THE RELATIONSHIP BETWEEN MORPHOLOGICAL AWARENESS AND ENGLISH VOCABULARY ACQUISITION OF SAUDI FEMALE STUDENTS AT KING SAUD UNIVERSITY

by

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The Relationship between Morphological Awareness and English Vocabulary Acquisition of Saudi Female Students at King Saud University

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Abstract

The present study examined the relationship between English vocabulary size and morphological awareness of Saudi female students at King Saud University. The participants in this study were 89 students divided into two sections: section one (40 students) and section two (49 students). The students were finishing a two-year EFL program, which prepares them for a three-year Arabic–English/English–Arabic translation program. In order to determine the relationship between vocabulary size and morphological awareness, it was necessary to first measure these two variables in the participants in the study. Two types of tests were used: the Vocabulary Size Test and the Morphological Awareness Test. The Vocabulary Size Test was used to estimate the vocabulary size of the students, which could range from 1,000 to 14,000 word-families. The results showed that the vocabulary size in both sections of students was over 4,000 word-families. The Morphological Awareness Test included two subtests: the Morphological Structure Test and the Morpheme Identification Test. They were used to estimate the level of morphological awareness. The findings showed that the students' overall morphological awareness level was relatively low. To answer the research question concerning the relationship between English vocabulary size and morphological awareness, correlational analyses were done to test for a relationship between vocabulary size and morphological awareness scores on the two tests in the two sections of classes. The results of the correlation tests indicated that there was no relationship between the two variables in both sections. Possible reasons for the lack of correlation between the two variables are discussed and implications for teaching vocabulary are considered.

Chapter One

Introduction

The majority of students in Saudi Arabia are under the assumption that learning the English language can be done by focusing more on learning its grammar. Thus, students spend many years studying English grammar without reaching the desired level of fluency and proficiency. Grammar is only one pillar of any language. Certainly, the importance of grammar cannot be denied. It is essential to formulate comprehensible and clear sentences. Yet, without a good-sized vocabulary, one's means of expressing ideas will be limited. A good vocabulary is required for a good command over any language. The English language is no exception, with its large vocabulary size and diverse grammatical rules.

The number of English words is growing every day. The compendious *Oxford English Dictionary* lists 616,500 word-forms including headwords of main entries, combinations, derivatives, and phrases (Elert, n.d). The number of words in *Webster's Third International Dictionary* (1963), the largest non-historical dictionary of English, has been investigated by two studies (Dupuy, 1974; Goulden, Nation & Read, 1990). In order to estimate the most accurate number, the researchers excluded compound words, archaic words, abbreviations, proper names, alternative spellings, and dialect forms. Both studies agreed that the *Third International Dictionary* includes 54,000 word families. Nagy and Anderson (1984) stated that people are exposed to roughly 88,700 different word families while in school between Kindergarten and grade 12.

Bauer and Nation (1993) investigated the importance of word families and word forms in order to find a systematic approach to vocabulary teaching and to determine the vocabulary load of texts. They define a word family as a base word and all its derived and inflected forms that can be understood by a learner without having to learn each form separately. For example, the word family for the word *develop* includes *develops, developing, developed, developable, undevelopable, developers,* and *undeveloped*. A word form is a particular form of a lexical item occurring in certain grammatical environments. For example, the singular *student* and its plural *students* are two different word forms representing the single lexical item *student* in different grammatical circumstances. The derived and inflected words are the different forms of the base word. If a learner knows the meaning of the base word in the word family, he can easily understand the meaning of the rest of the words in the family. In this way, the learner can increase his knowledge of any given word family by developing his morphological knowledge. Some researchers consider any word and its different forms as separate items while others count these as one word. For example, *house, housing,* and *houses* can be regarded as one word by some researchers because they are members of the same family, while other researchers may count them as three separate words. These differences in defining what counts as a member of the same family are due to different purposes of research and the constraints governing them.

English is the lingua franca of the present time. Many English words are derived from other languages, such as Latin, German, Greek, Arabic and many others, which results in English possessing a massive vocabulary size. This expansion is reinforced by

the global, economic, financial, scientific, and military position of the English-speaking countries, especially the U.S. Due to the continued growth in the fields of economics, science, and the military, more vocabulary will be needed to describe and refer to new inventions and discoveries. Thus, every student aiming to acquire a substantial vocabulary is advised to expand his knowledge and read as much as possible.

Learning the entire English vocabulary would be a goal that is far beyond the capability of English language learners and even native speakers of English. Levine and Reves (1990) believe that one of the biggest obstacles that students of English as a foreign language (EFL) face is the lack of adequate vocabulary, which hinders text comprehension. According to Levine and Reves, a well-known approach to vocabulary learning is based on the belief that vocabulary can be acquired only through reading instruction. That means students should be exposed to unfamiliar texts with a significant amount of new words in order to acquire vocabulary (both specialized terminology and general vocabulary). However, many students do not prefer this approach since it leaves them with only partial comprehension of the texts. Furthermore, it is difficult to apply reading skills and strategies if the students' understanding of the texts is limited. Thus, the need for learning strategies that can help students to decode unfamiliar words in any text is urgent. O'Malley, Chamot, Manzanares, Russo and Kupper (1985) define learning strategies as "any set of operations or steps used by a learner that will facilitate the acquisition, storage, retrieval or use of information" (p.23). Brown (1994) referred to learning strategies as specific "attacks" that language learners apply when faced with a problem, that is, cognitive steps applied to facilitate language acquisition.

Understanding its importance, researchers have conducted a number of studies to find out the most effective strategies for learning vocabulary. One method is the direct instruction of new words (McKeown, Beck, Omalson, & Pople, 1983). In this method, the teacher explicitly teaches new vocabulary as a part of the lessons. Another method is learning vocabulary from context. To encourage learning words from context, the teacher exposes her students to a variety of texts and encourages the students to pay attention to the unknown words and try to guess their meanings using clues from the context. Sternberg (1987) argues that most vocabulary is learned from context. Still another method is applying morphological knowledge to infer the meanings of new words. In this method, students apply morphological analysis when they read or hear a complex word that they have never encountered before. They analyze the words to see if they recognize any of the pieces (White, Power, & Sheida, 1989). Because English has borrowed many words from different foreign languages, students should learn how to analyze the different parts of any new word. Mastering such skills will equip students with a useful tool to decode most unfamiliar words in a given text (Nation, 2001). O'Malley and Chamot (1990) consider all three strategies to be learning techniques used for processing information in order to enhance learning, comprehension, and retention. Other researchers (Morin, 2003; McBride-Chang, Wagner, Muse, Chow, & Shu, 2005; Schiff & Calif, 2007) have also suggested that using morphological cues for inferring meaning can help with L2 learning.

The term *morphology* is derived from the Greek word *morph*, which means shape. In linguistics, morphology refers to the mental system involved in word formation or to

the branch of linguistics that deals with words (their interior structure, and how they are formed) (Aronoff & Fudeman, 2005). Morphological awareness refers to the ability to reflect upon and manipulate morphemes and to control word formation processes (Koda & Zehler, 2008). According to Al Farsi (2008), morphological analysis is the learners' ability to learn morphemes and morphemic boundaries by disassembling complex words into meaningful parts and reassembling the meaningful parts into new meanings. For example, the word *kingdom* has two morphemes (*king* and *-dom* meaning condition, state, and dignity). New words, such as *wisdom*, *martyrdom*, and *chiefdom*, can be generated using the morpheme *-dom*.

Koda and Zehler (2008) believe that there is a strong relationship between morphological awareness and the ability to read in either the first language (L1) or second language (L2). Furthermore, Kuo and Anderson (2006) believe that morphological awareness can make students more aware of the writing system by recognizing spelling and phonological irregularities. Recently, Koda and Zehler have investigated the importance of morphological awareness as a key element of vocabulary knowledge in L1 reading. According to Nurhemida (2007), a few studies have examined the role of morphological awareness in L2 vocabulary development. These studies concluded that morphological awareness may be a key element in vocabulary acquisition. One such study was conducted by Wysocki and Jenkins (1987). They found that the students' ability to learn new words originates from forming new words by using previously acquired roots.

This study aims to investigate the relationship between morphological awareness and English vocabulary size. Moreover, the study synthesizes findings from previous studies that were conducted to investigate the relationship between morphological awareness and vocabulary size and how students decode morphologically complex words. Finally, the study focuses on the morphological development of EFL students and their vocabulary size. The main questions that guide this research are:

- What is the English vocabulary size of Saudi female students at King Saud University?
- What is the level of morphological awareness in English that Saudi female students at King Saud University possess?
- Is there a relationship between morphological awareness in English and the English vocabulary size of Saudi female students at King Saud University?

In the next chapter, the theoretical constructs of morphological awareness and vocabulary size will be discussed followed by a review of the research conducted on these two constructs. A description of the procedures used in the study and the subjects are presented in Chapter Three. Chapter Four provides a detailed analysis of the data and findings. Chapter Five includes a discussion of the findings. Chapter Six includes a summary of the study and pedagogical implications, limitations of the study, and suggestions for further research.

Chapter Two

Literature Review

Acquiring a good-sized vocabulary is an important part of successful language learning. It is essential for accessing background knowledge, expressing ideas, and learning about new concepts. Adequate vocabulary size is a key component for the development of the communication and literacy skills that are needed to succeed in school (Rowe & Goldin-Meadow, 2009). Vocabulary building is also a top priority and an ongoing process for both L1 and L2 instruction (Belisle, 1997). According to Nation (2001), the process of acquiring new vocabulary includes establishing word knowledge through noticing, retrieving and generating strategies. Morgan and Rinvolucri (2004) describe the process of vocabulary acquisition as a branching process rather than a linear one. Moreover, they believe that it is a personal process that is greatly influenced by one's past, present, and future experiences. In order to establish the research questions for this study, this chapter highlights studies that have been conducted on the importance of vocabulary size and vocabulary levels. Afterward, the relationship between vocabulary knowledge, reading comprehension, and text coverage will be defined and discussed. Finally, a discussion on morphological awareness and its relationship with vocabulary size will be presented.

Vocabulary Size and Vocabulary Levels

According to Nation (1996), one of the biggest obstacles facing many adult English language learners is acquiring an adequate vocabulary size. Even though students

spend years studying English, their vocabulary size is much less than 5,000 word-families. However, a study carried out by Milton and Meara (1995) showed that the students' vocabulary size can increase enormously if learning takes place in the second language environment. The participants in the study were 53 European students who joined the Lingua and Erasmus program, a study abroad program for English as a foreign language at a British university. Most students were studying management science and some were studying English language and literature. The results revealed that 2,500 words per year was the average growth rate for their vocabulary size. This growth rate almost resembles the growth in vocabulary size which takes place in first language development during adolescence (Milton & Meara, 1995, as cited in Nation, 1996). This means that exposure to a second language in a naturalistic setting (i.e., in the target country) can result in nearly the same rate of growth for second language learners as native speakers.

