores were almost equal at the fourth year of study. It seems that lexical development improves with language exposure, but this improvement is accelerated at earlier stages when quality output is emphasized. Other alternative factors may be considered including the decreased number of language courses at the third and fourth year of the English Department program or perhaps lack of motivation to enhance one's language competence after having secured a position at the Department. A further study may be useful here.

A final observation with respect to the last question is that the AWL scores for the second and fourth year students at the two departments did not reflect any statistical difference in three receptive and productive tasks. Again, the AWL seems to operate differently than the normal trends. It is obvious that the emphasis on the AWL at university settings is so influential that it overrules the role played by standard word frequency counts. In other words, frequency of exposure matters more than frequency counts. In addition, the trend of placing emphasis on the AWL at university settings since the preparatory year program may need to be re-considered. It is important to address the GSL words as well for students to meet the language requirements for the university courses taught in English.

## **9. Limitations of the Study**

The limitations of the present study are related to three aspects of the study sample. First, the study was conducted on 150 university students. It will be interesting to seek a larger sample to ensure better generalizability of the results. Second, Saudi universities include separate campuses for men and women, and the present study was applied on the women campus solely. It would be intriguing to apply the study on the men campus as well and see if the findings hold for them. Finally, the study sample included students from different Arab nationalities, but the majority of these students were educated in Saudi high schools. Hence, future studies may attempt to assess the vocabulary knowledge of university Arab students in other countries in order to compare their vocabulary knowledge with the present findings.

## **10. Conclusion**

The present study has shed the light on significant findings. First, it is very important to assess the vocabulary knowledge of EFL students at school and university levels in order to improve the educational and support services offered to them. It is clear that exposure to English during schoolyears is not a reliable predictor of language competence. Vocabulary knowledge may serve as a better predictor, and, hence, vocabulary instruction and assessment need careful consideration. Second, high school and university students in Saudi Arabia need extensive language support due to their unsatisfactory vocabulary scores noted in the present and earlier studies. It has been noted that the students require further language training even towards their graduation. An important

part of the training will be to enhance their vocabulary size, and to support them to use the newly acquired lexis in real language production. Third, continuous language exposure seems to enhance lexical competence. Hence, the present study does not recommend the teaching of university courses in the first language. The study, however, highlights that students may need stronger linguistic support with language and content courses, a recommendation that university professors need to be aware of and develop effective instructional strategies to address it. Finally, the results of the present study regarding the influence of pushed output on lexical competence are not conclusive. However, they suggest that emphasis on quality output may accelerate vocabulary development at initial years of university education.

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## Appendix A

Thank you for accepting to participate in this research study.

Kindly, note that all your answers will remain confidential and will only be used for research purposes.

Fill in the gaps with words from the box. Each word must be used only once. There are TWO extra words in the list.

wish	seat	decision	memory	knowledge	opportunity
season	distance	character	population	nation	article

- 1) It was my mother's greatest \_\_\_\_\_ that one of her children would become a doctor, but it did not come true.
- 2) The company will make a \_\_\_\_\_ soon. They are still thinking about what to do.
- 3) I've been offered the \_\_\_\_\_ of working in India for a year, but I'm not sure whether to take it or not.
- 4) I have no \_\_\_\_\_ of how a car works. I never learned how to drive.
- 5) The \_\_\_\_\_ of Egypt is over 90 million people.
- 6) He travels quite a long \_\_\_\_\_ to work every day.
- 7) She has a food \_\_\_\_\_ for words. She remembers them really well.
- 8) There was an interesting \_\_\_\_\_ in the newspaper yesterday.
- 9) Why don't you sit down on that \_\_\_\_\_ over there while we're waiting?
- 10) One of the joys of being a father is watching the child's \_\_\_\_\_ develop.

fashion	journey	companion	rice	ambition	cottage
stomach	loan	excuse	reward	patience	flavor

- 1) Eating too much can be bad for your \_\_\_\_\_.
- 2) They have a good \_\_\_\_\_ for being late-their car wouldn't start.
- 3) His \_\_\_\_\_ is to run his own business. He was always dreaming of becoming a businessman.
- 4) It's a two-hour train \_\_\_\_\_ from York to London.
- 5) The dog has been her close \_\_\_\_\_ these part ten years. She had no one else around.
- 6) My mother used to give me flowers as a \_\_\_\_\_ when I was good.
- 7) We will eat \_\_\_\_\_ and fish today.
- 8) They live in a country \_\_\_\_\_, with a small garden around.
- 9) I can't say the food was special. It had no \_\_\_\_\_ at all.
- 10) You have to have \_\_\_\_\_ when you're dealing with young children. They can really be mean.

