L1 Influence on the Reception and Production of Collocations by Advanced ESL/EFL Arabic Learners of English

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Asmaa K. Shehata
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by

ASMAA K. SHEHATA

has been approved for
the Department of Linguistics
and the College of Arts and Sciences by

Scott H. Jarvis
Associate Professor of Linguistics

Benjamin M. Ogles
Dean, College of Arts and Sciences
ABSTRACT

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To meet the challenges associated with L2 learners’ acquisition of collocational knowledge, it is imperative to investigate the factors that influence this process. This thesis reports on a study that explores the role of an L1 (Arabic) on the use of English collocations by advanced Arabic-speaking learners of English. The aim of the study was to examine how an L1 (Arabic) influences learners’ production and reception of collocations. The study also explores whether the learning environment (EFL vs. ESL) and the amount of exposure to the language have an influence on the acquisition of collocations. Ninety-seven participants (thirty-five Arabic-speaking learners of English at a university in the United States and sixty-two undergraduate students from an English Department in a university in Egypt) took two production tests and one reception test dealing with collocations. In addition, the participants’ familiarity with the meaning of the collocational components (i.e. individual words) was checked using a vocabulary recognition test. In addition, the study explored the difference between the participants’ performance with two types of collocations: verb-noun and adjective-noun collocations. The data analyses showed that learners’ L1 and their learning environment had a strong influence on the acquisition of L2 collocations. Furthermore, the findings revealed that there was a moderate positive correlation between learners’ knowledge of collocations
and their amount of exposure to the language. It was also concluded that learners’
receptive knowledge of collocations was broader than their productive knowledge of
collocations. The study concludes with implications for pedagogy and further research

Approved: _____________________________________________________________

Scott H. Jarvis

Associate Professor of Linguistics
This thesis is dedicated to
the memory of my beloved Mother.

It is you Mom

Who is behind any success

I ever achieve!
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CHAPTER 1: INTRODUCTION

General Background

“While without grammar very little can be conveyed, without vocabulary nothing can be conveyed” (Wilkins, 1972, p. 111). This argument has been supported by many researchers in the field of second language acquisition (SLA) who have emphasized the significance of vocabulary and agreed that vocabulary is equally, if not more, important than language structure in language acquisition. This is why it was recommended to pay attention to the teaching of vocabulary in the same way as the teaching of grammar (Krashen, 1988). For example, McCarthy (1990) summarizes the importance of vocabulary teaching for second language (L2) learners in the following statement:

No matter how well the student learns grammar, no matter how successfully the sounds of L2 are mastered, without words to express a wide range of meanings; communication in an L2 just cannot happen in any meaningful way (p. viii).

Within the area of vocabulary research, researchers have stressed the importance of word combinations, which are usually referred to as formulaic language1. They argue that these formulaic expressions are widespread in language discourse and distinguish the speech of native from non-native speakers (Conklin & Schmitt, 2007). For instance, Erman and Warren (2000) found that formulaic language creates 58.6% of the spoken English

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1 Although there is no one satisfactory definition of formulaic language, the term typically includes: idioms, collocations, turns of phrase, preferred ways of saying things, routines, set phrases, prayers, proverbs, rhymes and songs. While researchers differ in what they consider to be formulaic language, the following definition is one of the most inclusive. A formulaic sequence is:

“a sequence, continuous or discontinuous, of words or other elements, which is, or appears to be, prefabricated: that is, stored and retrieved whole from memory at the time of use, rather than being subject to generation or analysis by the language grammar” (Wray 2002:9).
discourse they analyzed and 52.3% of the written English discourse. Moreover, the raters in Forster’s study (2001) classified 32.3% of the unplanned speech of the non-native speakers as formulaic language. Also, it is claimed that formulaic language creates one-third to one-half of the used language (Howarth, 1998). Further, it is argued that formulaic sequences not only facilitate language development for First Language (L1) learners but also for L2 learners since they provide them with the raw material that helps them to improve their language (Bardovi-Harlig, 2002).

As a sub-category of formulaic language, collocations that are a transitional area between idioms and free combinations (Benson et al., 1986) have attracted the attention of language researchers who attempt to investigate their acquisition. For example, McCarthy (1990) states that “in vocabulary teaching there is a high importance of collocation”, also suggesting that “the relationship of collocation is fundamental in the study of vocabulary, and collocation is an important organizing principle in the vocabulary of any language” (p.12).

In addition, collocations are indispensable for second language (L2) learners, especially at an advanced level. This is due to the fact that collocational knowledge is an essential part in both speech and writing (Bahns & Eldaw, 1993; Fontenelle, 1994; Herbst, 1996; Lennon, 1996; Moon, 1992). To gain overall language proficiency, learners need to gain collocational competence (Fayez-Hussein, 1990). According to Kjellemer (1992), the more accurately language learners are able to use collocations, the fewer pauses and hesitations they make during long chunks of discourse. This is only one of many reasons why it is necessary for language learners to master collocations. By doing
so, their speech sounds more natural, and is more easily understood by native speakers. Also, language learners are able to express their ideas in more varied ways when they learn collocations (Lennon, 1986). Furthermore, Benson and Ilson (1997) have stated that language learners must acquire how words collocate with each other to be able to produce language with native-like accuracy and fluency in both oral and written forms. Thus, their vocabulary and overall language proficiency level increases as their collocational knowledge increases. Therefore, many researchers (e.g. Ellis and Schmidt, 1997; Ellis, 2001; Hill, 2000; Lewis, 2001; McCarthy, 1984) have claimed that collocational knowledge is the essence of language knowledge. Based on the aforementioned argument, the importance of collocations has recently been emphasized by researchers in the field of SLA.

Lexicographers also show interest in collocations. Due to the importance of collocations that are widely spread in native speakers’ speech, lexicographers bear in mind that collocations need to be well explained to L2 learners, to whom they create a hazard. For example, Verstraten (1992) states that “Fixed phrases must be thoroughly explained in the learner's dictionary in order to enable the student quickly to enter them into his/her own mental lexicon” (p. 38). Thus, lexicographers like Benson (1985), Cowie (1981), Hausmann (1999) and Zofgen (1986) have supported the importance of having specialized dictionaries for collocations. Therefore, the last three decades have witnessed the appearance of specialized collocation dictionaries, such as Oxford Advanced Learner’s Dictionary of Current English (Hornby, 1974), the BBI Combination

Statement of the Problem

Much has been said about the acquisition of collocations by English as foreign language (EFL) learners who come from various cultural backgrounds in various countries (Allerton, 1984; Bahns & Eldaw 1993; Bahns, 1993; Biskup, 1992; Caroli, 1998; Channell, 1981; Elyidirm, 1997; Fontenelle 1994; Ghadessy, 1989; Gitsaki, 1999; Herbst, 1996; Lennon, 1996; Lewis, 1993; Moon 1992; Putseys & Ostyn, 1981; Takizawa, 1999; Willis, 1990). However, few studies have explored the collocational knowledge of Arabic-speaking learners of English in an EFL environment (Fayez-Hussein, 1990; Farghal & Obiedant, 1995; Al-Zahrani, 1998). Like other EFL learners, Arabic learners of English have difficulties with the acquisition of English collocations (Al-Zahrani, 1998). Researchers attribute the poor collocational knowledge of L1 Arabic learners of English to various factors, e.g., their unfamiliarity with English collocation structures, and negative transfer\(^2\) from Arabic (Hussein, 1990). Since most Arabic-speaking learners in EFL classrooms have fewer opportunities to encounter collocations in their daily input, it is emphasized that they commonly resort to their L1 whenever they lack English collocational knowledge (Hussein, 1990; Al-Zahrani, 1998). Moreover, they typically find it difficult to encounter collocations in EFL settings, since they are more accustomed to learning individual words that form collocations, but they are less frequently exposed to those

\(^2\) “cross-linguistic influences resulting in errors, over-production, underproduction, miscomprehension, and other effects that constitute a divergence between the behavior of native and non-native speakers of a language” (Odlin, 1989, p.167)
words in the form of collocations (Farghal & Obiedant, 1995). Further, as a learner and a teacher of English in an EFL environment in Egypt, an Arab country, I have noticed that collocations do not receive much attention from teachers in the classroom. In this context, the focus is restricted to drills or repetition of individual words, in particular verbs. Consequently, students graduate from schools with a very low ability to communicate or express themselves effectively in English using collocations.

On the other hand, few studies have been conducted on collocations in English as a second language (ESL) context (e.g. Cowie & Howarth, 1996). Like EFL students, learners in ESL environments are reported to have difficulties with collocations. Nevertheless, the results of these studies are questioned and cannot be generalized for many reasons: they included few participants and the participants’ length of residence in the ESL countries, such as Britain, was not reported. One can assume that learners in an EFL environment have less exposure to English collocations than do ESL learners. In ESL environments, it is likely that learners acquire collocations more quickly and rely less on their L1 collocational knowledge. Therefore, it can be expected that their collocational knowledge would be much richer and more sophisticated than that of EFL learners. In addition, none of the previous studies has included both EFL and ESL environments to investigate the role of the learning environment in acquiring collocations and to explore the relationship between L2 learners’ collocational knowledge and their amount of exposure to the language. Finally, previous studies that have analyzed learners’ production of English
collocations have been insufficient since they have relied on a small range of instruments, such as translation tests (Nesselhauf, 2003). Further collocation research and discussions are certainly needed to explore both the reception and production of collocations.

**Purpose of the Study**

Taking the aforementioned gaps in the previous literature into consideration, the objective of this study was threefold: (a) to investigate the role of learners’ learning environment in the acquisition of English collocations, (b) to identify the influence of L1, Arabic, on both the production and reception of English collocations by advanced Arabic-speaking learners of English in an ESL environment in comparison with EFL learners, and (c) to explore the relationship between the participants’ collocational knowledge and their amount of exposure to the English language. Also, the researcher identified the following sub-objectives: (1) to determine in which of the two collocational categories, verb-noun or adjective-noun collocations, learners do better, and (2) to find whether a difference between the participants’ productive knowledge of collocations and their receptive knowledge of collocations.

**Significance of the Study**

The present study differs from previous studies in several ways: (a) it not only investigates an L1 influence on the production and reception of English collocations, but it also examines the relationship between the exposure to language and the participants’ collocational knowledge; (b) it includes participants in two different
learning contexts, i.e. an EFL setting and an ESL setting; (c) it explores the participants’ performance on three different tests of two categories of collocations (verb-noun collocations and adjective-noun collocations) and examines whether there is any difference between both; and finally (d) it investigates both the reception and production of collocations.

Research Questions and Hypotheses

Questions

The present study addresses the following main research questions:

1. Is there a significant difference in the collocational knowledge of advanced Arabic-speaking learners of English studying in an ESL environment and those studying in an EFL environment?

2. Is there a significant L1 influence on the production and reception of English collocations by advanced Arabic-speaking learners of English studying in an ESL or EFL setting?

3. Is there a correlation between participants’ proficiency in producing and recognizing collocations and their amount of exposure to the English language?

4. Is there a significant difference between the subjects’ performance on verb-noun collocations test and adjective-noun collocations test?

5. Is there a significant difference between the participants’ production and reception skills related to collocations?

Hypotheses

To address these research questions, five hypotheses were formulated.
Hypothesis 1 addresses Research Question 1.

An ESL environment exposes advanced L1 Arabic learners of English to a high level of collocation-rich input. Therefore, it is predicted that they will acquire L2 collocations better than those studying in an EFL environment who are rarely exposed to collocations outside their classrooms.

H1: ESL participants have a more advanced knowledge of collocations than EFL participants.

Hypothesis 2 addresses Research Question 2.

According to the findings of previous studies on Arabic-speaking learners of English in an EFL setting (Hussein, 1991; Farghal & Obiedant, 1995; Zughoul & Abdul-Fattah, 2003; Mahmoud, 2005), there is a consensus that the collocational knowledge of L1 Arabic learners of English like other EFL learners is inadequate. Also, these studies indicate that even advanced learners in this context resort to their L1 when they lack English collocational knowledge (Hussein, 1991; Farghal & Obiedant, 1995). Therefore, it is assumed that there is a significant L1 influence on the use of collocations by EFL participants. Conversely, less L1 influence is expected on the reception and production of collocations by ESL participants who are commonly exposed to collocations in their daily lives. Based on the above assumptions, it is predicted that learners in an ESL context will have a more advanced knowledge of collocations than EFL learners.

H2: The collocational knowledge of EFL participants will be more influenced by an L1 (Arabic) than that of ESL participants.
Hypothesis 3 addresses Research Question 3.

Presumably, exposure can make a difference in the acquisition of L2 collocations because it provides a chance for frequent contact with collocations that commonly appear in native speakers’ language. Therefore, it is predicted that the more the learners are exposed to the language, the stronger their collocational knowledge will be.

H3: Participants’ amount of exposure to English will correlate positively with their scores on the two collocation tests.

Hypothesis 4 addresses Research Question 4.

Some researchers have addressed the difficulty of verb-noun collocations, which are considered more difficult than adjective-noun collocations (Elyildirm, 1997). However, other researchers have reported learners’ difficulty in producing adjective-noun collocations in comparison to verb-noun collocations (Channell, 1981; Koya, 2005). Along with this argument and based on the researcher’s personal experience as a learner and a teacher of English, it is predicted that verb-noun collocations will be more fully acquired than adjective-noun collocations.

H4: Participants’ performance on verb-noun collocation test will be higher than their performance on adjective-noun collocation test.

Hypothesis 5 addresses Research Question 5.

The findings of previous research suggest that learners perform better on receptive tests than on productive tests (Bahns & Eldaw, 1993; Bahns, 1993, Koya; 2005). This is predicted to be the case in the present study as well.
H5: Participants’ performance on the receptive test will be higher than their performance on the productive tests.