Nation (1996) argues that words should be categorized based on their frequency levels. Frequency level refers to how often the word occurs in normal use of the language. Since the English language has a large number of words, it is impossible for EFL students to learn them all. By categorizing the words into lists according to their frequency levels, students can focus their efforts on learning the high frequency words first. Chiarello (1988) defined word frequency as "the *sine qua non* among variables that affect basic word recognition" (p.49). For example, the word *the* occurs very often in written and spoken English. It occurs so frequently that about seven percent of the words on a page of written English are a repetition of the word *the*. Thus, the word *the* is a high

frequency word (Waring & Nation, 1997). On the other hand, words like *maunder*, *ecumenical*, and *bawdy* are considered low frequency words since they rarely occur in normal written or spoken English. Between the two ends of the frequency scale, the rest of the English words differ in their ranking according to their frequency levels. Such a distribution is known as a *Zipf* distribution, which paved the way for Zipf's law. To explain Zipf's law, Milton (2009) stated that:

> Zipf's law allows the relationship between the rank of the word in a frequency list and the number of times it occurs to be described more systematically and graphed up. Zipf's law states that in a corpus of natural language, the frequency of a word is roughly inversely proportional to its rank in the frequency table. So, the word that is ranked first in the table is likely to occur about twice as often as the word ranked second. (p. 45)

Table 2.1 Ranks and Frequencies of Words in English and French

Rank	Most frequent words in English	Frequency in English corpora	Most frequent words in French	Frequency in French corpora
1	the	6,187,267	de	68,373
2	be	4,239,632	le	42,419
3	of	3,039,444	être	26,897
4	and	2,687,862	un	26,613
5	a	2,186,369	avoir	23,570
6	in	1,924,315	â	23,475
7	to	1,620,850	et	23,325
8	have	1,375,636	les	19,230

Table 2.1 shows the law doesn't accurately predict the frequency in terms of numbers but does reflect the overall ranking of high-frequency words in English and French. For example, the word *the* occurs in the English corpora about six million times. According to Zipf's law, the word *the* is likely to occur about twice as often as the word *be*. For instance, the second ranked words in both languages occur 50 percent more frequently than what the law predicts. In other words, if Zipf's law were applied here, the frequencies of the words *be* and *le* should be about three million and 34,000, respectively. This table shows a very clear relation between a word's frequency and its position in the rank table. The relationship between the rank and the frequency level can be summarized as follows: a few words of the language are used more frequently than the others and make up a large percentage of text coverage.

Vocabulary Knowledge, Reading Comprehension and Text Coverage

The relationship between vocabulary knowledge and reading comprehension is symbiotic, meaning that vocabulary knowledge can lead to reading comprehension, and reading comprehension can lead to vocabulary knowledge and growth (Hu & Nation, 2000). Chall (1987) argues that this relationship happens at different times for young native speakers of English. At early ages, young native English speakers rely on their vocabulary knowledge to achieve reading comprehension. At an older age, a native speaker of English enters school with a vocabulary size of 5,000 word families. After two to three years of learning to read and after acquiring good reading skills, the relationship will be the opposite. Reading then becomes an essential way to acquire vocabulary. Stahl (1999) found that vocabulary size is directly linked to reading comprehension. Students'

vocabulary knowledge relates strongly to reading comprehension and overall academic success. Students need to know at least a certain percentage of words to be able to comprehend a passage and to decode the meanings of new words when they encounter them (Lehr, Osborn, & Hiebert, n.d.).

Moreover, familiarity with high frequency words will facilitate text comprehension for EFL students since they contribute to a high level of text coverage. Text coverage refers to the percentage of running words in the text known by the readers (Hu & Nation, 2000). A running word refers to a particular instance of a word in a text. For example, if a text contains 1,000 words and a reader's text coverage is 80%, this means that 800 words out of 1,000 words are known, which means that for every five known words there is one unknown word. This would make reading very difficult and would most likely cause a low level of text comprehension.

By knowing the high frequency words, which make up a very large portion of any normal text, students will have a good degree of text coverage, which will lead to improved text comprehension (Milton, 2009). The relationship between text coverage and reading comprehension has been the focus of a number of studies, one of which was conducted by Hu and Nation (2000). They measured the level of comprehension of a fictional text by replacing the low-frequency words in the text with nonsense words to ensure they were unknown. To measure the reading comprehension level, Hu and Nation gave the non-native English speaker participants a multiple-choice reading comprehension test, consisting of 14 items and a written cued recall of the text, twenty-

seven items. To decide what can be considered as adequate comprehension of the text, an arbitrary decision allowing for degree of human error was used. For example, fourteen correct answers out of fourteen multiple-choice questions is obviously adequate, and allowing for human error, twelve or thirteen correct answers out of fourteen is also adequate. With text coverage of 80% (that is, 20 out of every 100 words [1 in 5] were nonsense words), the level of text comprehension was very low. With text coverage of 90%, only 24% of the students had good comprehension of the text. With a text coverage of 95% (1 unknown word in 20), only 25.7% had good comprehension of the text. The study concluded that a reader of a text needs more than 98% of text coverage to be able to read and comprehend the text.

Hu and Nation concluded their study by stating that possessing 98% coverage of the vocabulary in any text is not the only skill or knowledge needed to gain adequate comprehension of the text. Other reading skills should be used along with the 98% text coverage to be able to read a text and comprehend it, such as knowledge of English grammar.

Francis and Kucera (1982) carried out a study to understand the effect of high frequency words and text coverage on comprehension. They gathered 500 texts totaling one million words and classified them according to their level of frequency, creating the Brown Corpus. It is the earliest computerized study of English vocabulary. The words were arranged according to their frequency level, i.e. the first 1,000 words, the second 1,000 words, etc. The texts were carefully compiled and the language used in the texts

was current American English. They collected the texts from a wide variety of sources. In their study, they provided a table showing what proportion of a text is covered by certain numbers of high frequency words.

Table 2.2 Vocabulary Size and Text Coverage in the Brown Corpus

Vocabulary Size	Written Text Coverage
1,000	72.0%
2,000	79.7%
3,000	84.0%
4,000	86.8%
5,000	88.7%
6,000	89.9%
15,851	97.8%

Francis and Kucera found that if a student is familiar with the words at the highest frequency level (the first 1,000), they will have 72% of text coverage. If an EFL learner has a vocabulary size of 2,000 word families, the learner will have 80% of text coverage, which means that one word in every five words (approximately two words in every line) are unknown (Waring & Nation, 1997).

Another study conducted by Carver (1994) investigated the percentage of known words in fiction texts varying in the level of difficulty. Carver stated that in easy material about 0% of the words are unknown. In appropriate material nearly 1% of the words are unknown. In difficult material around 2% of the words are unknown (as cited

in Nation, 2001). In order for EFL learners to acquire vocabulary and increase their vocabulary size, reading materials need to be chosen carefully to ensure that learners encounter new words in the materials they are reading. If the material chosen is too easy, they will encounter 0% new words. If the material chosen is beyond their text coverage level, the percentage of unknown words will be high and will therefore hinder their comprehension. Easy reading material with no new and challenging vocabulary will increase the depth of vocabulary, but not its breadth. The depth of vocabulary refers to how well one knows the meanings of words. Additionally, the breadth of vocabulary refers to the number of words one knows (Lehr, Osborn, & Hiebert, n.d.). Words have various aspects that can facilitate understanding their meaning, such as their literal meaning, their various connotations, the sorts of syntactic constructions they occur in, the morphological options they offer and a rich array of semantic associates, such as synonyms and antonyms (August, Carlo, Dressler, & Snow, 2005). These various aspects are related to the depth of word knowledge, which is as important as breadth of word knowledge.

Morphemes and Morphology

The term *morpheme* refers to the smallest, visible unit of semantic content or grammatical function of which words are made up (Katamba, 1993). Morphemes can be divided into four general classes: free, bound, derivational, and inflectional morphemes. Free morphemes are those which can stand alone in words such as *dog*, *cat*, and *house*. Bound morphemes must be attached to other morphemes to make sense, such as *un-*, *dis-*, and *ex-*. Derivational morphemes create new words by changing the part of speech or the

meaning, e.g. *legal /illegal.* Inflectional morphemes add a grammatical element to the word without changing its meaning or part of speech, e.g. *book/books*. In English, the same morpheme, -s, can be both inflectional and derivational. For example, the *s* in the word *organizers* is both inflectional and derivational; it changes the verb into a noun and indicates plural form.

Morphemes can be compared to Lego pieces. The same morphemes can be attached to different words to compose new words. For example, the morpheme *un-* can be attached to a large number of words, e.g. *unsafe, unhappy*, and *unorganized*. Yet, some morphemes are limited to a few numbers of words, such as the morpheme *–dom,* which is found in words such as *kingdom*. The roots of complex words of Germanic origin are usually free morphemes, such as the word *festschrift*, a book prepared by colleagues to honor a scholar, often on an important birthday, such as the sixtieth.

Morphology is defined as "the area of grammar concerned with the structure of words and with relationships between words involving the morphemes that compose them" (McCarthy, 2002, p. 144). Arnoff and Fudeman (2005) stated that the study of morphology is a combination of two approaches: analytic and synthetic. A good learner needs to acquire both. The analytic approach focuses on morpheme identification or breaking words down into meaningful parts. For example, *handshake* is a combination of *hand* and *shake*. The synthetic approach involves the process of producing new words by using different morphemes. For example, different morphemes can be attached to the word *achieve*, such as *achieving, achievable,* and *achieved.* So, it could be argued that the analytic approach paves the way for the synthetic approach (Arnoff & Fudeman, 2005).

Morphological Awareness and Vocabulary Size

As discussed earlier, there are three methods for learning vocabulary: direct instruction of new words in classrooms, learning vocabulary from context, and applying morphological knowledge to infer the meaning of new words. Morphological awareness is defined as the recognition of the different parts forming a word (Carlisle, 1995). According to August, Carlo, Dressler, and Snow (2005), many studies have focused on vocabulary and its essential role in reading comprehension, and consequently in maximizing vocabulary size (Anglin, 1993; Carlisle & Nomanbhoy, 1993; Muter & Diethelm, 2001; Verhallen & Schoonen, 1993; Wang & Geva, 2003).