community	welfare	method	sequence	generation	tradition
factor	acknowledgement	challenge	violation	source	debate

1. This gentleman is very well-known in the local \_\_\_\_\_.
2. Price will be an important \_\_\_\_\_ in the success of this new product.
3. It is a \_\_\_\_\_ in many countries to have the weekend on Saturday and Sunday.
4. In a \_\_\_\_\_, some people speak for a subject and others speak against it.
5. The \_\_\_\_\_ who were children forty years ago are now business people and politicians.
6. Having a good family and friends is a \_\_\_\_\_ of happiness.
7. The school is very concerned for the \_\_\_\_\_ of the missing child.
8. Trains are still a safe \_\_\_\_\_ of travelling.

9. Is there a particular sequence in which you have to answer these questions? Can't you start with the ones you like?

10. My brother was stopped for a driving \_\_\_\_\_. He was driving too fast.

### Appendix B

Thank you for accepting to participate in this research study.

Kindly, note that all your answers will remain confidential and will only be used for research purposes.

**Complete the missing words. The beginning of every word is given to you.**

*Example*

The students are having their final ex\_\_\_\_\_ next week.

*Answer: exam*

- 1) We couldn't find a space for our car near the train sta\_\_\_\_\_.
- 2) I have great res\_\_\_\_\_ for his ideas, although I don't agree with them.
- 3) "No, go that way," I said, pointing in the other di\_\_\_\_\_.
- 4) I did not expect their visit. It was a complete sur\_\_\_\_\_.
- 5) Where are you planning to go this eve\_\_\_\_\_? Would you care for a party?
- 6) The doctor said that she was making good pro\_\_\_\_\_ and she would be feeling much better within a week.
- 7) If you don't allow your child any free\_\_\_\_\_, he or she will never become independent.
- 8) She did not believe that her mar\_\_\_\_\_ would last so long. She has now been with her husband for more than 20 years.
- 9) He joined the ar\_\_\_\_\_ because he had always wanted to become a soldier.
- 10) This report stresses the im\_\_\_\_\_ of fresh food for our body. So, make sure to choose what to eat carefully.
- 11) There is no need for des\_\_\_\_\_. We can always try again and have hope for a better future.
- 12) This train crosses the bo\_\_\_\_\_ between France and Spain.
- 13) The writing teacher asked us to write a com\_\_\_\_\_ on our favorite friend.
- 14) They had a qua\_\_\_\_\_ three years ago and haven't spoken to each other since.
- 15) 15. He has been ill with high fe\_\_\_\_\_ for over two days. I hope he'll get better soon.
- 16) His rep\_\_\_\_\_ was destroyed when his lies were discovered.
- 17) You'll never work at this school if you don't have the right qua\_\_\_\_\_.
- 18) We need to buy a new cur\_\_\_\_\_ for the bedroom. The one hanging at the window now has a cut.
- 19) Please, fill in the form and send it to this address at your con\_\_\_\_\_.
- 20) He was a young sailor on his first sea voy\_\_\_\_\_. The ship captain was kind to him.
- 21) Users have fast and easy ac\_\_\_\_\_ to the system. They can open everything in less than a minute.
- 22) Letters were an important means of com\_\_\_\_\_ in the past, but very few people use them now.
- 23) He said that it would be better if we made more use of the en\_\_\_\_\_ provided by the sun. Oil may run out any time.
- 24) The player will be taking a rest for a month because of an arm in\_\_\_\_\_. He is not feeling well now.
- 25) When I left school I wanted to travel, but I had no money so I had no op\_\_\_\_\_ but to work.
- 26) The ra\_\_\_\_\_ of men to women at the meeting was ten to one.
- 27) Can you tell me a sum\_\_\_\_\_ of the book? I don't have time to read it.
- 28) Could you turn the vol\_\_\_\_\_ of the music down, please? I'm trying to sleep.
- 29) I need to sit for a test to get a driving li\_\_\_\_\_. I cannot drive without one.

30) When I visit a new country, I always like to learn about the language and cul\_\_\_\_\_.

**Appendix C**

Thank you for accepting to participate in this research study.

Kindly, note that all your answers will remain confidential and will only be used for research purposes.

Write a paragraph on the following topic. Your paragraph must have a minimum of 12 sentences.

Topic: Why are more people trying to learn English every day?

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