Definition of Terms

ESL: This refers to the teaching and learning of English as a second language where learners are exposed to an English-speaking environment. Therefore, they use the language outside the classroom to communicate in their daily life. (Nayer, 1997)

EFL: This refers to the teaching and learning of English as a foreign language where it is taught in a non English-speaking region. Here, the classroom is the main source of exposure for the English language and any other exposure to the language requires a personal effort. (Nayer, 1997)

Collocations: “Sequences of lexical items, which habitually co-occur, but which are nonetheless fully transparent in the sense that each lexical constituent is also a semantic constituent” (Cruse, 1986, p.40).

Congruent collocations: This refers to those collocations that have literal translation equivalent in learners’ L1.

Non-congruent collocations: This refers to those collocations that do not have literal translation equivalent in learners’ L1.

Exposure to language: This refers to all forms of contact with the second language both inside and outside the formal environment, which includes speaking, listening, reading and writing using the target language.

Free word combinations: They are sequences of words that occur most frequently where the meaning of the whole is the sum of the meanings of its constituent words and any
word of them can be substituted by a large class of words. (e.g., the noun *murder* can be used with many verbs: to analyze, boast of, condemn, describe, film, forget, remember etc.) (Aisenstadt, 1979).

Idioms: An idiom is ‘one semantic unit and its meaning is not composed from the sum of the meanings of its constituents’ (e.g., *face the music*, which means ‘display courage’ or ‘show no fear’) (Aisenstadt, 1979, p.71-2).

Language transfer: This refers to “the influence resulting from the similarities and differences between the target language (TL) and any other language that has been previously acquired” (Odlin, 1989, p. 27).

Summary

In this chapter, some problems related to the acquisition of collocations have been addressed and research questions for further investigation have been raised. The purpose of the present study is to explore the role of both the learning environment and the influence of L1, Arabic, on the use of English collocations by advanced L1 Arabic learners of English who are studying in two different environments, i.e. EFL and ESL. In addition, the study investigates whether there is a relationship between the participants’ amount of exposure to the language and their collocational knowledge.

Organization of the Study

The present study is arranged into five chapters. Chapter One includes an introduction, the statement of the problem, the purpose of the study, the significance of the study, the research questions and hypotheses, the definition of terms, and the
organization of the study. Chapter Two provides a theoretical review of the literature relevant to this study. Therefore, it includes a historical overview of the collocation research, the importance and issues in learning English collocations, empirical studies on the acquisition and use of collocations by EFL/ESL learners, the relationship between collocations and L1 transfer, and empirical studies on the acquisition and use of collocations by Arabic-speaking learners of English in EFL settings. Chapter Three outlines the method for the study, including the participants, the materials, and the data collection procedures that are used. Also, this chapter presents the ways the data are analyzed. In chapter Four, the results of the data analysis and interpretations of these results will be presented and discussed. Chapter five, the conclusion, summarizes the study, discusses the findings as well as explores the teaching implications of the study and makes recommendations for further research.
CHAPTER 2: LITERATURE REVIEW

To understand the phenomenon of collocations in the field of SLA, it is necessary to know the development of this area of research. For this purpose, this literature review addresses the following main points: 1) a historical overview of collocation research, 2) the importance and issues of learning collocations, 3) recent empirical studies of collocations and learning environments (EFL/ESL), 4) the relationship between collocations and L1 transfer, and 5) empirical studies of collocations involving Arabic-speaking learners of English.

1. Historical Overview of Collocation Research

The origin of the term collocation is the Latin verb *collocare*, which means *to set in order/to arrange*. However, the term collocation was first introduced by Firth (1957) who is known as the father of collocations. He defined collocation as “the company that words keep” (1957, p.183). According to Firth, it is essential to recognize the company that a word keeps. Previous studies have investigated different aspects of the phenomenon of collocations. These studies can be classified in terms of three main approaches to collocation research, i.e. the lexical approach, the semantic approach and the structural approach, which will be briefly discussed below.

The first approach was the lexical approach, which focuses on the idea that words receive their meanings from the words they co-occur with. Thus, lexis is seen to be separate from grammar. The developer of this approach is Firth (1957). For example, *give birth* is a collocation that has a different meaning from the individual meanings of both *give* and *birth*. The two words gain a new meaning when they co-occur together. Then, other
linguists, known as Neo-Firthians, (e.g. Halliday, 1966; Sinclair, 1966), developed Firth’s theory of meaning and emphasized the importance of lexical collocations (e.g., verb-noun and adjective-noun collocations). For example, Halliday (1966) emphasized the importance of collocations in the study of lexis, which he considered as complementary to grammatical theory. He defined a collocation as “a linear co-occurrence relationship among lexical items which co-occur together” (1966:153). Also, he added to the notion of collocations the term ‘set’, which he defined as “the grouping members with like privilege of occurrence in collocation” (1966:153). According to Halliday, for instance, hot, cold, fresh, supply, warm, deep, contaminated and pour belong to the same lexical set, because they all collocate with the word water. Moreover, he argued that collocations cut across grammar boundaries. For instance, she argues strongly and the strength of her arguments are two alternative grammatical versions of strong argument.

On the other hand, Sinclair (1966), who stressed the separation between lexis and grammar, changed his attitude later and created an integrated technique that combined both lexis and grammar. He divided collocations into two categories, i.e. upward and downward collocations. While upward collocations include prepositions, adverbs, conjunctions, and pronouns that collocate with words more frequently used than themselves, (e.g. back collocates with at, in and up that are used more frequently than itself), downward collocations include verbs and nouns that collocate with words less frequently used than they are, (e.g. commit suicide). He, also, introduced three linguistic terms: Node, which refers to the lexical items being investigated, Span, which refers to the items on either side of the node; and Collocates, which refer to those items that are found within the span. For
example, to study the collocational pattern of the word *heat*, it can be said that *heat* is the *node*. But if a *span* of three was decided, this means that we study the three lexical items that occur after the word *heat*. And all the lexical items that are within the *span* of the word *heat* are considered to be its *collocates*. Generally, the contribution of the lexical approach can be summed up to emphasize lexical analysis as the best way to describe collocations without underestimating the role of grammar.

Like the lexical approach, the semantic approach focuses on exploring collocations on the basis of the semantic framework without paying attention to grammar. In other words, it attempts to explain why certain words are found together (Lehrer, 1974). On the other hand, the supporters of the semantic approach, such as Lyons (1966) described the lexical approach as an inadequate one because of its inability to explain why some lexical items collocate only with certain items. For example, why *blond hair* is correct; but *blond car* is wrong. The semanticists consider the semantic properties of the lexical item to be responsible for determining the words it collocates with. This view results in a criticism directed to them because there are a number of collocations that are arbitrarily restricted. For example, there is nothing in the meaning of the word *drinker* that should make it collocate with *heavy*, rather than with *strong* or *powerful*.

The third approach is the structural approach, which stresses the importance of including grammar in the study of collocations. According to this approach, lexis and grammar complete each other and cannot be separated (Mitchell, 1971; Gitsaki, 1996). Thus, Mitchell (1971) stated that collocations can be described as *lexico-grammatical*. This means collocations have to be studied within a grammatical matrix. Mitchell also
considered collocations as roots, rather than words that can be associated to other different roots. For instance, *smoke* and *heavy* are two roots and every combination of them results in acceptable collocations, e.g. *heavy smoker* can be *smoke heavily* and *heavy smoking*. However, Michell was criticized by other linguists who found his view of collocations as roots cannot hold for every combination. For example, *faint praise* is an acceptable English collocation but *praise faintly* is not. On the other hand, without referring to syntax, the notion of collocations becomes vacuous (Greenbaum, 1974). For example, we can say, “I *much prefer* a dry wine,” when *prefer* collocates with *much* in a pre-verb position. However, we cannot say, “I *prefer* a dry wine *much*” where *much* comes in a post-verb position. This confirms that certain items only collocate in certain syntactic relationships, e.g. *sincerity* can collocate with *frighten* but the acceptability of the combinations they produce can be judged only via syntax. Therefore, we can say, *his sincerity frightens us*, but we cannot say *we frighten his sincerity*, which is not syntactically an acceptable combination.

Subsequently, Benson, Benson and Ilson (1986) compiled the BBI Combinatory Dictionary of English where they distinguished between two categories of collocations, i.e. lexical and grammatical collocations. Lexical collocations include: verb-noun (e.g., *break a code*), verb-adverb (e.g., *affect deeply*), adjective–noun (e.g., *heavy drinker*), noun-verb (e.g., *water freezes*) and adverb-adjective (*closely related*). Conversely, grammatical collocations consist of a main lexical word (a noun, adjective, verb, or adverb) plus a preposition (e.g., *by accident*) or that-clause (e.g., *an agreement that*), or a to-infinitive clause (e.g., *need to*). In spite of the criticism directed to the BBI dictionary related to its
weak methodology and limitations, it is considered the first systematic attempt to
categorize English collocations (Gitsaki, 1999). The text proved that it is possible to use
structural patterns to study collocations.

**Summary of the three approaches**

As mentioned above, different aspects of the phenomenon of collocations have been
studied by researchers using these three approaches. First, the lexical approach considers
lexis to be an autonomous entity, which is separate from grammar. Like the lexical
approach, the semantic approach excludes grammar, but it overemphasizes the semantic
features of the items that determine their meaning and enables the prediction of their
colloicates. The structural approach highlights the importance of both lexis and grammar in
the study of collocations. Furthermore, it is noted that the researchers of both the lexical
and the semantic approaches have studied a small number of collocations (mainly, verb-
noun and adjective-noun collocations). Therefore, their results are limited. By contrast, the
structural approach studies have studied more patterns of collocations, such as verb-noun,
adjective-noun, adverb-noun, adverb-adjective, adjective-prepositions and this is therefore
a well-developed framework with a richer body of empirical literature.

2. Importance and Problematicity of Learning English Collocations for L2 Learners

Many researchers have stressed the importance of collocations in language
learning. Brown (1974) suggested that learning collocations improves the learner’s oral
proficiency, listening comprehension and reading speed. In addition, she argued that we
speak and write in chunks and learning collocations helps learners observe how native
speakers in both spoken and written contexts use language chunks. Moreover, Brown
(1974) has contended that this knowledge helps language learners use these expressions themselves. According to Brown, together with context and concept, collocations should be included when we teach advanced learners new words because of their crucial significance in language learning.

Like Brown (1974), Lewis (2000) stated that learning chunks of words helps language learners develop their communicative competencies better than learning words in isolation. Along the same lines, Pawley and Syder (1983) pointed out that collocations play a significant role in language learning. They lead to the improvement of language competence. Therefore, Pawley and Syder (1983) argued that the more fixed expressions, including collocations, language learners use in useful basic chunks, the more they produce native-like language structures. In addition, Ellis (2001) claimed that direct instruction for collocations is important in language learning because they represent an important aspect of L2 vocabulary development. Furthermore, some researchers like Nation (2001) argued that knowing a word involves knowing the words that co-occur with it. In addition, he emphasized that collocations are parts of the reception and production of vocabulary knowledge. Therefore, collocations should be taught to language learners to be able to produce the target language appropriately (Nation, 2001).

Similarly, Laufer (1988) argued that collocations help in many levels of the development of vocabulary development, which she considers a crucial aspect in vocabulary learning. She further stressed their importance in improving learning strategies, such as guessing. Hearing the word intense, the native speaker knows that it is connected with either pressure, heat, light, energy or feeling and that one of these words
will follow. They also know that the word *convenient* is not used with people. So, a sentence like *I am not feeling convenient about meeting new people* is not judged as acceptable. This guessing strategy can be developed by learning collocations.

In the light of the abovementioned studies, it can be concluded that many researchers have studied the significance of collocations from different perspectives. Some of these involve memorization and fluency. Others address collocations in relation to language appropriateness, word knowledge, and teaching effectiveness. Since collocations are related to all these factors, they are important for language learners. Nevertheless, several L2 studies have reported L2 learners’ low performance on collocation tests (Al-Zahrani, 1998; Bahns & Eldaw, 1993; Biskup, 1992; Caroli, 1998; Channell, 1981; Cowie & Howarth, 1996; Dechert & Lennon, 1989; Elyildirm, 1997; Farghal & Obiedant, 1995; Hussein, 1991; Gitsaki, 1999; Granger, 1998; Herbst, 1996; Koosha & Jafarpour, 2006; Lennon, 1996; Zhang, 1993; Mohamoud, 2005; Martynska, 2004; Matsuno & Sugiura, 2002; Nesselhauf, 2003; Shei & Pain, 2000; Zughoul & Abdul-Fattah, 2003; Zhang, 1993). Also, it seems uncontroversial that L2 learners’ collocational errors are higher than other errors they commit (Ellis, 2001). Thus, learners’ problems with collocations are an ingrained fact that has been confirmed by many studies in both ESL and EFL environments. The following paragraphs present these studies in detail.

3. Collocations and Learning Environments (EFL/ESL)

Although much collocation research has been conducted in the EFL learning environment, few studies have included ESL learners. This section is divided into two
3.1. EFL Learners

Much research has been done on collocations exploring EFL learners’ knowledge of collocations (Marton, 1977; Bahns & Eldaw, 1993; Shei & Pain, 2000; Matsuno & Sugiura, 2002, Koya, 2005). Many of them have reported insufficient collocational knowledge among EFL learners and confirmed that collocations create a challenge to language learners in EFL settings. For example, in an investigation of Polish learners’ knowledge of collocations and their abilities to use them, Marton (1977) used pre-treatment and post-treatment translation tests. The researcher used also two comprehension tests that included the same collocations used in the translation tests. However, the results showed no significant differences in the participants’ scores on the two translation tests, which confirmed learners’ poor productive knowledge of collocations. Therefore, Marton concluded that limited exposure to collocations would not improve learners’ productive knowledge of those structures.