A study conducted by Anglin (1993) showed that between the first and the fifth grade, children learn new words by applying their knowledge of prefixes and suffixes at more than three times the rate at which they learn new root words. There are two reasons behind this enormous difference in the rate of growth in these two categories of morphemes. The first reason is the types of reading materials these students are exposed to. Indeed, as students get older, their reading skills develop and they encounter more texts containing larger numbers of low frequency words. The second reason is that they become more aware of the internal structure of complex words. Angling (1993) reported that the relationship between vocabulary knowledge and morphological awareness around the fourth grade could be attributed to the learners' knowledge of derived words and their use of morphological problem solving between first and fifth grade.

Another way that morphological awareness may lead to comprehension, which eventually will increase vocabulary size, is by facilitating the process of breaking down

morphologically complex words. When encountering morphologically complex words in the text, students apply their morphological knowledge to break down the complex words into meaningful morphemes as a way to better understand the word meaning (Wagner, Muse, & Tannenbaum, 2006). Nagy, Berninger, and Abbott (2006) stated that by eighth and ninth grade, students have gained a significant amount of vocabulary, and their reading comprehension has developed due to their ability to decode morphologically complex words.

As mentioned earlier, one of the challenges that ESL/EFL students may face when learning the English language is the acquisition of substantial vocabulary. Vocabulary is an important factor in comprehending any text. Having a large vocabulary will pave the way to comprehending a wider range of reading materials, which will also improve students' ability to communicate through speaking, listening, and writing. Researchers have stated that significant growth in vocabulary can occur if learning takes place in a second language environment. Moreover, categorizing the words according to their frequency levels will facilitate the acquisition of new words and assist the students to prioritize their tasks of learning the most frequent words. By doing so, students can acquire the basic vocabulary necessary to read and understand reading materials. Acquiring high frequency words will help students to understand more complex texts because they make up a large portion of any text, thus providing an enormous amount of text coverage. This relationship between vocabulary knowledge and reading comprehension has been the subject of many studies. One of them has revealed that the

relationship is symbiotic (Nagy, Herman, & Anderson, 1985). In other words, acquiring one of them will lead to acquiring the other.

The studies reviewed here have focused on morphological awareness and its contribution to increasing vocabulary size. One of the biggest goals for ESL/EFL is to acquire an adequate vocabulary size. Nation (1996) believes that categorizing the word based on their frequency levels and focusing on learning the high frequency words first will facilitate the process of vocabulary acquisition. Many studies have investigated the relationship between vocabulary knowledge, reading comprehension, and text coverage. Hu and Nation (2000) concluded that vocabulary knowledge contributes to reading comprehension, and reading comprehension increases the level of vocabulary knowledge. They also believe that knowing high frequency words will facilitate text comprehension, because they provide a high level of text coverage. Another relationship that was discussed earlier was the relationship between morphological awareness, text comprehension, and vocabulary size.

In the next chapter, a methodology for investigating the relationship between vocabulary size and morphological awareness will be presented with detailed information about the participants and the research instrument.

Chapter Three

Methodology

Introduction

Morphological awareness makes a unique contribution to vocabulary growth and acquisition. Morphological analysis contributes to word decoding and reading comprehension via the identification, analysis, and description of the structure of a new word, as well as its morphemes and other units of meaning (Elbro & Arnbak, 1996). This mental process eases the task of guessing the meaning of new words in any text. If the student encounters an unfamiliar word in a text, their morphological knowledge can help them to analyze the word by breaking it into its morphological components, which will facilitate guessing its meaning. For example, the word *unchanged* consists of three morphemes; *-un, change,* and *-ed.* The morpheme *-un* means ‘not’ and the morpheme *change* is a verb that means to become different. The last morpheme *-ed* indicates the past tense. By combining the three definitions, students can guess the meaning of the whole word. By dividing the words into meaningful parts, the task of guessing the meaning is much easier.

Research Questions

This study focuses on the relationship between morphological awareness and vocabulary acquisition in English of Saudi female students at King Saud University. The

goals of the research and research questions addressed in this study have already been presented in Chapter One. For easy reference, the research questions are repeated here:

- What is the English vocabulary size of Saudi female students at King Saud University?
- What is the level of morphological awareness in English that Saudi female students at King Saud University possess?
- Is there a relationship between morphological awareness in English and the English vocabulary size of Saudi female students at King Saud University?

Participants

The participants in this study were fourth semester female students who were finishing a two-year EFL program in the College of Languages and Translation at King Saud University, Riyadh, Saudi Arabia. This program prepares the students for a three-year Arabic–English/English–Arabic translation program. In this program, students are expected to develop skills in English reading, writing, speaking, and listening. As part of the English program, students take vocabulary classes in order to increase their vocabulary and to equip them to succeed in their subsequent academic studies.

According to the King Saud University homepage, the College of Languages and Translation was first established in 1977 as a branch of the College of Arts. The college offers ten bachelor degrees for males in ten languages: English, French, German, Spanish, Russian, Japanese, Farsi, Hebrew, Italian, and Turkish. For females, the college

only offers two languages: English and French. The female program is a five-year program, and it consists of preparation in English or French, preparation in the Arabic language, and theoretical and pragmatic training in written and spoken translation. As a graduation project, students must choose a book, Arabic or English, and translate a part of it. The subject of the book should be relevant to applied linguistics, theoretical linguistics, law, science, religion, commerce, or any other topic of interest. Before starting the translation, the chosen book must be approved by the student's adviser. Then, the students are assigned to translate ten thousand words, around fifty pages, of the chosen book.

The participants in the present study were 89 female students enrolled in two sections. Section one was 40 students and section two was 49 students. The first language of these students is Arabic. All participants were students from the College of Languages and Translation. Since the education system in Saudi Arabia is divided by gender, choosing female students facilitated administering the test.

Research Instruments

Two test instruments were used in order to address the research questions: a shorter version of the Vocabulary Size Test (Nation & Beglar, 2007) and the Morphological Awareness Test with its two parts: the Morphological Structure Test and the Morpheme Identification Test (Mc-Bride-Chang, Wagner, Muse, Chow, & Shu, 2005). These tests were used because they perform consistently and reliably and the results are easy to score and interpret.

The Vocabulary Size Test

The Vocabulary Size Test was created by Nation and Beglar (2007) based on the British National Corpus (BNC). It consists of 14 levels of 1,000 words, with the first level consisting of the most frequent word families and the 14th level consisting of the least frequent. The BNC is a 100 million–token corpus consisting of 90% written texts and 10% spoken text. These words were arranged and divided into fourteen levels according to their level of frequency. The division of the words into fourteen 1,000-word-family lists was made using range and frequency data by running the word families through the 10,000,000 words from the spoken section of the British National Corpus. The Vocabulary Size Test was used in order to answer research question number one, what is the English vocabulary Size of Saudi female students at King Saud University?

This test was chosen because it is commonly used in other research focusing on vocabulary size. Moreover, students taking the test would find it is easy to understand the definitions, because the definitions used in the test are based on the 1,000 most frequent words, which makes the definitions clear and unambiguous. In addition, collecting the data and analyzing it is relatively easy, because the test is easy to score and interpret.

The Vocabulary Size Test measures written receptive vocabulary size. The original test contains 140 multiple-choice items, 10 at each 1,000-word family level. A shorter version was used because of time concerns. The shorter version was created by Nation and Beglar (2007), and it contains 70 multiple-choice items, five at each 1,000 word-family level. (See Appendix B for a copy of the adapted test). Because there are

five items at each 1,000 word level, each item in the test represents the knowledge of that level of vocabulary. If a test-taker got every item on the test correct, then it is assumed that that person knows the most frequent 14,000 word families of English. A student's score needs to be multiplied by 200 in order to estimate total vocabulary size out of 14,000 word families. For example, if a student's score on this test was 22 out of 70, his vocabulary knowledge is 4,400 word-families (22 x 200), which means he is in the fourth 1,000-word-family level.

On the Vocabulary Size Test, each word appears in the context of a sentence. Students choose the correct definition from four choices. Students have to have a fairly developed idea of the meaning of the word because the correct answer and the distracters usually share elements of meaning (Nation & Beglar, 2007.)

The Morphological Awareness Test

Part one: Morphological Structure Test. The test measures students' ability to produce novel words using different morphemes. For example, many morphemes can be attached to the word *enjoy*, such as *enjoyable*, *enjoys*, and *enjoying*. The original test was created by McBride-Chang, Wagner, Muse, Chow, and Shu (2005) to measure the morphological awareness of children in kindergarten and second grade. In order to measure the morphological awareness of the adult participants in this study, a modified version of the Morphological Structure Test was used. The modifications were made by this researcher to make the test more appropriate for the age group of the participants. The original test consists of 20 scenarios, which are orally presented in two to four

sentence stories. Then, children were asked to produce words for the objects or concepts presented by each scenario. For example, in one scenario, a teacher states, "*Early in the morning, we can see the sun coming up. This is called a sunrise. At night, we might also see the moon coming up. What could we call this?* The correct response for this item is *moonrise.* Fourteen of the stories required responses involving morpheme compounding, while the remaining six items involved syntactic manipulations (McBride-Change, Wagner, Muse, Chow, & Shu, 2005.)

The modified version of the test consisted of ten items. Each item included a frame sentence in which the inflected word was embedded. Then the students were asked to use the frame sentence to create a new word that fit the provided scenario. The students' performance on this test was considered to be an indicator of their level of awareness of the relationships between words and how words relate to each other in a sentence. In addition, it is also an indicator of the participants' awareness of the relationships within words. Students demonstrated their knowledge of the word structure and how morphemes relate to each other with a word. (See Appendix C for a copy of the adapted test.)

Part two: Morphemes Identification Test. The Morpheme Identification Test was designed to measure the students' ability to analyze and break down complex words into smaller meaningful parts. The original test consisted of 13 test items. For each item, the researcher orally labeled two different pictures for the child and then the researcher provided a word or phrase containing the target morpheme for the child. Children were asked to choose from the two pictures the one that best corresponded to the meaning of

that morpheme. For example, from two pictures, one showing *the color blue* and the other *he blew out some air*, the child was asked to select the one that contained the meaning of the morpheme *blue* in *blueberries*.

In the current study, the original test was modified by the researcher to make it more appropriate for university students. The modified version of the test consisted of ten complex words. The students were asked to give the meaning of the word, divide it into meaningful parts, and give the meaning of each part. (See Appendix D for a copy of the adapted test.)