In their empirical study, later, Bahns and Eldaw (1993) used verb-noun collocations to measure German advanced EFL students’ productive knowledge of English collocations. By using a cloze test and a translation test, the results showed poor performance among the participants. Thus, the researchers concluded that (1) EFL learners’ knowledge of general vocabulary outstrips their knowledge of collocations; (2) collocations are necessary for full communicative mastery of English; and (3) language
instructors should teach only highly frequent collocations, such as *keep a diary, cancel an order, reject a proposal, do damage, whip cream* and *achieve perfection*.

Like Marton and Bahns and Eldaw, Shei and Pain’s (2000) study reached a similar conclusion. The researchers used a questionnaire to investigate the English collocational competence of advanced Chinese-speaking learners. The results showed that the collocational knowledge of the Chinese subjects was poor. Therefore, an online correcting program was developed to detect some collocation errors and to present collocations from a large corpus as a reference for the students. Another study that confirmed the low collocational knowledge of EFL learners is Matsuno and Sugiura’s (2002) study, which addressed the question of whether the collocational expressions of L1 Japanese learners of English resemble those of native speakers. To answer this question, the researchers used two corpora: native speakers’ corpora and Japanese learners’ corpora to compare the performance of the two groups. The Japanese corpus included the essays of first year Japanese college students who were asked to write about a certain topic as fast as possible. In this exercise, they were allowed to use dictionaries. The researcher’s conclusions confirmed the poor collocational knowledge of Japanese learners of English.

Similar results were also found by some other researchers in different EFL contexts (Channell, 1981; Cowie & Howarth, 1996; Koya, 2005; Martynska, 2004). In Channell’s (1981) study, the researcher highlighted the insufficient collocational knowledge of eight advanced EFL learners of English who failed to fill in a collocational grid that included adjective-noun collocations although they were familiar with the words individually.
Channell stressed the importance of presenting highly frequent collocates when they are first encountered. Moreover, Cowie and Howarth (1996) compared four essays of one native speaker with one non-native university student. The results of this study indicated the gap between the collocational knowledge of the two participants where the lack of collocational knowledge of the non-native was obvious.

Koya’s (2005) study attempted to identify basic collocations to be taught to Japanese learners. To this effect, she conducted two kinds of analyses: a corpus-based analysis to identify basic collocations and an empirical analysis to investigate the development of collocations in Japanese learners who were reported in the study to lack basic collocational knowledge. The study reported the following findings: (1) a significant positive relationship between learners’ general knowledge of vocabulary and their knowledge of collocations, (2) the depth of participants’ receptive knowledge of collocations than their productive knowledge, and (3) learners’ difficulty with some collocation categories, such as adjective-noun collocations, compared to others.

Martynska’s (2004) study probed English collocation competencies among intermediate high school Polish students. Four tasks were used in this research: matching, a completion task, circling the correct option, and identifying and correcting errors in underlined parts of sentences. Based on the data collected in these four tasks, Martynska found that, overall, the students performed poorly on all tasks. Surprisingly, there was no relationship between their length of time of learning English and their collocation competence, since there were students who have studied English for shorter periods of time, yet performed better on the English tests than those who studied English for longer
time. Additionally, some students got higher scores on the multiple-choice tasks but lower scores on the completion tasks, which indicated a lack of consistency in their production of collocations, which is apparently lower than their receptive skills. Given her findings, Martynska recommended that instructors should pay more attention to collocations when teaching the English language.

Unlike previous studies, Herbst (1996) used more test items, i.e., 100 items, in three instruments (a close-test, a translation test, and a completion test to measure the participants’ knowledge of collocations. The findings revealed high collocational knowledge among the English students and deficient collocational knowledge among the German students, which was clear in the completion test. Another study that raised awareness in terms of the difficulties language learners encounter when learning English collocations is Koosha and Jafarpour’s (2006) study. The researchers recruited 200 Iranian university students majoring in English who took two collocation tests: completion and translation tests. The results revealed that the Iranian students lacked collocational knowledge though they had a good knowledge of both English grammar and vocabulary.

Based on the above-mentioned studies, it can be concluded that although collocations are crucial in language learning, learning collocations presents challenges to EFL learners. These studies have evidently confirmed that EFL learners with different L1 backgrounds have troubles with collocations, and they lack the due exposure to them. They also emphasize that teaching collocations is missing or not satisfactory in EFL settings that provide EFL learners with no opportunity to be exposed to collocations. Therefore, the present study assumes that living in an ESL environment is a privilege
because it offers learners a chance to be exposed to input rich with collocations. This constant exposure to the natural speech of native speakers is consequently assumed to enrich learners’ knowledge of collocations, which the present study investigates.

### 3.2. ESL Learners

A careful review of the literature indicates that less research has been done on the acquisition of collocations among ESL learners (Dechert & Lennon, 1989; Lennon, 1996; Zhang, 1993; Bonk, 2001). In addition, these studies have included few subjects, i.e. one or two participants, who spent a short amount of time in an ESL environment; therefore, their results are questioned and cannot be generalized. For example, Dechert and Lennon (1989) analyzed errors in essays written by two university students who spent an unspecified amount of time in England. The study reported that the participants’ collocational knowledge was low. The researchers explained this lack of collocational knowledge in terms of the participants’ inability to write an essay on a complex topic, which was unfamiliar to them because they were accustomed to using a casual style of communication instead. The study did not mention the length of time the participants spent in the ESL setting nor the learners’ amount of exposure to the language, which made the results questionable.

Along the same lines, Lennon (1996) conducted an error analysis in a corpus of 745 oral errors made by four female advanced German learners who spent six months at the University of Reading in Britain. The results showed that these learners had insufficient knowledge of collocations and they tended to overgeneralize their knowledge of common verbs like *put, go,* and *take.* Consequently, Lennon concluded that learners should practise
with highly frequent verbs and explore their collocational restrictions. Again, this study included few participants who spent only six months in an ESL environment, which is assumed to be a short time of exposure to the language that can result in improving their knowledge of collocations. Like the previous study, Lennon’s study did not describe the participants’ amount of exposure to the target language.

To investigate the relationship between learners’ knowledge of collocations and their writing proficiency, Zhang (1993) recruited 60 students (i.e. 30 native and 30 non-natives) at Indiana University of Pennsylvania. Two instruments: a gap-filling test and a paper and pencil TOEFL-like writing test were used. Confirming the result of previous research, the findings reported poor performance in the non-native group in comparison to the native group on both tests. Therefore, Zhang concluded by stating that collocational knowledge is a source of fluency in written communication and the production of accurate collocations improves the quality of writing. Again, the length of residence in the United States and the amount of exposure to the language were not reported, which might have made a difference. Unlike previous studies that explored learners’ knowledge of collocations, Bonk’s (2001) study aimed at investigating the reliability and validity of a test of collocational knowledge that consisted of three subtests, i.e. two gap-filling tests and a multiple choice test. To achieve that goal, ninety-eight East-Asian university students at the University of Hawai’i were recruited to take the test battery. The participants’ language proficiency varied from low intermediate to very proficient advanced language learners. Also, the study explored the correlation between participants’ knowledge of collocations and their general English proficiency. The results showed that the first and the third
subtests were valid and reliable tests, but the second subtest, which tested verb-proposition collocations, did not show high reliability. The study also indicated a positive correlation between learners’ general language proficiency and their knowledge of collocations. However, Bonk’s study was criticized for the length of the tasks’ format that raised the question of whether they measured learners’ reading comprehension or their knowledge of collocations. Also, the selection of the test items was based on intuition only.

Therefore, the present study has avoided these deficiencies in the previous research by having more participants whose length of residence in an ESL environment was established. Also, the selection of test’ items is based on checking with two dictionaries of collocations and native speakers’ intuition as well. The present study also investigates whether or not being in a highly rich in collocations environment and having the opportunity to be exposed more to the English language in ESL setting than in an EFL context facilitate the acquisition of collocational knowledge has not been largely neglected in other studies.

4. Relationship between Collocations and L1 Transfer

Language transfer, which simply means the influence of one language on a person’s use and knowledge of another language, is a phenomenon that has been of interest to many SLA researchers, such as Gass and Selinker (1992), Kellerman and Sharwood Smith (1986), Ringbom (1987), Odlin (1989), Jarvis (1998), Arabski (2006), etc. In 1986, Sharwood Smith & Kellerman presented the term “cross-linguistic influence” to include native language transfer, interlanguage transfer, and avoidance due to the influence of another system, borrowing and L2-related aspects of language loss.
Since then researchers have used the terms cross-linguistic influence and language transfer interchangeably to refer to the same concept. In collocation studies, some work has been done on the role of L1 transfer on the acquisition of collocations. Some researchers (Biskup, 1992; Caroli, 1998; Granger, 1998; and Nesselhauf, 2003) tested EFL learners’ knowledge of collocations with the emphasis on the role of the L1 in creating transfer effects from the L1 to the L2. First, Biskup (1992) investigated the main reasons behind collocational errors and the influence of L1 on the collocation usage of Polish and German learners of English. The results of her study revealed a strong L1 influence on the production of collocations by the two groups. According to the researcher, the Germans’ errors were the result of negative L1 transfer. On the other hand, the Polish students’ errors were either loan translations or extensions of L2 meaning on the basis of the L1 word. The results also showed that the German students produced more incorrect collocations (156 errors) than the Polish participants (106 errors) who were careful and unwilling to take risks. When the German participants were not sure about the correct collocations, they used descriptive answers, as opposed to the Polish participants, who preferred to avoid responding. The researcher attributed this to the influence of the respective educational systems. It was claimed that the Polish system emphasizes accuracy and the German system emphasizes fluency.

Another study that revealed the role of L1 transfer in producing English collocations by EFL learners is Caroli’s (1998) study. The study had two main aims: to investigate the influence of L1 (Italian) on learners’ collocational knowledge and to examine the relationship between learners’ general vocabulary knowledge and their
knowledge of collocations. To achieve these two goals, the researcher recruited seventy-three Italian high school students to take three tests: Nation’s vocabulary test, a receptive collocation test and a productive collocation test, which included 30 English collocations, half of them (15) had the literal Italian equivalents and the other 15 did not have the literal Italian equivalents. Like previous studies, Caroli reported that participants resorted to their L1 (Italian) in selecting the English word that collocated whenever they lacked collocational knowledge in the L2, English. It was also noticed that collocations with the Italian literal equivalents were easier than those collocations with no Italian equivalents. Like Bahns and Eldaw’s (1993) study, the researcher found that there was no significant relationship between Italian learners’ general vocabulary knowledge and their collocational knowledge. Therefore, the researcher recommended that teachers should present the new words with their frequent collocates to improve learners’ collocational knowledge.

Similar to what previous studies found, Granger’s study (1998) confirmed the important role that learners’ L1 plays in the use and acquisition of collocations. In her study, she studied the difference between native speakers of English and French learners of English in producing English collocations, in particular adjective amplifiers, such as totally and highly. She found that amplifiers with direct translation equivalents in French were the most frequent ones. She attributed that finding to the L1 positive transfer that facilitated learners’ acquisition of the similar amplifiers to their L1 (French).

3 “Any facilitating effects on acquisition due to the influence of cross-linguistic similarities. Unlike the negative transfer, positive transfer results in a convergence of behaviors of native and non-native speakers of a language. (Odlin, 1989, p. 168)
Confirming what has been said in previous research, Nesselhauf (2003) also found a considerable influence of the L1 (German) on the production of English collocations. In her study, verb-noun collocations were used to measure the collocational knowledge of advanced German-speaking learners of English. Nesselhauf focused on production because, in her opinion, comprehension was not difficult for learners. For this purpose, she evaluated collocations produced by 32 German-speaking university students of English in their essays, as to their acceptability in English using native speaker judgments, corpus analysis, and use of dictionaries. Her results showed that almost a quarter of the combinations contained one or several mistakes with non-lexical elements like the articles and prepositions belonging to a combination, not only verb-noun mismatches. However, the most common type of mistake was the wrong choice of verbs. Therefore, the researcher recommended that teachers should focus on the verb in the teaching of verb-noun collocations.

Other researchers (Elyildirm, 1997; Gitsaki, 1999; Lennon, 1996) have attributed learners’ deficient knowledge of collocations to various factors including negative L1 transfer. For example, Elyildirim’s (1998) study aimed at examining the comprehension and production of the target collocations of L1 Turkish learners of English. The researcher analyzed data from three collocation tests: correct or incorrect test, translation test and a gap-filling test that included two collocation categories, i.e. verb-noun collocations and adjective-noun collocations. The results revealed that participants tended to generalize unfamiliar combinations in reference to the familiar ones that learners frequently encountered in the textbook. Learners also have a tendency to incorrectly overgeneralize their L1 collocational knowledge with unknown collocations, which resulted in L1 negative
transfer. His findings also confirmed the easiness of acquiring collocations that have L1 equivalent and the difficulty of acquiring collocations that have no L1 equivalents. Another finding of the study was that the participants performed better on the adjective-noun collocation test than verb-noun-collocation test, which they found to be more difficult. The researcher concluded with advising teachers to teach the highly frequent collocations and learners to spend much time reading and listening to improve their knowledge of collocations instead of avoiding them.

Along the same lines, Gitsaki’s (1999) study confirms the influence of L1 on the production of English collocations. Data were collected from 275 Greek learners of English at three different levels: post-beginners, intermediate learners and post-intermediate learners. Unlike previous research that used limited types of collocations, Gitsaki used 37 types of collocations in three tests, i.e. essay writing, a translation, and a fill-in-the-blanks test. Her study showed two main results. The first finding revealed a positive relationship between overall language proficiency and collocational knowledge, which contradicts the studies of both Bahns and Eldaw (1993) and Caroli (1998), but confirms results of Al Zahrani (1998), Bonk (2001) and Koya (2005). The second finding relates to the factors that influence the development of collocational knowledge: the differences between L1 and L2, complexity, and arbitrariness, maturation, language proficiency, instruction, and saliency. Based on these results, Gitsaki stressed the significance of the acquisition of collocations that might help curriculum designers and teachers facilitate the gradual development of collocational knowledge.
The same claim was supported in Lennon’s (1996) study where the researcher recruited four university female German speakers to participate in a picture-story narration where the main focus was on the production of verb-noun collocations. As it was pointed out before, the researcher analyzed the oral errors of the participants. The study’s findings confirmed the claim that learners resorted to their L1 when they lacked the knowledge of the correct collocations. Also, learners tended to overgeneralize their knowledge of common verbs like get, put and take to compensate their deficiency of knowledge of collocations. Lennon concluded that L2 learners should be exposed to high-frequency verbs collocational possibilities and restrictions.

To sum up, some previous studies have highlighted the role of L1 in EFL learners’ production of English collocations and indicated that L2 learners resort to their L1 when they lack English collocational knowledge. On the other hand, other studies have claimed that Learners’ L1 is one of the factors that influence L2 learners’ acquisition of collocations, but other factors, such as unfamiliarity, explicit teaching, and language proficiency are involved as well. However, it is noticeable that most of the above-mentioned studies have been conducted in EFL settings and a very few studies (e.g., Dechert & Lennon, 1989; Lennon, 1996) investigated L1 influence on the production of collocations in an ESL setting. Based on these conclusions, the present study investigates the influence of L1 (Arabic) on the use of English collocations by learners in an ESL setting, which is assumed to be less significant than that of the EFL participants due to the greater chances of exposure to rich collocational input.
5. Arabic-Speaking Learners of English

A careful search of literature on collocation studies only located a few studies conducted to explore the collocational knowledge of language learners in ESL environments. None of these previous studies included Arabic-speaking learners of English. There are also few studies conducted on Arabic-speaking learners of English in EFL settings (Al-Zahrani, 1998; Farghal & Obiedant, 1995; Hussein, 1991; Mahmoud, 2005; Zughoul & Abdul-Fattah, 2003). These studies will be discussed in greater detail below.

First, Hussein (1991) used a forty-item test to measure the collocational knowledge of 200 university students majoring in English at Yarmouk University, Jordan. The findings showed that the students’ performance was unsatisfactory. Overall, the students did well on collocations commonly used in everyday life such as have a seat, alarm clock and safety belts. The researcher believed that the students’ low achievement was due to the teacher’s overemphasis of grammar in both teaching and testing at the expense of lexis, which led to the students’ poor reading experience, and their overuse of guessing strategies. In addition, the researcher indicated that some of the correct answers were due to positive transfer from the L1, Arabic, where there are some collocations that are similar to English. In addition, the researcher attributed the collocational errors to negative L1 transfer, unfamiliarity with the collocations, and overgeneralization. The study concluded by offering a broad suggestion: teachers should not underestimate the importance of teaching collocations.
Next, Farghal and Obiedant (1995) addressed the importance of collocations in EFL settings, which was assumed to be neglected. Two groups were used to answer two different questionnaires: one in English and the other in Arabic. The first group included junior and senior English major university students and the second group included senior English major at the higher college for the certificate of teachers. The results revealed that the subjects’ knowledge of collocations was poorer than expected. Additionally, in the absence of collocational knowledge, the subjects used different strategies. They tended to paraphrase, to avoid the missing words, to rely on the L1 in a way that resulted in both negative and positive L1 transfer, and to give synonyms. The study emphasized that collocations should receive more attention due to their crucial importance to communication. However, there are some disadvantages of this study. First, this study has made use of a small number of items, only 22 items, and it is not clear how they were selected. Second, the researchers did not present any reliability measures of the test instruments. Third, the instruments used antonyms to elicit the target collocations whose validity is questionable.

Later, Al- Zahrani (1998) investigated the relationship between learners’ general language proficiency and their knowledge of lexical collocations. In his study, there were 81 male English major Saudi students who represented four academic levels of Saudi EFL students: juniors, seniors, freshmen and sophomores. To test their collocational knowledge, a test that consisted of 50 verb-nouns collocations was used. In addition, the participants’ general language proficiency was measured by completing a writing test and an institutional version of the TOEFL exam. Unlike Bahns and Eldaw’s study (1993), the
results showed that there was a positive relationship between participants’ knowledge of collocations and their general language proficiency. In other words, highly proficient English learners have high collocational knowledge and low proficient participants have low knowledge of collocations. In addition, Al-Zahrani found that there were significant differences in students’ knowledge of collocations when he compared their academic levels.

Then, Zughoul and Abdul-Fattah (2003) investigated three aspects of collocational knowledge: the use of collocations as an indicator of language proficiency, the strategies of L1 Arabic learners of English used to produce the proper collocations and how differently Arabic and English words combined together. A multiple choice test that included sixteen collocations for the Arabic verb *khasara* (‘broke’) and a free translation task of the same Arabic collocations were given to two groups of advanced EFL university students (38 graduate students and 32 undergraduate students). The results showed that the subjects used distinct communicative strategies when rendering into English the collocation sequences of the Arabic verb *khasara*, such as avoidance, paraphrasing, literal translation, assumed synonymity, overgeneralizations and analogy, substitutions and imitation of the literary style. The study’s conclusion was that even advanced L1 Arabic learners of English had difficulty with English collocations. The researcher suggested having more studies that focus on the phenomenon of collocations in English at both school and university levels.

Confirming the results of previous research, Mahmoud’s (2005) study examined learners’ production of English collocations. To achieve that goal, the researcher gave a
list of topics to forty two Arabic speaking university students majoring in English. Participants were asked to write an essay as a homework assignment. The data were 42 essays written by the participants about one of the given topics they chose. Then, the data were analyzed, and this revealed a low level of the collocational competence among the participants. Although the learners used different kinds of collocations, such as lexical and grammatical collocations, 64% of the collocations they used were wrong and 61% of the word combinations they used were bad. The researcher explained that some of these mistakes were due to negative transfer from their L1, Arabic. In conclusion, the researcher confirmed the necessity of teaching collocations for foreign language learners of English.

The abovementioned studies confirm the poor collocational knowledge of Arabic-speaking learners of English like the other EFL learners. While there are few collocation studies that included Arabic-speaking learners of English, all of these studies have been conducted in EFL settings. And no previous study has explored the knowledge of collocations of L1 Arabic learners of English in an ESL setting. Therefore, the present study attempts to fill this gap in the existing research by investigating whether or not living in an ESL environment in the United States affects the collocational knowledge of advanced Arabic-speaking learners of English in comparison with their counterparts in an EFL environment, i.e. Egypt.

In light of the previous review of the literature, the following assumptions can be made. Firstly, collocations present a challenge for students in EFL and ESL settings. Secondly, few studies have been conducted on language learners in ESL settings.
Thirdly, researchers study transfer in the use of collocations by contrasting collocations existing in the L1 and L2 (Bahns and Eldaw, 1993; Biskup, 1992; Caroli, 1998; Nesselhauf, 2003). Fourthly, like other EFL students, Arabic-speaking learners of English have poor collocational knowledge, which researchers attribute to factors, such as unfamiliarity with collocational structures, overgeneralization and negative transfer, which they attribute to the relative in frequency with which ESL learners encounter collocations. In such cases, learners are assumed to rely on their L1 collocational knowledge while using collocations in the L2. Fifthly, no previous study in an ESL setting included Arabic-speaking learners of English. According to Wary (2002, p.183), learners can acquire collocations only if they are present in the input they are exposed to. Therefore, on this basis, one might predict that learners in an ESL environment will acquire L2 collocations more quickly while using the L2. This is the general hypothesis of this study. No previous study has reported on the relationship between the collocational competences of Arabic-speaking learners of English, the influence of the L1 (Arabic), effects of the learning environments, i.e. EFL and ESL and the amount of exposure to the English language. These are the main goals of the current study.

Chapter Summary

In this chapter, previous studies on the acquisition and use of L2 have been reviewed. This review covered five different aspects: a historical review of collocation research, the importance of collocations and the problems they create for L2 language learners, the relationship between collocations and learning environments, which included: empirical studies that include language learners in EFL settings and empirical
studies on collocations that include learners in ESL environments, the empirical studies that focus on the relationship between collocations and L1 influence, and the empirical studies of collocations involving Arabic-speaking learners of English. Then, an association between previous research and the current study was presented. It can be generally concluded that due to the importance of collocations and the problems they cause to language learners, more research studies on the acquisition of collocations are considered necessary, which highlights the importance of the present study.
CHAPTER THREE: METHOD

To achieve the aforementioned purposes, the study addresses the following main research questions:

1. Is there a significant difference in the collocational knowledge of advanced Arabic-speaking learners of English studying in an ESL environment and those studying in an EFL environment?

2. Is there a significant L1 influence on the production and reception of English collocations by advanced Arabic-speaking learners of English studying in an ESL or EFL setting?

3. Is there a correlation between participants’ proficiency in producing and recognizing collocations and their amount of exposure to the English language?

4. Is there a significant difference between the subjects’ performance on verb-noun collocations and adjective-noun collocations?

5. Is there a significant difference between the participants’ production and reception skills of collocations?

This chapter is organized as follows: First, a description of the participants is given. Then, the materials used are presented in detail. Next, the data collection procedures are described, which is followed by a presentation of the statistical analysis.

Participants

In this research, I studied two groups in two different learning environments; i.e., ESL and EFL in two countries: The United States of America and Egypt. The total number of participants in the study was ninety-seven (N= 97) and they were divided into
two groups—ESL ($n = 35$) and EFL ($n = 62$) group. In the ESL condition, out of 50
Arabic-speaking students studying at Ohio University, who were contacted via e-mail, 42
responded. However, only 35 participants, whose TOEFL score was over 550, were
selected to participate in the experiment; and the other seven were excluded because their
TOEFL score was lower than 550. This cut off score was chosen because it is the
required TOEFL score that Ohio University sets for its international students before they
are allowed to start a degree-granting academic program. The participants in the ESL
group included 35 advanced Arabic-speaking learners of English who came from eight
Arabic-speaking countries: Egypt ($n = 7$), Iraq ($n = 2$), Jordan ($n = 8$), Kingdom of Saudi
Arabia ($n = 8$), Kuwait ($n = 2$), Morocco ($n = 2$), Sudan ($n = 3$), and Syria ($n = 3$). At the
time of the experiment, they were studying at Ohio University in both graduate and
undergraduate programs majoring in African studies, biology, chemistry, economics,
education, engineering, international development, linguistics, media, modern languages,
and telecommunication. They all were advanced English learners, whose TOEFL scores
ranged from 567 to 620 ($M = 593.5$). Their stay in the United States ranged from one to
eight years ($M = 4.5$). Both genders were represented in the sample—with 13 females and
22 males. Out of the 13 female students, 1 was a senior undergraduate, 6 were M.A.
candidates, and 6 were Ph.D. candidates. As for the male participants, there were 3 senior
undergraduates, 13 M.A. candidates and 6 Ph.D. candidates. The ages of the participants
ranged from 19 to 38 ($M = 28$).

All participants in this group had undergone formal instruction in English, which
ranged from 1 to 20 years ($M = 9.9$). Eighteen of the participants had studied English for
at least 10 years, although there were 2 participants who had studied English for 20 years. Only 12 participants had previously studied English abroad, while the rest of them had not studied in English speaking countries before. In addition, the number of classes the participants took per quarter ranged from two to five classes per quarter: 7 doctoral participants were working on their dissertations and took no classes, 1 took two classes, 15 participants took three classes, 10 took four classes, and 2 participants took five classes per quarter.

At the Egyptian University, 80 students majoring in English were invited to participate in the study, but only 62 students responded. This EFL group of participants consisted of advanced Arabic-speaking learners of English who were English major at an Egyptian University. This group included sixty-two undergraduate students: 29 third year students and 23 fourth year students. All participants in this group were Egyptians who had been learning English as a foreign language for at least 11 years ($M = 10.4$) starting from elementary school and continuing through middle and high school and then to college. However, there were 2 participants who had studied English for 18 years. The English proficiency of the participants in this group could be considered advanced, according to the test scores by which they were admitted to the English Department, which allows only advanced language learners to enroll. Their admission scores ranged from 45 to 49 ($M = 47$) out of 50. The equivalency of third and fourth year students in terms of English proficiency was confirmed through the use of an independent-sample t-test, which found no significant difference between the two groups ($t = .69, df = 60, p < .49$).
At the time of data collection, the students were between ages 19 and 22 ($M = 20.5$). There were 58 females and 4 males. Out of the 58 female students, 27 were third year students and 31 were fourth year students. As for the male participants, 2 were third year students and 2 were fourth year students. None of the participants in this group had studied English in an English speaking country, such as the USA, Britain or Australia. The students in this group were homogeneous in terms of learning experience and learning environment.

To investigate the equivalency of the participants in the two groups in terms of their knowledge of the vocabulary used in the study, an independent-samples t-test was run, which found no significant difference between the two groups ($t = -0.63$, $df = 95$, $p < .57$).