Procedure

Prior to using an adapted form of the Morphological Awareness Test in the current study, a request for permission was sent to Cambridge University Press and approval for using the test was given. (See Appendix E for a copy of the approval.) The permission to use the Vocabulary Size Test was sent to Mr. Paul Nation via email, who approved using the test in this study (see Appendix F for a copy of the approval). A letter asking for permission to conduct the study along with copies of the two tests were submitted to the dean of King Saud University, Olaysha Campus for Girls**.** After permission was given,, two sections were assigned to participate in the study. In each section, the students were informed about the study and asked for their consent, knowing that participation in this study would not affect their academic grades. The researcher introduced herself to the students and gave a brief presentation about the study and how to take the tests.

The first page of the test included a note for the student stating that participation in this study would not affect their grades in any way and their confidentiality and anonymity were assured. After the introductory paragraph, a questionnaire was included to find out background information about the participating students. The students were asked about their reason for choosing The College of Languages and Translation, their plans after graduation, how they had learned vocabulary, and how they continued to increase their vocabulary size. Then, the researcher read the instructions and modeled the task for the students. Any questions regarding the process of taking the test were answered before the test was given. The students were encouraged to ask the researcher any question regarding the process during the test. There was no time limit. After finishing the test, the students submitted their papers to the researcher.

Data Analysis

Since the research questions in this study lend themselves more to quantitative than to qualitative analysis, descriptive statistics and other statistical tests were used to help summarize and describe data that had been collected. To answer the first research question, which investigated the vocabulary size of Saudi female students at King Saud University, descriptive statistics on the Vocabulary Size Test for the two class sections were calculated. Then an independent samples t-test was conducted to test for possible mean differences between the two sections.

To answer the second research question concerning the level of morphological awareness of English in Saudi female students at King Saud University, descriptive

statistics of section one and section two were calculated. After that, an independent samples t-test was conducted to test for the mean differences between the two sections on the Morphological Structure Test and the Morpheme Identification Test.

To answer the third research question concerning the strength of the relationship between morphological awareness and vocabulary acquisition in Saudi female students at King Saud University, several Pearson product-moment correlations tests were performed. Correlations between Vocabulary Size Test and Morphological Structure Test and between the Vocabulary Size Test and the Morpheme Identification Test were performed separately for each class section.

In the next chapter, Chapter Four, the results of the Vocabulary Size Test, the Morphological Structure Test, and the Morpheme Identification Test will be presented. Moreover, the questions asked in this study will be answered.

Chapter Four

Results

This chapter reports the results of the data analysis with illustrative tables. It also provides detailed information concerning the frequency and the percentages of the scores on the two types of tests in order to answer the research questions. The 89 female Saudi university students who participated in the study were divided into two sections. The first section included 40 students, which represent 45% of the population, and the second section included 49 students, representing 55% of the population. Both sections included students with similar ability levels in English language proficiency and similar academic backgrounds.

Results on the Questionnaire

The questionnaire was designed to investigate background information about the participating students. The questionnaire consisted of four questions: reasons for choosing the College of Languages and Translation, post-graduation plans, methods used to learn vocabulary, and ways of increasing vocabulary. In the first question, the students were asked about the reason for choosing the College of Languages and Translation.

Table 4.1 Reasons for Choosing the College of Languages and Translation

	Frequency	Percentage
My interest	79	88.8%
My parents' desire	2	2.2%
My GPA	3	3.4%
Advice from friends	5	5.6%
Total	89	100%

Table 4.1 shows that the vast majority (nearly 89%) of the students chose the College of Languages and Translation based on their own interest. Only a small minority of students (about 2%) chose the college based on their parents' desire. The rest of the students enrolled in the college based on their grades (GPA, from high-school) and their friends' advice.

The second question in the questionnaire concerned the students' future plans. They were asked about their plans after graduating from the college.

Table 4.2 Post-Graduation Plans

	Frequency	Percentage
Continue higher education	47	52.8%
Get a job in translation field	35	39.3%
Get a job in another field	7	7.9%
Total	89	100%

Table 4.2 shows that 47 students (around 53%) were planning to continue in higher education. The percentage of the students who were planning to get a job in the translation field was 39 % while nearly 8% were planning to get a job in another field.

The third question concerned the methods students use to learn new vocabulary in English on their own.

Table 4.3 Methods Used to Learn Vocabulary

	Frequency	Percentage
Memorization and repetition	36	40.4%
Daily practice	10	11.2%
Speaking with native speakers	7	7.9%
All	36	40.4%
Total	89	100%

Table 4.3 indicates that 36 students (about 40%) depend on memorization and repetition. Some students (nearly 11%) learn new vocabulary by daily practice with their families and friends by engaging in conversations in English. The percentage of students who learn new vocabulary by talking to native speakers of English was almost 8%. A rather high percentage (40%) of the students use all the methods mentioned earlier. One reason for the low percentages for strategies two and three may be the lack of opportunities for using the English language outside the university. Most of the foreign workers who work in public places in Saudi Arabia speak Arabic. The students prefer to speak to them in Arabic to avoid the embarrassment of making mistakes in English. Moreover, the private nature of the Saudi society, which discourages women from talking to strangers, could be responsible for limiting the opportunities of talking to native speakers of English.

The fourth question concerned the ways students increase their vocabulary size in English.

Table 4.4 Ways of Increasing Vocabulary

	Frequency	Percentage
Attending classes only	24	27%
Reading extra material	17	19.1%
Watching TV& movies	36	40.4%
Learning from specialized websites and programs	12	13.5%
Total	89	100%

Table 4.4 indicates that 24 students (27%) depended on attending classes only to increase their vocabulary size. A lower percentage of the students (19%) read extra materials as a way of increasing their vocabulary size. The majority of the students (about 40%)

watched TV and movies to acquire new vocabulary. The percentage of the students who used the Internet and specialized websites and software programs was about 13%. These results show that most of the students preferred watching TV and movies to increase their vocabulary level. This method will assist the students to pick up new words and phrases and improve their passive English vocabulary, but not necessarily active vocabulary.

Before summarizing the data obtained from the research instruments, the reliability of the Vocabulary Size Test and the Morphological Awareness Test, with its two parts, was assessed using Cronbach's alpha. This analysis was performed in order to assess the consistency of results across items within a test. In this assessment, mathematical procedures are used to obtain the equivalent of the average of all possible reliability coefficients (Patten, 2009). If the reliability coefficient of a test is greater than 0.5, it can be concluded that the test is reliable. The reliability coefficient of the Vocabulary Size Test was 0.77, which indicates that the test is reliable. The reliability coefficient of part one of the Morphological Awareness Test (Morphological Structure Test) was 0.76 and the reliability of part two (Morphemes Identification Test) was 0.91, which means that both parts of the test are reliable. The reliability coefficient of the test as a whole, containing 110 items, was 0.85, which indicates that the scores obtained were highly reliable.

The Vocabulary Size Test Results

The Vocabulary Size Test was administered to the two sections of 40 and 49 students. The test consists of fourteen levels in which each level consists of five items, making the total number of items 70 and the total possible score 70 points. The scores at

each level were analyzed and summed across levels. Table 4.5 provides the descriptive statistics of the students' total scores for the Vocabulary Size Test in each section.

Table 4.5 Descriptive Statistics on the Vocabulary Size Test by Class Section

Vocabulary Size Test	N	Mean	Std. Deviation	St. Error Mean
Section 1	40	20.9250	5.5902	.8839
Section 2	49	20.0204	6.2600	.8943

An independent-sample t-test (two-tailed) was conducted in order to test for possible mean differences between the two sections of the same class. As the table shows, the mean difference between the two sections is less than 1 (0.9046). The result of the t-test is reported in Table 4.6.

Table 4.6 Independent-Sample T-Test (Two-Tailed) for the Vocabulary Size Test in Sections One and Two

t-test for Equality of Means					
	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference
Equal variances assumed	.711	87	.479	.9046	1.2720
Equal variances not assumed	.719	86.26	.474	.9046	1.2574

There was no significant difference in the mean scores for the Vocabulary Size Test between section one and section two (t =.711, p =.479). These results reveal that the students in the two sections performed about the same on the Vocabulary Size Test.

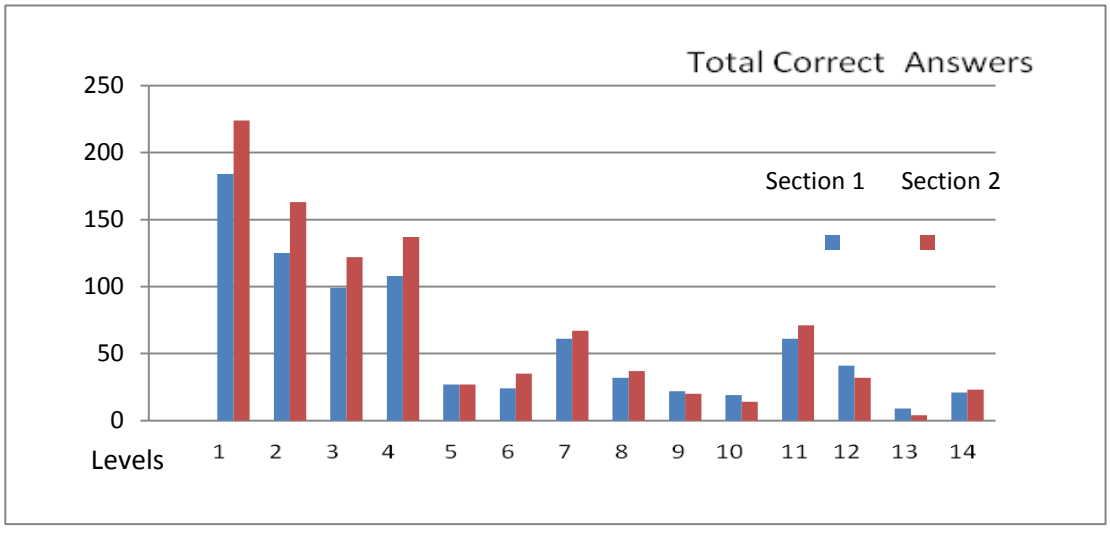
Table 4.7 shows the raw scores and percentages of the Vocabulary Size Test at each frequency level in both sections. These levels represent the knowledge of 14 frequency levels of 1,000 word-families each in the English language. The possible score for each level is five points. To calculate the scores for each section at every level, the scores of the total number of students at that level were summed up. For example, in section one at the first level, the total points of students was 184 points out of 200 (40 x 5 = 200). For section two, the possible score for each level was 245 (49 x5 = 245). Since the total possible scores were different for each section, the percentage of correct answers by level for each section was calculated. For this reason, comparisons between the two class sections should be based on percentages of correct scores, not the raw scores.