**Materials**

*The Selection of Collocations*

The selected collocations were drawn from previously published literature on collocations. To decide which items to be included in the test instruments in the present study, the following steps were taken. Firstly, prior research shows that the most commonly used categories of collocations are verb-noun collocations (Bahns & Eldaw, 1993; Caroli, 1998; Nesselhauf, 2003) and adjective-noun collocations (Channell, 1981; Elyildirm, 1997, Kayo, 2005). Therefore, all verb-noun and adjective-noun collocations, which appeared in previous research that I was able to access, were extracted. This resulted in 315 collocations: 227 verb-noun collocations and 88 adjective-noun collocations (see Appendix A and Appendix B).
Secondly, in accordance with Sinclair’s (1987) emphasis on the importance of frequency of co-occurrence, the researcher consulted the *CO-BUILD English Collocations on CD-ROM* (1995) and the *Oxford Collocation dictionary for Students of English* (2002) to make sure that the collated collocations were listed as collocations in those two sources and to identify the highly frequent ones, which narrowed down the number of collocations to 86. To investigate which of these collocations have an Arabic equivalent and which do not, a bilingual dictionary (Abu-Ssaydh, 1995) and two native speakers of Arabic were consulted. Finally, the remaining collocations were used in fixed structures and given to 15 native speakers (NSs) of American English and 15 non-native speakers (NNSs) of English with different L1 backgrounds to validate the instruments and to arrive at a final set of target items. The intuition of the NSs served as a filter for the selected items. In other words, if there was a contradiction between the used references and the NSs’ responses, it was the native speakers’ intuitions that counted. The participation of the NNSs acted as a checker of the difficulty of the selected items. In other words, the items the NNSs were not able to identify were excluded. This item-piloting resulted in the selection of 32 collocations: 16 verb-noun collocations and 16 adjective-noun collocations that were used in the test materials. Each category consisted of eight collocations with literal Arabic equivalents (congruent) and eight items without literal Arabic equivalents (non-congruent). Then, another 18 collocations, with nine having Arabic equivalents and nine without Arabic equivalents, were added as distracters to the receptive test, so a total number of 50 collocations were used in this study. Some of
these distracters were correct collocations and others were wrong, which are marked by asterisks (*) in Table 1.

Table 1

Collocations used in the study

<table>
<thead>
<tr>
<th>Verb-noun collocations</th>
<th>Adjective-noun collocations</th>
</tr>
</thead>
<tbody>
<tr>
<td>catch fire</td>
<td>*false limbs</td>
</tr>
<tr>
<td>change one’s mind</td>
<td>black eye</td>
</tr>
<tr>
<td>do good</td>
<td>broken English</td>
</tr>
<tr>
<td>eat soup</td>
<td>capital punishment</td>
</tr>
<tr>
<td>gain weight</td>
<td>*artificial teeth</td>
</tr>
<tr>
<td>*get success</td>
<td>fast food</td>
</tr>
<tr>
<td>give birth</td>
<td>fine arts</td>
</tr>
<tr>
<td>have an effect</td>
<td>golden age</td>
</tr>
<tr>
<td>have heart attack</td>
<td>heavy rain</td>
</tr>
<tr>
<td>keep an eye on</td>
<td>heavy traffic</td>
</tr>
<tr>
<td>*leave one’s mind</td>
<td>hot blood</td>
</tr>
<tr>
<td>*do effort</td>
<td>last chance</td>
</tr>
<tr>
<td>make a difference</td>
<td>*wide public</td>
</tr>
<tr>
<td>make a mistake</td>
<td>middle class</td>
</tr>
<tr>
<td>play a role</td>
<td>old age</td>
</tr>
<tr>
<td>*put risk</td>
<td>political party</td>
</tr>
<tr>
<td>spend time</td>
<td>public opinion</td>
</tr>
</tbody>
</table>
After the final selection of the items and the design of the tests, they were given to three Arabic-speaking learners of English who were newly arrived in the United States to study English at Ohio University. The purpose of this procedure was to check the time limit and whether the suggested time limit of 15 minutes per test was enough for a test to be completed or it needed some adjustment. After taking the two tests, the researcher found that the participants finished each test within 10 minutes that is why the researcher decided on 10 minutes per each productive test, and thirty minutes for the receptive test, which was enough time.

**Data Collection**

After reviewing the literature on collocation studies, the following four instruments were designed: a) a questionnaire, b) two gap-filling productive tests, c) an appropriateness judgment test, and d) a vocabulary recognition test. All test instruments were administered in English. Each of the test instruments is briefly described below.
1. Questionnaire

This was a self-report questionnaire (see Appendix C), which included two sections. In the first section, the participants provided some demographic information, which included nationality, major, age, TOEFL/admission score, gender, educational level, etc. The information gathered with the questionnaire helped create a complete picture of the participants’ profile. In the second part of the questionnaire, the participants responded to 20 questions on a 4-point Likert scale to report on their length of exposure to both English and Arabic on a daily basis. The participants were asked to respond to these questions by selecting the point on the 4-point Likert scale that best reflected their self-perceived amount of exposure.

2. Productive Collocation Tests

The two productive tests, which the researcher devised, were intended to explore the participants’ collocational productive proficiency. They included the 32 target collocations described earlier, which fell into two categories: 16 verb-noun and 16 adjective-noun collocations. Each category was further divided into two sub-categories to include 8 collocations with Arabic equivalents (congruent) and 8 collocations without Arabic equivalents (non-congruent) (see Table 2).
Table 2

Collocations with Arabic equivalents and without Arabic equivalents used in the productive test

<table>
<thead>
<tr>
<th>Collocation category</th>
<th>Collocations with an Arabic equivalent</th>
<th>Collocations without Arabic equivalent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Verb-noun</td>
<td>take action</td>
<td>gain weight</td>
</tr>
<tr>
<td></td>
<td>change one’s mind</td>
<td>take place</td>
</tr>
<tr>
<td></td>
<td>Spend time</td>
<td>do good</td>
</tr>
<tr>
<td></td>
<td>make a difference</td>
<td>give birth</td>
</tr>
<tr>
<td></td>
<td>take time</td>
<td>make a mistake</td>
</tr>
<tr>
<td></td>
<td>play a role</td>
<td>catch fire</td>
</tr>
<tr>
<td></td>
<td>tell the truth</td>
<td>keep an eye on</td>
</tr>
<tr>
<td></td>
<td>have an effect</td>
<td>take advantage</td>
</tr>
<tr>
<td>Adjective-noun</td>
<td>political party</td>
<td>second thoughts</td>
</tr>
<tr>
<td></td>
<td>last chance</td>
<td>short cut</td>
</tr>
<tr>
<td></td>
<td>old age</td>
<td>fast food</td>
</tr>
<tr>
<td></td>
<td>fine arts</td>
<td>black eye</td>
</tr>
<tr>
<td></td>
<td>golden age</td>
<td>red tape</td>
</tr>
<tr>
<td></td>
<td>public opinion</td>
<td>heavy rain</td>
</tr>
<tr>
<td></td>
<td>white lie</td>
<td>soft drinks</td>
</tr>
<tr>
<td></td>
<td>middle class</td>
<td>capital punishment</td>
</tr>
</tbody>
</table>
These items were used in two separate tests: a verb-noun collocations test and adjective-noun collocations test, which are described below.

**a. First Gap-filling productive test. (Verb-noun collocations)**

This test included sixteen target verb-noun collocations, which were used in well-restricted structures that allowed only one correct answer (see Appendix D). Each sentence included only the noun part of the collocation and the participants were asked to complete the collocational string by filling in the missing verb part.

**b. Second Gap-filling productive test. (Adjective-noun collocations)**

In this test, sixteen adjective-noun collocations were used in controlled sentences, where only one answer was possible (see Appendix E). In each sentence, the missing adjective collocate to the given noun node was to be provided. The participants were asked to give the missing adjective that best fit the sentences. The purpose of this test was to test the participants’ collocational knowledge and their ability to produce target language collocations.

**3. Appropriateness Judgment Test (Receptive Test)**

This receptive test was meant to elicit the same participants’ receptive competence in recognizing correct English collocations. It consisted of 50 sentences that included the 32 sentences used in the two gap-filling tests in addition to another 18 sentences that included nine verb-noun collocations and nine adjective-noun collocations that acted as distracters (see Appendix F). Thus, overall, the test included 25 verb-noun collocations and 25 adjective-noun collocations (see Table 3).
Table 3

Collocations used in the receptive test

<table>
<thead>
<tr>
<th>Verb-noun collocations</th>
<th>Adjective-noun collocations</th>
</tr>
</thead>
<tbody>
<tr>
<td>make a difference</td>
<td>second thoughts</td>
</tr>
<tr>
<td>tell the truth</td>
<td>political party</td>
</tr>
<tr>
<td>take action</td>
<td>last chance</td>
</tr>
<tr>
<td>spend time</td>
<td>old age</td>
</tr>
<tr>
<td>play a role</td>
<td>golden age</td>
</tr>
<tr>
<td>take time</td>
<td>fine arts</td>
</tr>
<tr>
<td>change one’s mind</td>
<td>broken English</td>
</tr>
<tr>
<td>take advice</td>
<td>white lie</td>
</tr>
<tr>
<td>have a heart attack</td>
<td>public opinion</td>
</tr>
<tr>
<td>eat soup</td>
<td>middle class</td>
</tr>
<tr>
<td>give birth</td>
<td>residential area</td>
</tr>
<tr>
<td>do good</td>
<td>short cut</td>
</tr>
<tr>
<td>take place</td>
<td>capital punishment</td>
</tr>
<tr>
<td>make a mistake</td>
<td>political party</td>
</tr>
<tr>
<td>catch fire</td>
<td>last chance</td>
</tr>
<tr>
<td>take advantage</td>
<td>*wide public</td>
</tr>
<tr>
<td>keep an eye on</td>
<td>black eye</td>
</tr>
<tr>
<td>have an effect</td>
<td>soft drinks</td>
</tr>
<tr>
<td>gain weight</td>
<td>red tape</td>
</tr>
</tbody>
</table>
These 50 items were divided into four categories: (a) wrong English collocations that have an Arabic equivalent, (b) correct English collocations that do not have an Arabic equivalent, (c) wrong English collocations with no Arabic equivalent and (d) correct English collocations with an Arabic equivalent, as shown in Table 4 and Table 5.

<table>
<thead>
<tr>
<th>*leave one’s mind</th>
<th>*artificial teeth</th>
</tr>
</thead>
<tbody>
<tr>
<td>*run minerals</td>
<td>wide public</td>
</tr>
<tr>
<td>*do effort</td>
<td>hot blood</td>
</tr>
<tr>
<td>*put risk</td>
<td>*growing generation</td>
</tr>
<tr>
<td>*get success</td>
<td>*false limbs</td>
</tr>
<tr>
<td>wear makeup</td>
<td>*wide imagination</td>
</tr>
</tbody>
</table>
Table 4
The Four Collocation Categories in the Receptive Test

<table>
<thead>
<tr>
<th>Wrong English collocations that have an Arabic equivalent</th>
<th>Correct English collocations that do not have an Arabic equivalent</th>
<th>Wrong English collocations with no Arabic equivalent</th>
<th>Correct English collocations with an Arabic equivalent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Verb-noun</td>
<td>Adjective-noun</td>
<td>Verb-noun</td>
<td>Adjective-noun</td>
</tr>
<tr>
<td>-get success</td>
<td>-false limb</td>
<td>-eat soup</td>
<td>-red tape</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>-put risk</td>
</tr>
<tr>
<td>-wide imagination</td>
<td>-gain weight</td>
<td>-broken English</td>
<td>-run vitamins</td>
</tr>
<tr>
<td>-growing generation</td>
<td>-give birth</td>
<td>-heavy rain</td>
<td>-leave mind</td>
</tr>
<tr>
<td>-wide public</td>
<td>-make a mistake</td>
<td>-heavy traffic</td>
<td>-do effort</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>-have heart attack</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>-white lie</td>
</tr>
<tr>
<td>artificial teeth</td>
<td>take place</td>
<td>soft drinks</td>
<td>take action</td>
</tr>
<tr>
<td>------------------</td>
<td>------------</td>
<td>-------------</td>
<td>-------------</td>
</tr>
<tr>
<td>keep an eye on</td>
<td>black eye</td>
<td>spend time</td>
<td>golden age</td>
</tr>
<tr>
<td>take advantage</td>
<td>fast food</td>
<td>make a difference</td>
<td>last chance</td>
</tr>
<tr>
<td>catch fire</td>
<td>short cut</td>
<td>take time</td>
<td>political party</td>
</tr>
<tr>
<td>do good</td>
<td>hot blood</td>
<td>have effect</td>
<td>old age</td>
</tr>
<tr>
<td>wear makeup</td>
<td>second thoughts</td>
<td>take advice</td>
<td></td>
</tr>
<tr>
<td></td>
<td>capital punishment</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Table 5
The Number and Percentages of Items with and Without Arabic Equivalents on the
Productive and Receptive Tests

<table>
<thead>
<tr>
<th></th>
<th>Productive test</th>
<th>Receptive test</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Verb-noun</td>
<td>Adjective-noun</td>
</tr>
<tr>
<td>Number of items</td>
<td>8</td>
<td>8</td>
</tr>
<tr>
<td>Arabic equivalents</td>
<td>25%</td>
<td>25%</td>
</tr>
<tr>
<td>Number of items</td>
<td>8</td>
<td>8</td>
</tr>
<tr>
<td>no Arabic equivalents</td>
<td>25%</td>
<td>25%</td>
</tr>
<tr>
<td>Total</td>
<td>16</td>
<td>16</td>
</tr>
<tr>
<td>Percentage</td>
<td>50%</td>
<td>50%</td>
</tr>
</tbody>
</table>

The purpose of this test was to determine the participants’ receptive knowledge of English collocations and their knowledge of the differences between Arabic and English ones. In this test, participants were required to circle only sentences they judged as unacceptable.