Table 4.7 Frequency Scores and Percentages on the Vocabulary Size Test

Section Level	Section 1 N=40	Percentage	Section 2 N=49	Percentage	Total N=89	Percentage
1st	184	92%	224	91.4%	408	91.6%
2nd	125	62.5%	163	66.5%	288	64.7%
3rd	99	49.5%	122	49.7%	221	49.6%
4th	108	54%	137	55.9%	245	55%
5th	27	13.5%	27	11%	54	12.1%
6th	24	12%	35	14.2%	59	13.2%
7th	61	30.5%	67	27.3%	128	28.7%
8th	32	16%	37	15.1%	69	15.5%
9th	22	11%	20	8.1%	42	9.4%
10th	19	9.5%	14	5.7%	33	7.4%
11th	61	30.5%	71	28.9%	132	29.6%
12th	41	20.5%	32	13%	13	2.9%
13th	9	4.5%	4	1.6%	73	16.4%
14th	21	10.5%	23	9.3%	44	9.8%

Table 4.7 shows that the students in section one appeared to perform slightly better overall than students in section two in the Vocabulary Size Test. The students in both sections obtained the highest score in the first level (92% and 91%, respectively). This is to be expected because the first 1,000 words are those that are most commonly used in English. Then the scores started to decrease. At the second level the students in the first section had about 62% correct answers while the students in the second section had around 66%. Then the scores continued to decrease in both sections until they increased at the 11th level, where students in section one had 30.5% and the students in section two had nearly 29%. However, the scores decreased again in both sections in the remaining levels. Figure 4.1 presents the percentage of correct answers at each level for both sections.

Figure 4.1 Percentages of Correct Vocabulary Answers by Class Section



Results from the First Research Question

To answer the first research question, what is the vocabulary size in English of Saudi female students at King Saud University, it was necessary to estimate total vocabulary size. The following calculations were made. Because there are five items sampled at each 1,000 word-family level, each item in the test is representative of the knowledge of 200 word-families. The students' scores were multiplied by 200 to estimate total vocabulary size. For example, the students' mean score in section one is 20.92. This score was multiplied by 200. The vocabulary size of the students in section one is thus estimated to be 4,184 word-families. The students' mean score in section two is 20.02. The mean score was multiplied by 200. The vocabulary size of the students in section two is 4,004 word-families. This difference in the estimated size of vocabulary between the two sections was found not to be significant.

The Morphological Awareness Test Results

The Morphological Structure Test results. The Morphological Awareness Test assesses the degree of English morphological awareness possessed by the participants in the study. The students were asked to produce new words involving morpheme compounding presented by frame sentences. The mean scores refer to the average number of correct scores by the students in each section out of a total of ten points. As the table shows, the mean difference between the two sections is less than 1 (0.9005). Descriptive statistics for the Morphological Structured Test are reported in the Table 4.8.

Table 4.8 Descriptive Statistics on the Morphological Structure Test by Class Section

		N	Mean	Std. Deviation	Std. Error
Section 1	Morphological Structure Test	40	5.1250	2.3225	0.3672
Section 2	Morphological Structure Test	49	4.2245	4.2245	.4012

An independent-sample t-test (two-tailed) was conducted to compare the mean differences of the Morphological Structure Test in section one and section two. The data is reported in Table 4.9.

Table 4.9 Independent-Sample T-Test for the Morphological Structure Test in Section One and Two

t-test for Equality of Means					
	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference
Equal variances assumed	1.624	87	.108	.9005	.5544
Equal variances not assumed	1.656	86.98	.101	.9005	.5439

The data in Table 4.9 shows that there was no significant difference in the scores for the Morphological Structure Test in section one and section two (t = 1.624, p =.108). These results indicate that the scores do not vary significantly between the two sections.

The Morpheme Identification Test results. Descriptive statistics for the Morpheme Identification Test are reported in Table 4.10. The students were asked to analyze ten morphologically complex words and give the meaning of the different morphemes forming the words. The mean scores refer to the average points earned by the students in each section out of 30 points. As the table shows, the mean difference between the two sections is (4.1214) and section one performed better on this test.

Table 4.10 Descriptive Statistics on the Morpheme Identification Test by Class Section

		N	Mean	Std. Deviation	Std. Error
Section 1	Morpheme Identification Test	40	11.5500	6.9317	1.0960
Section 2	Morpheme Identification Test	49	7.4286	6.5955	.9422

An independent-sample t-test (two-tailed) was conducted to compare the mean differences on the Morphemes Identification Test.

Table 4.11 Independent-Sample T-Test for the Morpheme Identification Test in Sections One and Two

t-test for Equality of Means					
	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference
Equal variances assumed	2.866	87	.005	4.1214	1.4380
Equal variances not assumed	2.852	81.69	.006	4.1214	1.4453

The data in Table 4.11 show that there was a significant difference in the scores for the Morpheme Identification Test in section one and section two (t = 2.866, p =.005). Since the two sections are different, the scores across the two sections cannot be combined. Possible reasons for this difference between the two sections will be discussed in Chapter Five.

Results from the Second Research Question

In order to answer the second research question, what is the level of morphological awareness in English that Saudi female students at King Saud University possess?, the scores from the Morphological Structure Test and the Morpheme Identification Test of section one and section two were calculated and analyzed. For the Morphological Structure Test, the mean of section one is 5.12 and the mean for section two is 4.22. For the Morpheme Identification Test, the mean of section one is 11.55 and the mean for section two is 7.42. These results suggest that section one performed better in the Morpheme Identification Test. In section one, the students had a percentage of 51.25% in the Morphological Structure Test while section two had 42.24%, which are not significantly different. In the Morpheme Identification Test section one had 38.5% while section two had 24.76%. However, the overall morphological awareness of the students was limited.

Results from the Third Research Question

In order to answer the third question presented in this study, is there a relationship between morphological awareness in English and the English vocabulary size of Saudi

female students at King Saud University?, scores on the Vocabulary Size Test were correlated with scores on the Morphological Structure Test and scores on the Morpheme Identification Test for each class section. For each correlation, Pearson product-moment correlations were performed.

Table 4.12 Correlations between Scores on the Vocabulary Size Test, the Morphological Structure Test, and the Morpheme Identification Test in Section One

		Vocabulary Size Test	Morphological Structure Test	Morpheme Identification Test
Vocabulary Size Test	Pearson Correlation	1	-.108	.124
	Sig. (2-tailed)		.508	.448
	N	40	40	40

In section one, there was no significant correlation between the Vocabulary Size Test and Morphological Structure Test (r = -108, p = .508). Moreover, there was no significant correlation between the Vocabulary Size Test and the Morpheme Identification Test (r = 124, p = .448). This means that there was no relationship between vocabulary size and morphological awareness in section one.

Table 4.13 Correlations between the Vocabulary Size Test, the Morphological Structure Test, and the Morpheme Identification Test in Section Two

		Vocabulary Size Test	Morphological Structure Test	Morpheme Identification Test
Vocabulary Size Test	Pearson Correlation	1	-.032	.109
	Sig. (2-tailed)		.826	.455
	N	49	49	49

In Section two, there was no significant correlation between the Vocabulary Size Test and the Morphological Structure Test (r = -.032, p = .826). Neither was there a significant correlation between the Vocabulary Size Test and the Morpheme Identification Test (r = 109, p = .455).

To sum up, the results of the present study supported that the students' overall morphological awareness and vocabulary size were limited. There was no significant difference between the two sections in their performance on the Vocabulary Size Test and the Morphological Structure Test. In the Morpheme Identification Test, there was a significant difference in the scores between the two sections; section one performed better than section two. The correlations between the Vocabulary Size Test and the Morphological Structure Test and between the Vocabulary Size Test and Morpheme Identification Test showed that there was no relationship between the students' morphological awareness and English vocabulary size in either section.

The next chapter provides detailed discussion about the results of the Vocabulary Size Test and the Morphological Awareness Test. In addition, the relationship between morphological awareness and English vocabulary knowledge will be addressed.

Chapter Five

Discussion

This study has sought to discover the relationship between English vocabulary size and morphological awareness of Saudi female students at King Saud University. It has also examined the vocabulary size of the participants and the level of morphological awareness. Correlational analyses were used to see if there was a relationship between English vocabulary size and morphological awareness.

The purpose of the questionnaire was to shed some light on the background information about the participating students. The questionnaire included four questions: reasons for choosing the College of Languages and Translation, post-graduation plans, methods used to learn vocabulary, and ways of increasing vocabulary. In the first question, nearly 89% of the students said that they chose the College of Languages and Translation based on their interest. Since those students chose to study translation, they were expected to be motivated in vocabulary learning. Students' motivation is a necessary step toward successful vocabulary learning. In the second question, the students were asked about their future plans after graduation. A rather high percentage (53%) of the students chose to continue higher education and get a job in the translation field. A large vocabulary size is essential in higher education and in translation, especially for EFL learners since they encounter less oral and written language context than native English speakers.

Vocabulary Size

The first research question of the study concerned the English vocabulary size of Saudi female students at King Saud University. The Vocabulary Size Test was used to measure the participants' vocabulary size after studying the English language for two years at the college level. The test score revealed that the participants' vocabulary size in both sections was over 4,000 word-families. In other studies that used this test, the results revealed that undergraduate non-native speakers studying at an English-speaking university have a vocabulary of 5,000-6,000 word-families. Similarly, competent non-native speaking doctoral students have around a vocabulary of 9,000 word-families (Beglar & Nation, 2007). This means that a certain size of vocabulary has to be known to the learners before the students can approach a text comfortably. Furthermore, in order to comprehend a text, readers should be familiar with 98% of the words in the text at any level (Hu & Nation, 2000).

Considering that the vocabulary size of competent undergraduate non-native speakers studying at an English-speaking university is in the range of 5,000-6,000 word-families, the low vocabulary size of the participants in the current study (around 4,000 word families) requires rapid intervention. Therefore, EFL teachers should do everything they can to enlarge the vocabulary size of their students, especially college students. Since they encounter more academic and specialized texts, a large vocabulary size is essential for their academic success. Good vocabulary size is critical for understanding and interpreting written texts. Students in this study are supposed to read different texts in

the foreign language as a part of their translation program. Thus, increasing their vocabulary size should be a top priority.

The importance of measuring vocabulary size is a preliminary step in identifying the amount of vocabulary needed to perform basic tasks at the university level, such as reading a novel, reading newspapers, watching movies, and listening to friendly conversations. Some studies have suggested that the vocabulary size needed for EFL learners to carry on such receptive tasks is a vocabulary size of 8,000 word-families (Beglar & Nation).