4. Vocabulary Recognition Task

The vocabulary recognition task (Appendix G) included all the single words that formed the used collocations in the receptive and productive tests. The words in this task were mixed up with the nonsense words (e.g. balfour, cantileen, degate and tenemy) that Meara (1992) used to monitor and adjust unreliable patterns of responses by test takers. In this test, the participants were asked to underline the words whose meaning they know
and not to mark the words they do not know. The purpose of this task was to ensure that
the participants’ performance on the other three tests would not be affected by their lack
of knowledge of the individual words comprising the target collocations.

Procedures

The study was conducted over a period of one academic quarter in winter 2008
between a northern university in Egypt and a Midwestern university in the USA. The
procedures for data gathering consisted of two separate test sessions for each group.
During the first session, the participants had ten to fifteen minutes to complete the
questionnaire which elicited demographic information and information on their self-
reported exposure to both English and Arabic on a day-to-day basis. Next, they were
given the gap-filling production tests, which lasted for twenty minutes; ten minutes each.
Then, the participants completed the vocabulary recognition task. After two weeks, the
participants took the second part of the test, which consisted of completing the
acceptability judgment test. Since the test included the same items from the productive
test mixed up with additional 18 new distracting items, the two-week delay was necessary
to eliminate the effects of memory across the two tests. The receptive test lasted for 30
minutes. The participants were not told that the main goal of these tasks was to
investigate their knowledge of collocations. But they were told that their vocabulary
knowledge would be tested. Also, the participants were asked to complete the tests to the
best of their abilities and were not allowed to use a dictionary or any other reference
material.
**Data Coding**

The data gathered from the three collocation tests were scored as correct or incorrect because all items were restricted collocations that were put into well-fixed structures, where only one possible answer was allowed. Sentences in which the collocate gap was left blank were counted as incorrect. A degree criterion was applied to the questionnaire questions because it was based on a 4-point Likert scale and a variety of answers were expected. Twenty questions were rated with the following marks:

0 = missing/ none
1 = less than one hour
2 = 1-3 hours
3 = more than 4 hours

Like previous collocational studies, such as Nesselhauf’s (2003) study, lexical choice was the focus of analysis so morphological errors, which are errors in word formation, such as in the use of verb tenses e.g. *we gains weight; *Mike make the mistake) and spelling errors (e.g. maked) were not considered.

**Data Analysis**

The data were analyzed using the Statistical Package for the Social Sciences (SPSS) 15.0 for Windows software package. There were three independent variables: participants’ learning environment (ESL or EFL), participants’ amount of exposure to English, and the relationship of each target English collocation to Arabic (i.e., whether it has an Arabic equivalent or not). The dependent variables were the participants’ scores on the three collocation tests.
The conventional level of .05 was used as the statistical level of significance for all analyses. Cronbach’s Alpha was used to assess the reliability of the measures. Descriptive statistics were conducted for demographic factors including age, and the number of years studying English. To assess participants’ collocational knowledge as measured in terms of production and reception, three kinds of tests were used, independent t-test, paired-sample t-test and GLM Univariate analysis of variance test.

*Tests of Assumptions*

The first question, which investigates the difference in the collocational knowledge between the two groups, was answered by comparing the performance of the two groups in the three collocation tests, using two independent t-tests to evaluate the relationship between the participants’ collocational knowledge and the learning environment. Additional investigation is provided through descriptive statistics.

Question two investigated the influence of the L1 on the reception and production of collocations by the participants in the two groups. To address this question the data were recoded and the correct responses to the congruent and non-congruent collocations was quantified on both the productive and receptive collocation tests. Then, two paired-samples t-tests were used to test for differences in performance related to the two environments.

The answer to the third question, which investigated whether there was a correlation between participants’ collocational knowledge and the amount of exposure to the English language, I used a Pearson Bivariate correlation test between the total number of hours the participants self-reported to have been exposed to English daily and their
total score in the three collocation tests. Additional analysis was conducted by running two Pearson Bivariate correlation tests to see in which group the strength of relationship was stronger.

To answer the fourth question, three tests were used. First, a paired-samples t-test was used to investigate the difference between the participants’ performance on the verb-noun collocation test and their performance on adjective-noun collocation test. Then, two GLM Univariate analysis of variance tests were used to further examine the difference between the performances of the two groups on the two productive tests.

To answer the fifth question, a paired-samples t-test was used to investigate the difference between the participants’ production and reception of collocations. Then, two GLM Univariate analysis of variance tests were used to further examine the difference between the performances of the two groups on both the productive and receptive tests. These methods will be explained further in the following chapter.

Chapter Summary

This study aims to explore the productive and receptive collocational knowledge of Arabic-speaking learners of English in two different leaning environments, i.e. EFL and ESL, by investigating the role of the learning environment and the influence of their L1 (Arabic) on their collocational knowledge, and by checking whether or not there is a relationship between the amount of exposure to the language and the participants’ collocational knowledge. Therefore, two collocation lexical categories were selected: verb-noun collocations and adjective-noun collocations because they are the most common collocation categories in the previous research. After a careful review of the
literature, checking with two specialized collocation dictionaries, and native speakers’ intuitions, three tests were designed, which included the highly frequent collocations in the two selected collocational categories, i.e. verb-noun and adjective-noun collocations, that appeared in the previous collocation research. The data analysis was quantitative, which relied on using SPSS 15.0 for Windows. And, three types of statistical tests were used: independent t-test, paired-samples t-test and a GLM Univariate analysis of variance test. This chapter has outlined the method used in the present study, including a description of the participants, materials, procedures and the data analysis procedure. A brief description of the statistical tests used to analyze the data was provided. In the following chapter, the results of the data analysis and the findings of the present study will be presented in detail.
CHAPTER FOUR: RESULTS AND DISCUSSION

As pointed out earlier, the purpose of the present study was to determine if the learning environment could influence the collocational knowledge of advanced Arabic-speaking learners of English and whether L1 influence played a role in their acquisition of collocations. This was accomplished by comparing the performance of two groups on three collocation tests in both EFL and ESL environments. This chapter consists of two parts: the first part presents the statistical results of the data gathered from the subjects’ answers on three tests and the second part discusses the findings from various viewpoints.

Results

In the current study, there were three dependent variables, based on the participants’ scores on the three collocation tests that reflected their collocational knowledge, and three independent variables, which included L1 influence, learning environment, and the amount of exposure to the English language.

To test the first research question, which investigated the differences between the two groups of participants on their collocational knowledge, two independent t-tests were run. The results indicated that there were significant statistical differences between the two groups on their productive knowledge of collocations ($t=10.64$, $df=95$, $p<.001$, $\eta_p^2=.54$) and on their receptive knowledge of collocations as well, ($t=-2.78$, $df=95$, $p<.007$, $\eta_p^2=.52$). The descriptive statistics presented in Table 6 indicate that the ESL participants perform significantly better than the EFL participants. This suggests that the ESL learning environment, which is a rich source
of collocation input, plays a positive role in improving learners’ collocational knowledge, unlike the EFL environment.

Table 6
Mean Scores for Productive Collocation Size and Receptive Collocation Size of the Two Groups

<table>
<thead>
<tr>
<th>Learning Environment</th>
<th>Productive knowledge of collocations</th>
<th>Receptive knowledge of collocations</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean</td>
<td>Std. Deviation</td>
</tr>
<tr>
<td>ESL (n=35)</td>
<td>20.71</td>
<td>6.33</td>
</tr>
<tr>
<td>EFL (n=62)</td>
<td>9.31</td>
<td>4.20</td>
</tr>
<tr>
<td>Total</td>
<td>13.42</td>
<td>7.46</td>
</tr>
</tbody>
</table>

The percentage of correct answers for each collocation in the productive and receptive collocation tests were compared with each other between the two groups. In Figure 1, the higher performance of the ESL group was clear. Generally, judging from the above statistical results, the answer to research question one supported the first hypothesis of the study. Thus, it can be claimed that being in an ESL environment enriches learners’ knowledge of collocations.
The boxplot in Figure 1 illustrates the difference between the performances of the two groups in the three collocation tests where the top whisker refers to the maximum score the participants got, (ESL= 80 & EFL= 56) and the lower whisker refers to the least score the participants got (ESL= 34 & EFL= 33). The upper quartile shows that 75% of the scores are below the top of the box and above the median, which is represented by a line inside each box. The lower quartile shows that 25% of the scores are below the median. One can also see that the ESL participants did better than the EFL group because the median is higher in the box of the ESL group and lower in the box of the EFL group.

Figure 1: The Percentage of Correct Answers of Each Collocation in the Two Group
To examine the second research question, which explored the influence of the L1 (Arabic) on the collocational knowledge of the participants in the two groups, the influence of cross-linguistically congruent collocations was examined.

If L1 effects play a role in learners’ collocational knowledge, then one can assume that their performance with cross-linguistically congruent collocations (i.e., English collocations with direct counterparts in Arabic) will be better than their performance with non-congruent collocations. I examined potential L1 effects with two statistical analyses. The first one compared the number of correct answers for congruent and non-congruent collocations by the ESL participants. The results showed a statistically significant effect for cross-linguistic congruence in the ESL group ($t = -6.96$, $df = 34$, $p < .001$, $\eta_p^2 = .59$). The same test was used with the EFL group and the results also showed a statistically significant effect for cross-linguistic congruence ($t = 11.93$, $df = 61$, $p < .001$, $\eta_p^2 = .64$). The descriptive statistics of the two groups nevertheless showed that there was a difference between the two groups in relation to the effect of L1-L2 congruence. As shown in Table 7 and Table 8, the ESL group exhibits less of a difference in their performance on congruence versus non-congruent collocations than the EFL group does (see Table 7 and Table 8).
Table 7

ESL Group: Mean Scores of Participants’ Correct Answers on Both the Congruent and Non-Congruent Collocations

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Congruent collocations</td>
<td>35</td>
<td>34.20</td>
<td>6.24</td>
</tr>
<tr>
<td>Non-congruent collocations</td>
<td>35</td>
<td>28.65</td>
<td>6.14</td>
</tr>
</tbody>
</table>

Table 8

EFL Group: Mean Scores of Participants’ Correct Answers on Both the Congruent and Non-Congruent Collocations

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Congruent collocations</td>
<td>62</td>
<td>26.72</td>
<td>3.53</td>
</tr>
<tr>
<td>Non-congruent collocations</td>
<td>62</td>
<td>21.51</td>
<td>2.67</td>
</tr>
</tbody>
</table>

To examine the third research question that explored whether the independent variable, i.e. the participants’ self-reported amount of exposure to the English language, resulted in participants’ better performance on both receptive and productive collocation tests, a Pearson Bivariate correlation test was used. The results indicated that there was a moderate significant positive correlation between the two variables (r=.33, p<.001). This means that the amount of exposure to the language showed demonstrable effects on the improvement of collocational knowledge. Figure 2 shows this correlation.
Two more Pearson Bivariate correlation tests were run to separately identify the relationship between the two groups’ collocational knowledge and their self-reported amount of exposure to the English language. Unlike the first test, which showed a strong positive correlation between the ESL group’s self-reported amount of exposure to the English and their performance on the collocation tests ($r=.88$, $p < .001$), the same test run with the EFL group showed only a moderate positive correlation between the two variables, which was nevertheless still significant ($r=.29$, $p< .001$ level) (see Figures 3 and 4).
Figure 3: The Correlation between the Number of Hours ESL Participants were Exposed to the English Language and Their Knowledge of Collocations

\[
R^2 \text{Linear} = 0.782
\]
To examine the fourth research question, which investigated whether the participants would demonstrate better productive performance with verb-noun versus adjective-noun collocations, a paired-samples t-test was used. The results showed that there was a significant statistical difference between the participants’ performance on the two tests ($t = 15.11$, $df = 96$; $p < .001$; $\eta^2 = 0.83$). Table 9 shows that all the participants performed better on the verb-noun collocation test than the adjective-noun collocation.
test. This result supported the study’s hypothesis that adjective-noun collocations are more difficult to acquire than verb-noun collocations.

Table 9

Participants’ Mean Scores on the Two Production Tests

<table>
<thead>
<tr>
<th>Collocation test</th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Verb-noun test</td>
<td>97</td>
<td>8.95</td>
<td>3.90</td>
</tr>
<tr>
<td>Adjective-noun test</td>
<td>97</td>
<td>4.47</td>
<td>4.10</td>
</tr>
</tbody>
</table>

To further examine the difference between the performances of the two groups on the two productive tests, two GLM Univariate tests were conducted. The results indicated that there was a statistically significant difference between the two groups in the production of the verb-noun collocations ($F(1, 95) = 45.13; p < .001, \eta^2_p = .32$) and in the production of the adjective-noun collocations ($F(1, 95) = 170.06; p < .001, \eta^2_p = .64$). The descriptive statistics showed that the ESL group did better on the two collocation tests ($M=11.88, SD=.54; M=8.83, SD=3.17$) than the EFL group ($M=7.29, SD=.41; M=2.02, SD=4.51$). Figure 5 and Figure 6 show this difference between the two groups.
Figure 5: The Participants' Scores on the First Production Test (Verb-Noun Collocations)
The last research question investigated the difference between the two groups on their receptive and productive collocation skills. To examine this question, a paired-samples t-test was used, which showed a significant statistical difference between the participants’ production and reception of collocations ($t = -34.45$, $df = 96$, $p < .001$, $\eta_p^2 = .96$). Figure 7 and Figure 8 show this difference between the two groups.
Figure 7: Participants' Total Scores on the Acceptability Judgment Test
To further examine the difference between the performances of the two groups on both the productive and receptive tests, two GLM Univariate tests were conducted. The results indicated that there was a statistically significant difference between the two groups in the production of collocations ($F(1, 95) = 113.24; p < .001, \eta^2 = .54$) and reception of collocations, ($F(1, 95) = 7.73; p < .007, \eta^2 = .07$). The descriptive statistics showed that the ESL group performed better on the three collocation tests. Table 10 shows that all the participants did better on the acceptability judgment test than the production tests.
Overall, the results of the analysis supported the conclusion that the collocational knowledge of the ESL advanced Arabic-speaking participants and the EFL Arabic-speaking participants was different on two dimensions (reception and production). Also, the performance of the two groups on the collocation tests was different in the degree they were influenced by their L1 (Arabic). While the ESL participants were less influenced by the L1 in their production and reception of collocations, the EFL participants were much more influenced by their L1 in the sense that they performed substantially better on those items that involved cross-linguistically congruent collocations. On the other hand, the study’s finding that the relationship between the participants’ self-reported amount of exposure to the English language and their collocational knowledge was a moderate one was intriguing because it can be assumed that there were other factors that influenced the improvement of learners’ collocational knowledge.