There are several factors that might have affected the students' responses in the Vocabulary Size Test. The first factor is that some words in the test are culture-specific. Culture-specific words are words that occur in the target language but are totally unknown in the source language. For example, the word *pub* means a place where people drink and talk. It refers to a drinking establishment, which is part of British and Irish culture. Even though it is one of the 2,000 most frequent words, 73% of the participants may have chosen the wrong answer because it is a culture-specific word. In Islam, any alcoholic drink is forbidden, no matter whether it is wine, beer, gin, or whiskey. It is illegal to sell such drinks in Saudi Arabia. Another example of culture-specific words that appeared in the test was the word *nun,* which refers to a woman following a strict religious life. The term *nun* is applicable to Christianity, Jainism, Buddhism, and Taoism but not to Islam. There are about 25 million Muslims in Saudi Arabia making up 97% of the total population. Therefore, words that are related to other religions may be unknown

to Saudi students. Seventy-four percent of the students did not know the correct definition of the word *nun*.

Moreover, the word *butler,* meaning a male servant, was very confusing for the students. One hundred percent of the students chose the wrong answer. Saudi society is a very conservative and private society. The concept of having a strange man in the house is totally unacceptable in Saudi Arabia and against Islamic law. Also, many students did not know the word *pigtail*, a long rope of hair made by twisting strands together. Nearly 94% chose the wrong definition. The word is a simile of the short, thin and kinked tail of a pig. Pork or ham, or any foods related to pigs or swine, are also prohibited in Islam. There are no farms for breeding pigs in Saudi Arabia. Therefore, the semantic picture was missing. The link between the word and the meaning was not established in the students' lexicon.

The second factor that might have influenced the students' knowledge of vocabulary is that some words are the same in the Arabic language. The percentage of correct responses for these words was high, such as the percentage of correct answers for the word *yoga*, a form of exercise for the body and mind. This word has the same meaning and pronunciation in Arabic. The Arabic word for yoga is يوغا / jəʊgə/ and 83% of the students selected the correct answer. The word *caffeine* is also the same in Arabic. The word for *caffeine* is كافيين/ ˈkaf,ēn/ and about 61% chose the right answer. Even though the word *yoga* is in the eleventh 1,000-word level and the word *caffeine* is in twelfth 1,000-word level, the percentage of correct answers was high due to the similarity in the source language.

However, in some cases there were a few words that were similar in Arabic, but the percentage of correct answers was rather low. For instance, the word *azalea*, a small tree with many flowers growing in groups, is the same in Arabic, but the pronunciation is slightly different. The Arabic word for *azalea* is أزاليا. The difference in pronunciation is in the sound /z/ .The closest sound in Arabic is /ð/and it is pronounced / æðeɪljə/. Even though the word *azalea* is similar in Arabic, only 9% chose the correct answer. Also, the word *emir*, a Middle Eastern chief with power by his own hand, comes from Arabic origin. Yet only 11% chose the correct answer. The Arabic word for *emir* is أمير and it is pronounced / æmîr/. The difference in pronouncing the vowel /æ/ might have confused the students.

The third factor that may have affected the students' knowledge of vocabulary is that some words are well-known words from advertising and the media. For example, the word *puma*, a large wild cat, is one of the low frequency words from the eleventh 1,000-word level, yet about 48% of the students chose the correct definition. The word may be known because of the German shoe and sportswear company, which is officially branded as PUMA. The famous brand logo and the international advertisements may have helped spread the word around the world.

One reason for the students' low vocabulary size is their limited exposure to low-frequency words. Even though the students were enrolled in a two-year program, they still had to finish the three-year translation program in order to graduate from the College of Languages and Translation. As the students progress in their program, they will

encounter more low-frequency words since they will study more specialized fields of translation such as medical, military, administrative, and petroleum translation.

In summary, the Vocabulary Size Test was used to estimate the vocabulary size of the students participating in this study. The results showed that the students in both sections had a vocabulary size of over 4,000 word-families. Many factors contributed to this result. Some of the words in the test were culture-specific, some words were the same in Arabic, and some of them were well-known words based on their use in the media.

Morphological Awareness

The second question of this study concerns the level of the students' morphological awareness in English. In order to determine the answer for this question, the Morphological Awareness Test with its two subtests (the Morphological Structure Test and the Morpheme Identification Test) were used. In section one, the students had a percentage of around 51% in the Morphological Structure Test while section two had 42%. In the Morpheme Identification Test, section one had 38% while section two had about 25%. There was no statistical difference between the two sections on the Morphological Structure Test. These percentages show that the overall morphological awareness of the students was relatively limited. The findings demonstrate that the students' performance in the Morphological Structure Test was slightly better than in the Morpheme Identification Test. Students' better performance on the Morphological Structure Test shows that they have the ability to manipulate and construct new words using free and bound morphemes.

Even though the percentage of correct responses on the Morphological Structure Test was about 46% across both sections, some items in the test resulted in an even higher percentage of correct answers. For example, the students were not familiar with the word *roommate*. Although the concept of roommate is not common in Saudi Arabia since it is a private and closed society where all members of the family live together, 84% produced the correct answer. As another example, *nosering* is not part of the Saudi culture and the students were not familiar with it, yet 55% answered correctly. One reason for the relatively high percentages of correct responses on this test is that the test was administered to adult students rather than children. It should be noted that the Morphological Structure Test asks the students to use analogies to construct novel words. Adult students whose cognitive skills are well developed may be better problem-solvers and decision makers, which are positively reflected in the students' scores.

Some of the students' responses on this test were interesting. For example, in item number four on the Morphological Structure Test the students were asked to create a compound word from the phrase *trains that run over the ground.* The correct answer would be *overground trains*. Instead, some of the students wrote *metro*, which is another word for underground trains. One possible explanation for such a response is that the students constructed the word based on personal experience. They may have seen trains run both below and above ground. Another interesting answer was in item number six. The students were asked to form a noun from the verb *examined* in the sentence *the doctor examined Maha.* The correct answer would be *Maha is an examinee.* Instead of writing *examinee*, some of the students wrote *patient*, which is a synonym for examinee.

Despite the low percentage of the Morpheme Identification Test, which was 38.5% in section one and about 25% in section two, the t-test showed that the difference in the mean was significant (t = 2.866, p =.005). This indicates that section one significantly performed better than section two on this test. A possible explanation for the students' better performance in section one is the different timing of the testing sessions. Section one had the test early in the morning at 8 a.m. before any classes while section two had the test at 2 p.m. The students in section two may have lost their focus and concentration. The students' performance might have negatively affected after a long day of classes. The different timing of the testing sessions was not planned or intended. The timing was based on the availability of free time in the students' schedules. Since the students were full-time students, it was hard to have matching schedules.

Another possible explanation for the students' better performance in section one is that there might have been a difference in the English language proficiency level between the two sections. Neither of the section was subjected to an English language proficiency test to confirm this possibility. Thus, there is no independent evidence that the two sections are the same. Students in section one might have had somewhat higher level of English language proficiency than the students in section two.

The low percentage of the scores on Morpheme Identification Test may be due to several reasons. The results showed that the students performed better at guessing the meaning of the words but had difficulties in guessing the meaning of the individual morphemes composing those words. For example, the percentage of correct answers for

the word *driver* was 68%. However, only 26% knew the meaning of the morpheme *drive* and 27% knew the meaning of the morpheme *–er.* Another reason that might have contributed to the lower percentage of correct answers on the Morpheme Identification Test was the length of the testing session. This test was the last test in the testing sequence. The students had to finish the Vocabulary Size Test and the Morphological Structure Test before answering the Morpheme Identification Test. This may have had a negative effect on the students' concentration and hindered them from staying focused.

In summary, to find out the level of morphological awareness possessed by the students in this study, the Morphological Awareness Test, with its two subtests, was used. The finding revealed that the students' performance in both sections on the Morphological Structure Test was better than that on the Morpheme Identification Test. However, the overall performance in the Morphological Awareness Test was relatively low.

The Relationship between Morphological Awareness and English Vocabulary Knowledge

The third research question concerned the possible relationship between vocabulary size and the level of morphological awareness. The study conducted by McBride-Chang et al. (2005) showed that morphological awareness was significantly correlated with word identification, word attack, and vocabulary scores among kindergartners and second graders. In this study, it was expected that vocabulary size, as assessed by the Vocabulary Size Test, would have a positive relationship with morphological awareness, as assessed by the Morphological Awareness Test. However,

the relationship between morphological awareness and vocabulary size could not be established in the current study for several possible reasons.

The Vocabulary Size Test was designed to measure the students' vocabulary size. The test included 14 levels, representing 14,000 word-families. The increasing difficulty of the words in the test as the levels increased might have had a negative effect on the scores, may have, in turn, affected the relationship between vocabulary size and morphological awareness. Each level of vocabulary knowledge is not an equal interval. As the levels become higher (that is, as the word-families decrease in frequency), it becomes increasingly difficult for students to be exposed to vocabulary associated with that level of word families.

Another factor that might have affected the relationship between vocabulary size and morphological awareness is the modification of the Morphological Awareness Test. The original test was designed for kindergartners and second graders. The modifications were made by the researcher to make the test appropriate for university students. The original test contained thirteen items, and for each item there were two pictures presented to the child. The pictures were labeled orally for the child by the experimenter. Such modifications may have affected the performance of the students. Moreover, providing a frame sentence in the Morphological Structure Test confused many students. The students were asked to combine morphemes in new ways following the pattern presented in the sentence frame. However, some students were confused by the similarities across the words and failed to make the correct morphological generalization.

Although the students' performance in this study was low overall, a few students were motivated to learn the vocabulary presented in the testing instruments and showed a real interest in expanding their vocabulary size. After submitting their test copies, they asked if they could have extra copies to take home to find out the correct answers. Such an attitude seems promising, especially in the field of learning foreign languages.

To sum up, after running correlational analyses between the Vocabulary Size Test and the two subtests of the Morphological Awareness Test, a relationship between vocabulary size and morphological awareness was not evident. Three reasons for the absence of any relationship may be the increasing difficulty of the words in the Vocabulary Size Test, the modification of the Morphological Awareness Test, and the different timing of the testing sessions.

Chapter Six

Summary and Conclusion

This chapter provides a summary and conclusions for the study, pedagogical implications of the present study, and suggestions for future research.

Summary of the Study

The current study investigated the relationship between the English vocabulary size and the morphological awareness of Saudi female students in King Saud University. In order to determine the kind of relationship between the two variables, a series of tests were used. The Vocabulary Size Test was used to measure the student's vocabulary size. The results indicated that the vocabulary size in both sections was just over 4,000 word-families. The Morphological Awareness Test with its subtests (the Morphological Structure Test and the Morpheme Identification Test) were used to measure the students' level of morphological awareness. The findings showed that the students in section one had a percentage of 51% on the Morphological Awareness Test while the students in section two had 42%. On the Morpheme Identification Test, the students in section one had a percentage of 38%, and the students in section two had 25%. After obtaining the data from the two tests, correlational analyses were done to determine the kind of relationship between the vocabulary size and the level of morphological awareness. The correlation tests revealed that there was no relationship between the two variables, which is contrary to what previous studies have established.

Pedagogical Implications

Vocabulary growth is especially important for English language learners (ELLs). Limited vocabulary size is a serious problem for these students. Students with deficits in their vocabulary are less able to comprehend texts, succeed academically, and communicate with speakers of the target language.

The data obtained from the testing instruments indicates that the vocabulary size of the students in this study and their morphological awareness level are relatively low. Teachers of English as a second language should focus more on expanding the vocabulary size of their students. Teachers should give vocabulary a high profile in the syllabus and in the classroom so that students can see its importance and understand that learning a language involves more than just its grammar. Also, teachers should discover what learning strategies work best for their students to learn vocabulary. Teachers should introduce different learning strategies to their students. Students should be explicitly taught word-learning strategies to deepen their knowledge of how to decode an unknown word and choose the appropriate meaning in any given context. Since learning the entire lexicon of a language is impossible, having the right strategies can be useful. However, these strategies must be adapted to the strengths and needs of ELLs.

Moreover, teachers should raise the students' awareness of cognates. English and Arabic share some cognates, such as *emir*, *azalea*, *carat*, and *cotton.* ELLs whose native language shares cognates with the English language should be aware of the similarities between the two languages. Cognate awareness is also an important strategy for expanding vocabulary size. Such strategies include taking advantage of students' first

language, teaching the meaning of basic words, and providing sufficient review and reinforcement of the cognates. Because English and Arabic share a number of cognate pairs, the students can draw on their cognate knowledge as a means of decoding some unfamiliar words in English texts.

One way to improve vocabulary instruction in the EFL courses for the women enrolled in the College of Languages and Translation is to provide a variety of reading materials and make them accessible for the students. For example, teachers could start a program where students can exchange reading material. Another way to encourage the student to read extra materials is by creating an electronic library. Many teachers can contribute to the content of the library by providing articles, electronic books, names of journals, and links to interesting websites. Since only 19% of the students reported that they read extra material to increase their vocabulary size, making reading materials accessible might help to increase the number of students using this method.

Another way to improve vocabulary instruction in the EFL courses is to increase the students' interaction with native speakers of English. Only 8% of the students said that they speak with native speakers of English as a way to learn vocabulary. The College of Languages and Translation could create a conversation partner program. Students could practice the English language by chatting with a native speaker using any chatting software such as Skype, Windows Live Messenger, Google Talk, etc. They could meet once or twice a week for about one hour, one-on-one, at a mutually convenient time and place in order to talk, listen, and learn from each other.

Limitations of the Study and Suggestions for Further Research

This study investigated the relationship between English vocabulary size and morphological awareness. However, the study had some limitations that may have affected the results. The first limitation was the lack of time. Due to the limited availability of time, the two sections were assigned on the same day and data collection was carried out in only one day.

The second limitation that may have affected the results of this study was the modification of the Morphological Awareness Test. The modifications were made by the researcher to make the tests more appropriate for the age group of the participants. The original test was orally presented to the participants, but the test used in this study was in written form. It might be useful to not provide a sentence frame, since it confused many students. The third limitation that may have had an effect on the study was the students' attitude. Before starting the test, the students were informed that the test would not affect their scores. This may have caused the students to be less motivated to do their best on the tests.

The university chosen for this study may not have been representative of all universities in Saudi Arabia. The data obtained from the test presented in this study may have been different if the participants were chosen from several universities. For example, if the students were chosen from different universities, their background information, English program, and syllabus may be different, which may have led to significant changes in data. Moreover, the current study only included college students from the College of Languages and Translation at King Saud University. It would be

desirable to have students from different colleges from KSU in order to determine how generalizable the findings are.

There is a lack of studies that have investigated the relationship between vocabulary size and morphological awareness of English language learners, especially Arabic-speaking students. Much more study is needed before we can understand this kind of relationship. Studies investigating the relationship between Arabic morphology and the acquisition of English vocabulary are needed. Future studies could help facilitate an understanding of the factors that influence the growth of English vocabulary and shed some light on the relationship between Arabic morphology and English morphology. Future studies could focus on how the knowledge of Arabic morphology affects the process of learning the English language. Knowing the relationship between them will have a significant influence on designing better English language syllabi that integrate vocabulary instruction for Arabic-speaking ELLs more effectively.

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Appendix A

Questionnaire

Dear Students,

Thank you for expressing an interest in participating in this study. Your participation in this study is at no cost to your academic grades. Your confidentiality and anonymity are assured. Please understand that the use of these data will be only confined to this study, as authorized by the College of Languages and Translation, King Saud University.

Please, be sure to choose the best answer:

1. I chose the College of Language and Translation based on:
    a) My interest.
    b) My parent's desire.
    c) My GPA.
    d) Advice from friends.

2. After graduation from the college, I am planning to :
    a) Continue higher education.
    b) Get a job in translation field.
    c) Get a job in another field.
    d) Stay at home.

3. I learn vocabulary by:
    a) Memorization and repetition.
    b) Daily practice.
    c) Speaking with native speakers.
    d) All.

4. I am working on increasing my vocabulary size by:
    a) Attending classes only.
    b) Reading extra material.
    c) Watching TV & movies.
    d) Learning from the Internet, specialized websites and programs.

Appendix B

Adapted Version of the Vocabulary Size Test

Question A:

- Read the sentence.
- Circle the letter next to the correct definition of the underlined word.
- If you do not know the answer, DO NOT GUESS.
- See the example below.

  - Example
    Sunset: we saw a beautiful **sunset**

    a) When the sun disappears and night begins.
    b) When the sun rises and day begins.
    c) Twilight.
    d) Crescent.

First 1000	**Second 1000**
1. **See**: They **saw** it. a. cut b. waited for c. looked at d. Started	1. **Maintain**: Can they **maintain** it? a. keep it as it is b. make it larger c. get a better one than it d. get it
2. **Period**: It was a difficult **period**. a. question b. time c. thing to do d. book	2. **Upset**: I am **upset**. a. tired b. famous c. rich d. unhappy
3. **Poor**: We are **poor**. a. have no money b. feel happy c. are very interested d. do not like to work hard	3. **Patience**: He has no **patience**. a. will not wait happily b. has no free time c. has no faith d. does not know what is fair
4. **Jump**: She tried to **jump**. a. lie on top of the water b. get off the ground suddenly c. stop the car at the edge of the road d. move very fast	4. **Pub**: They went to the **pub**. a. place where people drink and talk b. place that looks after money c. large building with many shops d. building for swimming
5. **Standard**: Her **standards** are very high. a. the bits at the back under her shoes b. the marks she gets in school c. the money she asks for d. the levels she reaches in everything	5. **Microphone**: Please use the **microphone**. a. machine for making food hot b. machine that makes sounds louder c. machine that makes things look bigger d. small telephone that can be carried around

Third 1000

1. **Soldier**: He is a **soldier**.
   a. person in a business
   b. student
   c. person who uses metal
   d. person in the army

2. **Jug**: He was holding a **jug**.
   a. a container for pouring liquids
   b. an informal discussion
   c. a soft cap
   d. a weapon that explodes

3. **Dinosaur**: The children were pretending to be **dinosaurs**.
   a. robbers who work at sea
   b. very small creatures with human form but with wings
   c. large creatures with wings that breathe fire
   d. animals that lived an extremely long time ago

4. **Pave**: It was **paved**.
   a. prevented from going through
   b. divided
   c. given gold edges
   d. covered with a hard surface

5. **Rove**: He couldn't stop **roving**.
   a. getting drunk
   b. travelling around
   c. making a musical sound through closed lips
   d. working hard

Fourth 1000

1. **Compound**: They made a new **compound**.
   a. agreement
   b. thing made of two or more parts
   c. group of people forming a business
   d. guess based on past experience

2. **Candid**: Please be **candid**.
   a. be careful
   b. show sympathy
   c. show fairness to both sides
   d. say what you really think

3. **Quiz**: We made a **quiz**.
   a. thing to hold arrows
   b. serious mistake
   c. set of questions
   d. box for birds to make nests in

4. **Crab**: Do you like **crabs**?
   a. sea creatures that walk sideways
   b. very thin small cakes
   c. tight, hard collars
   d. large black insects that sing at night

5. **Remedy**: We found a good **remedy**.
   a. way to fix a problem
   b. place to eat in public
   c. way to prepare food
   d. rule about numbers

Fifth 1000

1. **Deficit**: The company had a large **deficit**.
   a. spent a lot more money than it earned
   b. went down a lot in value
   c. had a plan for its spending that used a lot of money
   d. had a lot of money stored in the bank

2. **Nun**: We saw a **nun**.
   a. long thin creature that lives in the earth
   b. terrible accident
   c. woman following a strict religious life
   d. unexplained bright light in the sky

3. **Compost**: We need some **compost**.
   a. strong support
   b. help to feel better
   c. hard stuff made of stones and sand stuck together
   d. rotted plant material

4. **Miniature**: It is a **miniature**.
   a. a very small thing of its kind
   b. an instrument for looking at very small objects
   c. a very small living creature
   d. a small line to join letters in handwriting

5. **Fracture**: They found a **fracture**.
   a. break
   b. small piece
   c. short coat
   d. rare jewel

Sixth 1000

1. **Devious**: Your plans are **devious**.
   a. tricky
   b. well-developed
   c. not well thought out
   d. more expensive than necessary

2. **Butler**: They have a **butler**.
   a. man servant
   b. machine for cutting up trees
   c. private teacher
   d. cool dark room under the house

3. **Threshold**: They raised the **threshold**.
   a. flag
   b. point or line where something changes
   c. roof inside a building
   d. cost of borrowing money

4. **Strangle**: He **strangled** her.
   a. killed her by pressing her throat
   b. gave her all the things she wanted
   c. took her away by force
   d. admired her greatly

5. **Malign**: His **malign** influence is still felt.
   a. evil
   b. good
   c. very important
   d. secret

Seventh 1000

1. **Olive**: We bought **olives**.
   a oily fruit
   b scented pink or red flowers
   c men's clothes for swimming
   d tools for digging up weeds

2. **Stealth**: They did it by **stealth**.
   a spending a large amount of money
   b hurting someone so much that they agreed to their demands
   c moving secretly with extreme care and quietness
   d taking no notice of problems they met

3. **Bristle**: The **bristles** are too hard.
   a questions
   b short stiff hairs
   c folding beds
   d bottoms of the shoes