In addition, it was found that the two groups performed better on the verb-noun collocation test than the adjective-noun collocation test, which supported the study’s hypothesis. Moreover, when the two groups’ performances on the two tests were

<table>
<thead>
<tr>
<th>Collocation skill</th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Productive</td>
<td>97</td>
<td>13.42</td>
<td>7.46</td>
</tr>
<tr>
<td>Receptive</td>
<td>97</td>
<td>37.16</td>
<td>4.49</td>
</tr>
</tbody>
</table>

Table 10
Participants’ Mean Scores on both the Production and Reception Tests
compared by using GLM tests, it was clear that the performance of the ESL group surpassed the EFL group’s performance on the two tests. But still there was a difference between the performances on the two tests by the participants in the ESL group. The ESL participants did better on the verb-noun collocation test than on the adjective-noun collocation test, which confirmed the study’s fourth hypothesis that verb-noun collocations are easier to acquire than adjective-noun collocations. Further, it has become axiomatic in the field of L2 research that the production of collocations is more difficult than their perception, in general, regardless of learners’ L1 background. This claim is supported by the results of this study where the performance of the participants in the two groups was better on the acceptability judgment test (ESL group =77.1% & EFL group=72%) than on the two production tests (ESL group =64.7% & EFL group=29.2%). This was true, regardless of the collocation category.

General Discussion

The research questions examined in the present study concerned three dimensions of L2 knowledge of collocations: the role of the learning environment; the influence of an L1; and the role of the amount of exposure to the language on the acquisition of collocations. Previous research has focused on studying one or two of these dimensions. Also, the previous studies did not identify the role of the subjects’ learning environment. The present study examined two groups of participants in two different environments: advanced L1 Arabic learners of English in an ESL environment (the US) against which the performance of advanced L1 Arabic learners of English majoring in English in an EFL environment (Egypt) was compared. The
proficiency level of the two groups was established independently on the basis of their performance on two proficiency tests (TOEFL and a language admission test, which is a TOEFL like test).

In this section, the main findings of the study will be discussed with respect to the research questions addressed by the study.

The Role of the Learning Environment on the Knowledge of Collocations

It was asked how the participants’ knowledge of collocations changes as a result of the educational learning environment in which they live. To investigate the role of the learning environment in the acquisition of collocations, the collocational knowledge of two groups of participants in two different environments was tested for comparison sake. Such a comparison is necessary because it will show whether collocations represent an absolute challenge for language learners or there is a means to acquire them and produce them in a native-like manner.

The results of the present study were consistent with previous research in the EFL section and confirmed their poor knowledge of collocations but it contradicts previous research in the case of the ESL group who were shown to have more advanced collocational knowledge. Like all previous studies, the EFL knowledge of collocations was poor (the general percentage of their correct answers= 56.6%). However, unlike previous research (e.g., Lennon, 1989; Lennon, 1996; Zhang, 1993), the collocational knowledge of the ESL group was more advanced (71.1%) and generally surpassed the EFL group’s. At the production level, the ESL participants performed better (M=20.7) than the EFL participants (M= 16.5). The total score of
the ESL participants for the correct collocations was 725 out of 1120, or 64.7%. In contrast, the total score of the EFL participants was 577 out of 1984, or 29.1%. This reflected a wide gap between the two groups in the production of collocations. At the receptive level, also, the ESL group (M= 38) outstripped the EFL group (M= 36.2). The total score of the ESL participants for the correct collocations was 1349 out of 1750, or 77.1%. By comparison, the total scores of the correct collocations by the EFL participants was 2247 out of 3100, or 72.4%. Although the difference between the two groups was not as large as the difference between them at the production level, still it indicated the superiority of the ESL group.

This finding supported the study’s first hypothesis that there was a significant difference between the collocational knowledge of the two groups at both production and reception levels. Thus, it became evident that the learning environment plays a positive role in acquiring L2 collocations. It might be claimed that the poor performance of the EFL group might be due to their lack of knowledge of the meaning of the words individually and had nothing to do with collocations. However, the EFL participants reported that they were familiar with the words that were used in this study on the vocabulary recognition task. In spite of their familiarity with the words individually, the EFL participants’ performance was lower and their collocational knowledge was poorer than that of the ESL participants. Also, it can be argued that the learning environment can be responsible for this difference in the performance because the two groups included advanced language learners as reported by the two proficiency tests.
Interestingly, this study corroborates with the research of Hussein (1990) and the results of Mahmoud (2005) and others by confirming the low collocational level of Arabic-speaking university students majoring in English in EFL contexts. While 51.9% of the collocations the participants used in Hussein’s study and 64% in Mahmoud’s study were wrong, in this study 70.9% of the collocations produced by the EFL participants were erroneous. The difference in percentages between the results of the three studies are probably due to the differences in the nature of the tasks used; Hussein used a multiple choice task, Mahmoud used a writing task and this study used two gap-filling tests. One more reason for this difference may be related to the selection of the used items. Although the number of incorrect collocations was lower in Hussein’s (1990) study than Mahmoud’s (2005) study and the current study, Hussein’s study was the only study of the three that did not describe how the test items were selected. However, all the aforementioned studies agreed with previous research on the poor collocational knowledge of Arabic-speaking learners of English majoring in English. The current study attributed this to the influence of the participants’ learning environment, which lacked the rich collocational input the ESL environment is privileged to have. Thus, it can be concluded that it is the learning environment that promotes the collocational knowledge of ESL learners and hinders that of EFL learners even if their major is English.
The Role of the Learners’ L1 in their Knowledge of Collocations

The influence of the L1 on the participants’ knowledge of collocations was the second dimension that was investigated in the present study. Various previous studies have attempted to explore the role of an L1 on the acquisition of L2 collocations. In the present study, the role of the L1 influence was first examined by selecting an equal number of congruent and non-congruent collocations that were used in two types of tests: production tests and an acceptability judgment test. Then, the number of participants’ correct responses for both types of collocations was calculated. The results showed that ESL participants were more successful with both types of collocations than the EFL participants (see Table 11). The paired-samples t-tests reported earlier nevertheless showed that both groups were significantly more successful with collocations that have direct counterparts in Arabic (i.e., congruent collocations) than with non-congruent collocations.

In Table 11, this dimension of congruent and non-congruent is compared between the two groups in relation to the correct/wrong combinations at both production and reception levels. Also, a correct/wrong ratio is given for each of these groups. The more different a collocation is, the more difficult it becomes. This can supports positive transfer of L1. Whenever the collocations were congruent with Arabic, they were better produced than the non-congruent ones. This finding gives clear evidence of L1 influence on the use of collocations, which contradicts claims of the insignificance of the influence of an L1 on learners’ use of L2 collocations (Lesniewska, 2006) (see Table 11).
Table 11

The Congruence and Non-Congruence Dimension at both Production and Reception Levels and Their Relation to Correctness

<table>
<thead>
<tr>
<th></th>
<th>Congruent</th>
<th></th>
<th>Non-congruent</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>EFL</td>
<td>ESL</td>
<td>EFL</td>
<td>ESL</td>
</tr>
<tr>
<td></td>
<td>Production</td>
<td>Reception</td>
<td>Production</td>
<td>Reception</td>
</tr>
<tr>
<td>Total</td>
<td>992</td>
<td>1550</td>
<td>560</td>
<td>875</td>
</tr>
<tr>
<td>correct</td>
<td>347</td>
<td>1143</td>
<td>397</td>
<td>683</td>
</tr>
<tr>
<td>Percentage</td>
<td>35%</td>
<td>74%</td>
<td>70.1%</td>
<td>78.1%</td>
</tr>
<tr>
<td>Wrong</td>
<td>645</td>
<td>407</td>
<td>163</td>
<td>192</td>
</tr>
<tr>
<td>Percentage</td>
<td>65%</td>
<td>26%</td>
<td>29.1%</td>
<td>21.9%</td>
</tr>
<tr>
<td>Correct/Wrong</td>
<td>3:6</td>
<td>7:2</td>
<td>7:2</td>
<td>7:2</td>
</tr>
<tr>
<td>ratio</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Interestingly, the present study agrees with both Caroli’s (1998) study and Elyildirm’s (1998) study that those collocations with L1 equivalents are easier to produce than those without L1 equivalents. This shows that positive transfer is obvious in these three studies. However, in a few cases in this study, this equivalence between the two languages prevents some participants from giving the correct answer, which they apparently know. For example, some of the ESL participants reported that items like take action, have an effect, white lie, golden age, and last chance, which have Arabic equivalents, are Arabic combinations, and they expressed uncertainty about the English equivalents of these items. As a result of their doubts, they either left these items blank or gave wrong answers. Thus, the present study does not agree with the claims of some researchers that congruent collocations should not be addressed in teaching because learners will automatically acquire them correctly (Bahns, 1993)

**Knowledge of Collocations and the Amount of Language Exposure**

The third main dimension of the acquisition of English collocations in the present study is the participants’ exposure to the English language. Based on the first hypothesis, which predicted that learners’ learning environment plays an important role in enriching learners’ L2 collocations, it is argued that ESL learners have plenty of chances to encounter collocations in the natural environment and have a more exposure to collocations than EFL learners, who have limited exposure to collocations, often restricted to the classroom. In addition, it is reported that English instruction in EFL contexts has neglected collocations (Hussein, 1990; Bahns & Eldaw, 1993). Accordingly, it is assumed that it is the amount of exposure to the language that is responsible for the
differing levels of collocational knowledge between the two groups. While ESL learners are assumed to have high amount of exposure to the language (M= 14.63, SD= 3.919), EFL learners are predicted to have lower exposure to the language (M= 9.49, SD= 5.503). This claim is supported by the findings of previous research, as well (Bahns, 1993). Surprisingly, the results of the correlation test showed that there is a moderate positive correlation between the participants’ knowledge of collocations and their self-reported amount exposure to the English language. This implies that the amount of exposure to the language is one of the important factors that influence the participants’ acquisition of collocations, but there are other factors that influence learners’ collocational knowledge other than the amount of exposure. Consequently, this finding warrants more research to investigate these factors and how strongly each one of them is related to the learners’ knowledge of collocations. However, interesting results were obtained when the correlation between the two variables was measured separately for each group. While the results of the ESL group showed a strong correlation between the two variables, the correlation was moderate in the case of the EFL group.

Although some researchers like Marton (1977) have claimed that it is not enough for L2 learners to be exposed to the language to acquire collocations, the findings of the present study show that exposure to the language does help in improving the collocational knowledge of the ESL participants depending on the number of hours participants spend using the language. In other words, the more hours learners are exposed to the language, the higher their scores on the collocation tests are. For example, the ESL participant who spent 18 hours a day using the English language was the one
who got the highest score on the three collocation tests (80 out of 82). Likewise, the one who spent 7 hours a day using the English language got the lowest score (34 out of 82). More exposure to the L1 entails less exposure to the L@, and not surprisingly, the more the EFL participants are exposed to the Arabic language, the lower their English collocational knowledge is. For instance, the EFL participant who spent 19 hours a day using the Arabic language was the one who got the lowest score on the collocation tests (33 out of 82). This finding supports Bahns and Sibilis’s (1992) findings that the amount of exposure to the target language (not the L1) can positively help in the acquisition of L2 collocations.

*Verb-Noun vs. Adjective-Noun Collocations*

The present study, also, has explored the differences between the scores of the two groups on the production of the two collocation categories, i.e. verb-noun and adjective-noun collocations. The focus was to identify whether the participants found one of the two categories easier than the other. Unlike the work by Elyildirm (1997), this study finds that both groups get better scores on the verb-noun collocation test (M1=11.9, M2=8.8) than the adjective-noun collocation test (M1=7.3, M2=2). This supports the study’s fourth hypothesis, which springs from the researcher’s teaching experience in an EFL setting where verbs are given more attention than nouns in the given vocabulary lists that students have to memorize. And because the participants in the two groups have begun learning the English language in such an EFL environment, like the one where the researcher used to teach, it is expected that their performance would be influenced by this emphasis on verbs over adjectives. In addition, the difficulty of the adjective-noun
collocations that the participants encountered was not due to the participants’ unfamiliarity with the adjectives or the nouns because they reported that they were familiar with all the words used in the vocabulary recognition task.

Interestingly, this finding supports the findings of both Channell’s study (1981) and Koya’s study (2005) that indicated that learners at different vocabulary levels found difficulty in producing adjective-noun collocations. According to Channell (1981), learners were unable to mark a large number of collocations as acceptable in spite of being individually familiar with the words. Along these lines, Koya (2005) stated that it was hard for the Japanese learners to use the appropriate adjectives with the given nouns. Therefore, learners made more mistakes in their production of adjective-noun collocations than verb-noun collocations. This was the case of the participants in the present study in the two groups, which is shown in Table 12.