4. **Demography**: This book is about **demography**.
   a the study of patterns of land use
   b the study of the use of pictures to show facts about numbers
   c the study of the movement of water
   d the study of population

5. **Azalea**: This **azalea** is very pretty.
   a small tree with many flowers growing in groups
   b light material made from natural threads
   c long piece of material worn by women in India
   d sea shell shaped like a fan

Eighth 1000

1. **Erratic**: He was **erratic**.
   a without fault
   b very bad
   c very polite
   d unsteady

2. **Null**: His influence was **null**.
   a. had good results
   b. was unhelpful
   c. had no effect
   d. was long-lasting

3. **Eclipse**: There was an **eclipse**.
   a. a strong wind
   b. a loud noise of something hitting the water
   c. the killing of a large number of people
   d. the sun hidden by a planet

4. **Locust**: There were hundreds of **locusts**.
   a insects with wings
   b unpaid helpers
   c people who do not eat meat
   d brightly coloured wild flowers

5. **Cabaret**: We saw the **cabaret**.
   a painting covering a whole wall
   b song and dance performance
   c small crawling insect
   d person who is half fish, half woman

Ninth 1000

1. **Hallmark**: Does it have a **hallmark**?
   a. stamp to show when it should be used by
   b. stamp to show the quality
   c. mark to show it is approved by the royal family
   d. mark or stain to prevent copying
2. **Monologue**: Now he has a **monologue**.
   a. single piece of glass to hold over his eye to help him to see better
   b. long turn at talking without being interrupted
   c. position with all the power
   d. picture made by joining letters together in interesting ways
3. **Whim**: He had lots of **whims**.
   a. old gold coins
   b. female horses
   c. strange ideas with no motive
   d. sore red lumps
4. **Regent**: They chose a **regent**.
   a. an irresponsible person
   b. a person to run a meeting for a short time
   c. a ruler acting in place of the king or queen
   d. a person to represent them
5. **Fen**: The story is set in the **fens**.
   a a piece of low flat land partly covered by water
   b a piece of high, hilly land with few trees
   c a block of poor-quality houses in a city
   d a time long ago

Tenth 1000

1. **Awe**: They looked at the mountain with **awe**.
   a worry
   b interest
   c wonder
   d respect
2. **Egalitarian**: This organization is very **egalitarian**.
   a does not provide much information about itself to the public
   b dislikes change
   c frequently asks a court of law for a judgement
   d treats everyone who works for it as if they are equal
3. **Upbeat**: I'm feeling really **upbeat** about it.
   a. upset
   b. good
   c. hurt
   d. confused
4. **Pigtail**: Does she have a **pigtail**?
   a. a long rope of hair made by twisting bits together
   b. a lot of cloth hanging behind a dress
   c. a plant with pale pink flowers that hang down in short bunches
   d. a lover
5. **Ruck**: He got hurt in the **ruck**.
   a hollow between the stomach and the top of the leg
   b noisy street fight
   c group of players gathered round the ball in some ball games
   d race across a field of snow

Eleventh 1000

1. **Excrete**: This was **excreted** recently.
   a pushed or sent out
   b made clear
   c discovered by a science experiment
   d put on a list of illegal things

2. **Yoga**: She has started **yoga**.
   a. handwork done by knotting thread
   b. a form of exercise for the body and mind
   c. a game where a cork stuck with feathers is hit between two players
   d. a type of dance from eastern countries
3. **Puma**: They saw a **puma**.
   a. small house made of mud bricks
   b. tree from hot, dry countries
   c. very strong wind that sucks up anything in its path
   d. large wild cat

4. **Aperitif**: She had an **aperitif**.
   a. a long chair for lying on with just one place to rest an arm
   b. a private singing teacher
   c. a large hat with tall feathers
   d. a drink taken before a meal

5. **Emir**: We saw the **emir**.
   a bird with two long curved tail feathers
   b woman who cares for other people's children in Eastern countries
   c Middle Eastern chief with power in his own land
   d house made from blocks of ice

Twelfth 1000

1. **Haze**: We looked through the **haze**.
   a. small round window in a ship
   b. unclear air
   c. cover for a window made of strips of wood or plastic
   d. list of names

2. **Soliloquy**: That was an excellent **soliloquy**!
   a. song for six people
   b. short clever saying with a deep meaning
   c. entertainment using lights and music
   d. speech in the theatre by a character who is alone
3. **Alum**: This contains **alum**.
   a. a poisonous substance from a common plant
   b. a soft material made of artificial threads
   c. a tobacco powder once put in the nose
   d. a chemical compound usually involving aluminium
4. **Caffeine**: This contains a lot of **caffeine**.
   a. a substance that makes you sleepy
   b. threads from very tough leaves
   c. ideas that are not correct
   d. a substance that makes you excited
5. **Coven**: She is the leader of a **coven**.
   a. a small singing group
   b. a business that is owned by the workers
   c. a secret society
   d. a group of church women who follow a strict religious life

Thirteenth 1000

1. **Ubiquitous**: Many weeds are **ubiquitous**.
   a. are difficult to get rid of
   b. have long, strong roots
   c. are found in most countries
   d. die away in the winter
2. Rouble: He had a lot of **roubles**.
   a. very precious red stones
   b. distant members of his family
   c. Russian money
   d. moral or other difficulties in the mind
3. **Communiqué**: I saw their **communiqué**.
   a. critical report about an organization
   b. garden owned by many members of a community
   c. printed material used for advertising
   d. official announcement

4. **Skylark**: We watched a **skylark**.
   a. show with aeroplanes flying in patterns
   b. man-made object going round the earth
   c. person who does funny tricks
   d. small bird that flies high as it sings
5. **Atoll**: The **atoll** was beautiful.
   a. low island made of coral round a sea-water lake
   b. work of art created by weaving pictures from fine thread
   c. small crown with many precious jewels worn in the evening by women
   d. place where a river flows through a narrow place full of large rocks

Fourteenth 1000

1. **Canonical**: These are **canonical** examples.
   a examples which break the usual rules
   b examples taken from a religious book
   c regular and widely accepted examples
   d examples discovered very recently

2. **Marsupial**: It is a **marsupial**.
   a an animal with hard feet
   b a plant that grows for several years
   c a plant with flowers that turn to face the sun
   d an animal with a pocket for babies

3 **Bawdy**: It was very **bawdy**.
   a. unpredictable
   b. enjoyable
   c. rushed
   d. rude

4. **Thesaurus**: She used a **thesaurus**.
   a a kind of dictionary
   b a chemical compound
   c a special way of speaking
   d an injection just under the skin

5. **Cordillera**: They were stopped by the **cordillera**.
   a a special law
   b an armed ship
   c a line of mountains
   d the eldest son of the king

Appendix C

The Morphological Awareness Test

Part one (Morphological Structure Test)

- Using one word, create a noun OR a verb for the underlined actions and objects
- If you do not know the answer, DO NOT GUESS.
- See the example below.

Example: There is a kind of **box** or **lunch**, we call it a **lunchbox.**	There is another kind of **box** for **tools**, we call it a **toolbox.**
1. There is a dish called **meatballs**. It contains **meat** formed into a **ball** shape.	If the **meat** is formed into a **loaf** shape, the dish will be called……..
2. People with you in a **class** are called **classmates**.	What do you call the people living with you in the same **room**?.....
3. Some people wear **rings** on their **ears**, they call them **earrings**.	Some people wear **rings** on their **nose**, what should we call them?.....
4. There is a kind of train that runs **under the ground**. We call that an **underground train.**	If the train **runs over the ground**. That would be called ……

5. Look at John. John is **stotting**.	Yesterday he did the same thing. What did he do yesterday? Yesterday, he …….
6. Ahmad is **training** in the company. Ahmad is a **trainee**.	The doctor **examined** Maha. Maha is an …….
7. This is a musical instrument called a **hux**.	If we have three of them, we should call them…….
8. Yesterday, my mother **cooked** lunch for us.	Now it is lunch time and she is …….
9. A **box** used to store **mail** is called a **mailbox.**	Some people use a **tray** to store **mail**. What should we call that?.....
10. Some **buildings** are built very **high**, and we call them **high-rise buildings**.	Some **buildings** are built very **low**, what do we call them?.....

Appendix D

The Morphological Awareness Test[1]

Part two (Morphemes Identification Test)

- Give the meaning of the word.
- Divide the word into meaningful parts.
- State the meaning of each part.
- If you do not know the answer, please DO NOT GUESS.
- See example.

Word	Meaning of the Word	Part 1 + Meaning	Part 2 + Meaning
Example: newspaper	printed paper containing news, articles, pictures, advertisements etc	news = information about something that has happened recently.	paper = material in the form of thin sheets that is used for writing on, wrapping things etc

[1] Adapted from McBride-Chang, C., Wagner, R. K., Muse, A., Chow, B. W.-Y., & Shu, H. (2005). The role of morphological awareness in children's vocabulary acquisition in English. *Applied Psycholinguistics, 26,* 415–435.

Word	Meaning of the Word	Part 1 + Meaning	Part 2 + Meaning
1. flowerpot			
2. hyperactive			
3. freedom			
4. handshake			
5. discomfort			
6. driver			
7. antibacterial			
8. monolingual			
9. biology			
10. sandstorm			

Appendix E

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Appendix F

Approval of Dr. Paul Nation

RE: Norah Alsalamah/ permission
Paul Nation [Paul.Nation@vuw.ac.nz]
You replied on 10/5/2010 2:48 PM.
Sent: Monday, October 04, 2010 10:54 PM
To: Alsalamah, Norah Sultan
Attachments: Vocabulary Size Test.doc (87 KB)[Open as Web Page]

Feel free to use it. If you are measuring vocabulary size, then the Vocabulary Size Test is better and is available free from my website. See the Beglar article mentioned in the attachment.

Best wishes

_____

From: Alsalamah, Norah Sultan [AlsalamaNS03@uww.edu]
Sent: Tuesday, 5 October 2010 2:09 p.m.
To: Paul Nation
Subject: Norah Alsalamah/ permission

Dear Sir,

I hope you are doing fine.
First of all, I admire your work very much. I almost read every article you wrote about vocabulary.

Second, my name is Norah Alsalamah from Saudi Arabia and I am a graduate student at the University of Wisconsin-Whitewater. Currently I am writing a thesis for my master degree. The title of my thesis is "The Relationship between Morphological Awareness and English Vocabulary Acquisition of Saudi Female Students at King Saud University". I am planning to use the Vocabulary Level Test as the instrument to measure the participants' vocabulary knowledge.

I am emailing you to ask for your permission to use the test in my study.
I really appreciate your time and effort.
Thank you
Norah