Table 12
The Total Number and Percentage of the Correct and Wrong Answers on Verb-Noun and Adjective-Noun Collocations

<table>
<thead>
<tr>
<th></th>
<th>ESL environment</th>
<th>EFL environment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Verb-noun collocations</td>
<td>560</td>
<td>992</td>
</tr>
<tr>
<td>Correct answers</td>
<td>416</td>
<td>452</td>
</tr>
<tr>
<td>Percentage</td>
<td>74.3%</td>
<td>45.5%</td>
</tr>
<tr>
<td>Wrong answers</td>
<td>144</td>
<td>540</td>
</tr>
<tr>
<td>Percentage</td>
<td>26.7%</td>
<td>54.5%</td>
</tr>
</tbody>
</table>
Correct/Wrong ratio  |  7:2  |  4:5  
Adjective-noun collocations  |  560  |  992  
Correct answers  |  309  |  125  
Percentage  |  55.1%  |  12.6%  
Wrong answers  |  251  |  867  
Percentage  |  44.9%  |  87.4%  
Correct/Wrong ratio  |  5:4  |  1:8  

Productive knowledge of collocations vs. Receptive knowledge of Collocations

The issue of the difference between the participants’ productive knowledge of collocations and their receptive knowledge of collocations is the fifth aspect in the present study. Expectedly, the results of the present study were consistent with previous research on the issue of the broadness of learners’ receptive skills in comparison to their productive ones. Like Caroli’s (1998) study and Koya’s (2005) study, the present study indicated that the participants in the two groups were able to judge the correctness and incorrectness of the given collocations on the receptive test, but they encountered difficulties in producing the correct collocations on the two productive tests. Interestingly, it was noticed that the participants got higher scores in the production of verb-noun collocations than in the production of adjective-noun collocation, which is shown in Table 13.
Table 13

The Total Number and Percentage of Correct and Wrong Answers in the Productive Collocation Tests and Receptive Collocation Test

<table>
<thead>
<tr>
<th></th>
<th>ESL environment</th>
<th>EFL environment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Productive collocation tests</td>
<td>1120</td>
<td>1984</td>
</tr>
<tr>
<td>Correct answers</td>
<td>725</td>
<td>577</td>
</tr>
<tr>
<td>Percentage</td>
<td>64.7 %</td>
<td>29.1 %</td>
</tr>
<tr>
<td>Wrong answers</td>
<td>395</td>
<td>1407</td>
</tr>
<tr>
<td>Percentage</td>
<td>35.3%</td>
<td>70.9%</td>
</tr>
<tr>
<td>Correct/Wrong ratio</td>
<td>6:3</td>
<td>2:7</td>
</tr>
<tr>
<td>Receptive collocation test</td>
<td>1750</td>
<td>3100</td>
</tr>
<tr>
<td>Correct answers</td>
<td>1349</td>
<td>2247</td>
</tr>
<tr>
<td>Percentage</td>
<td>77.1%</td>
<td>72.5%</td>
</tr>
<tr>
<td>Wrong answers</td>
<td>401</td>
<td>853</td>
</tr>
<tr>
<td>Percentage</td>
<td>22.9%</td>
<td>27.5%</td>
</tr>
<tr>
<td>Correct/Wrong ratio</td>
<td>7:2</td>
<td>7:2</td>
</tr>
</tbody>
</table>

Chapter Summary

In this chapter, the results of the statistical analyses of the research questions were displayed. The results showed an important positive role for the learning environment and a positive and negative L1 transfer in the acquisition of English collocations. Conversely, the findings of the study indicated a moderate influence of the amount of
exposure on the acquisition of collocations. Also, the findings of the present study strikingly agreed with the results of the previous research on two issues: the easiness of the verb-noun collocations in comparison with adjective-noun collocations and the broadness of the learners’ receptive knowledge of collocations in comparison with their productive knowledge of collocations. Finally, the discussion of the results was presented. In the next chapter, the conclusion, the study’s implications, contribution, limitations and recommendations for further research will be presented.
CHAPTER FIVE: CONCLUSION

The present study focused on addressing the performance of Arabic-speaking learners of English on three collocation tests, i.e. two productive tests and one receptive test. The main concern was to compare the participants’ performance in terms of learning environments, L1 influence, collocational productive and receptive knowledge, and the acquisition of two different collocational categories: verb-noun and adjective-noun collocations. Since collocation research on Arabic-speaking learners of English has been very few, it was important to conduct more empirical research, which can lead to effective ways to develop their collocational knowledge. Accordingly, this empirical study was conducted. This chapter is organized into two sections. The first section summarizes the whole study and the second section presents the pedagogical implications, the study’s contributions and recommendations for further research.

The present study addressed the following main research questions:

1. Is there a significant difference in the collocational knowledge of advanced Arabic-speaking learners of English studying in an ESL environment and those studying in an EFL environment?

2. Is there a significant L1 influence on the production and reception of English collocations by advanced Arabic-speaking learners of English studying in an ESL or EFL setting?

3. Is there a correlation between participants’ proficiency in producing and recognizing collocations and their amount of exposure to the English language?
4. Is there a significant difference between the subjects’ performance on verb-noun collocations and adjective-noun collocations?

5. Is there a significant difference between the participants’ production and reception skills of collocations?

Chapter One was an introductory chapter that gave a rational behind the study. It also presented the aims, the significance of the study, the research questions and the research hypothesis as well. Finally, the chapter included a brief presentation of the structure of the whole thesis.

Chapter Two presented a review of the previous research on collocations in the field. It, also, showed the significant disagreement and the lack clarity in the findings of the previous studies. Furthermore, the chapter discussed the interest shown in collocations by lexicographers and role of L1 influence in learning collocations.

Chapter Three showed the research methodology. It discussed the research design, the setting of the study, the participants, the instruments and the data collection procedures.

Chapter Four presented the results of the study. One of the findings was that the learning environment plays a role in the acquisition of collocations.

The results showed that the advanced Arabic-speaking participants in the ESL environment have more advanced knowledge of collocations than those studying in the EFL environment. Most importantly, the findings showed that Arabic as an L1 has a higher influence on EFL participants’ production and reception of English collocations than on the ESL group. Another major finding of the study was the moderate correlation
between learners’ amount of exposure to the language and their knowledge of collocations. Interestingly, the study supports the previous research assumptions that language learners find verb-noun collocations to be easier than adjective-noun collocations and that learners’ receptive knowledge of collocations are much broader than their productive knowledge of collocations.

Implications for Pedagogy

According to the results of the present study, many implications for teaching collocations in general can be suggested. These implications can be applied as a generic framework or a model for teaching all collocation categories. The study’s implications are as follows:

1. Since the learning environment is shown to play a significant role in the acquisition of collocations, it may be most effective to use authentic materials in teaching collocations at the higher levels of proficiency in an EFL setting. Authenticity gives EFL learners the chance to be exposed to natural language, which in turn helps them improve their language proficiency (Benally, 1994).

2. In light of the difficulty of the production in collocations, learners are in need of more practice producing collocations. Also, they should receive as much collocation input as possible. According to Krashen (1988), the more word input language learners perceive, the more productive of them they become, which can be true in the acquisition of collocations as well. Consequently, it is assumed that the more the receptive knowledge of collocations is increased, the more advanced the productive knowledge of collocations will be. Therefore, different kinds of activities can be used to improve learners’ receptive
and productive skills. For example, students can tell or retell or write stories they have heard that contain collocations, and they can present plays, dialogs with collocations in them. Also, to increase comprehension and recognition of collocations, teachers can use activities that provide learners with skills in guessing meaning from context like showing a paragraph from which a collocation has been deleted; students can supply a word or phrase which better fits the context.

3. Non-congruent collocations should receive more attention in language teaching without neglecting congruent collocations as some researchers suggested (Bahns, 1993), which can be a source of trouble as the results of the present study showed.

4. Selecting and teaching collocations should be done with reference to L1 where learners become aware of the L1-L2 differences and similarities. It is useless, for example, to teach Arabic-speaking learners the English collocation *false teeth* without drawing their attention to the fact that *artificial teeth* (the equivalent to *asnan senaeia*) is not possible in English.

5. In teaching collocations, more attention should be given to teaching adjective-noun collocations, which the results showed to be more difficult, if not a challenge, to the participants, where the focus should be on the adjective that causes the greatest difficulties.

6. Adding a bilingual glossary of collocations to textbooks is recommended to keep learners aware of the similarities and differences between the first and second language.
Contributions Made by This Study

This study provided five main contributions to the collocation research in the field of SLA. The first contribution is the thesis’ addition to the very limited studies into collocations acquired by Arabic language speakers. Second, the present study is the first to conduct an empirical investigation including this number of Arabic-speaking learners in an ESL environment. The third contribution of this study derives from the fact that the present study is the only study that has tested two groups of participants’ performance with regard to the production and reception of collocations in two different environments. The fourth contribution lies in the careful selection of highly frequent collocations that are used in previous collocation research and using them in a fixed structure where only one answer is allowed. Finally, the fifth contribution is the formulation of six implications for teaching collocations in general. As a result, these implications can be applied as a general framework or model for teaching all collocations. This is extremely significant for EFL learners in particular.

Recommendations for Further Research

The present study on the acquisition of collocations by advanced Arabic-speaking learners of English is an empirical one that sheds light on the problems they have with two lexical collocation categories: verb-noun and adjective-noun collocations. The study has clarified some aspects of collocation acquisition by a specific group of English language learners, i.e. L1 Arabic learners of English but many other aspects still remain to be investigated. That is why further research is recommended to be done in the following areas:
First, research should be done on other lexical and grammatical collocations to further examine the mechanism of learners’ acquisition of collocations. The current research has only examined verb-noun and adjective-noun collocations, which are the most frequent lexical collocations in the previous research. However, learners make errors with other categories as well. Therefore, more empirical research on other types of collocations needs to be conducted to get a comprehensive standpoint on collocation acquisition by Arab learners of English at different proficiency levels. Second, it would be valuable to replicate the current study using one proficiency test. Third, more research in the ESL environment is still needed. The current study has highlighted that being in an ESL environment is an advantage, which provides language learners with a golden opportunity to be in touch with a highly rich collocation input. However, being unable to have a good command of L2 collocational knowledge, which some participants showed in this study, is an issue that requires further research. Fourth, it is hoped that the insights presented in this study may inspire more research into learners’ collocational productive performance, which is of crucial importance to L2 learners’ overall language performance and which is shown to be a problematic for the participants. Finally, it might be a good idea to conduct similar studies in other ESL environments, such as the United Kingdom, Canada, Australia and others.

Limitations of the Present Study

The present study did not use one proficiency test to measure the participants’ proficiency level in the two learning environments. The study was based on the assumption of comparing two advanced Arabic-speaking learners in two different
environments depending on two different proficiency tests: TOEFL test and the English language admission proficiency test. However, using the same proficiency test will increase the study’s reliability. The second limitation pertains to the number of the selected collocations used in the study. Due to the time constraints, this study made use of only 32 collocations: 16 verb-noun collocations and 16 adjective-noun collocations to measure both the reception and production of the participants’ knowledge of collocations. However, the use of more collocations will be better to give a comprehensive measurement of learners’ collocational competence. The third limitation of this study relates to the time constraints for the participants and the researcher, this study was limited to three collocation tests to measure both production and reception of the collocational knowledge of the participants, which may not be enough to measure the two skills. However, more tests, which focus on more collocations, will offer a clearer picture of the participants’ reception and production of collocations.

Conclusion

Collocations play as a crucial role in native speakers’ lexical knowledge in general. Therefore, collocational knowledge has an impact on many aspects of language processing, comprehension and use. They are communicatively more useful to L2 learners than idioms, since they are less frozen and more transparent. However, previous collocation research has reflected L2 learners’ poor performance in producing and recognizing English collocations. Therefore, the aim of this study was to identify Arabic-speaking students’ competence to collocate English words correctly at an American university, and compare the subjects’ results with those L1 Arabic learners of English
studying in an EFL setting, in Egypt. The study investigated whether or not living in an English environment and being exposed to the English language in a natural environment enriches learners’ collocational knowledge.

Generally, the results highlighted the important role that learners’ first language plays in the acquisition of L2 collocations. The study’s results revealed that there was a positive role of the learning environment in the acquisition of collocations and suggested that learning environment not only plays a role in the acquisition of collocations but also reduces the amount of L1 influence. In other words, ESL learners depend less on their L1 in their production and reception of collocations than EFL learners. In addition, the amount of exposure to the language is shown to have a moderate positive correlation with learners’ collocational knowledge. On the other hand, although adjective-noun collocations were assumed by previous research to be less difficult than verb-noun collocations, the results of the present study indicated that the participants in the two environments have found them more difficult than verb-noun collocations. This implies that adjective-noun collocations need to be taught explicitly to language learners and used in more authentic contexts to be better acquired by language learners. Like previous research, the present study provides evidence that participants’ receptive knowledge of collocations is broader than their productive knowledge of collocations.

Finally, based on the study results and findings, recommendations were given regarding considerations that should be taken into account when teaching collocations. Overall, collocations are important in language learning, but they represent a source of
trouble for language learners. Therefore, they need more attention and practice to be well acquired.
REFERENCES


APPENDIX A: COLLOCATIONS SELECTION

The following table shows verb-noun collocations extracted from the previous studies:

| Achieve goal | Administer a test | Admit defeat | Adopt policy | Advise action | Break deadlock | Bring end | Cancel order | Catch cold | Catch fish | Catch fire | Catch mail | Close door | Do job | Do work | Do research | Make an excuse | Hold a discussion | Express opinion | Commit a murder | Take a break | Shake hand | Take time | Take turn | Take vacation | Take risk | Take walk | Take place | Bring peace | Catch breath | Catch eye | Catch fire | Catch glimpse | Cut cost | Cut price | Cut rate | Cut tax | Carry weight | Change mind | Do job | Draw attention | Draw conclusion | Face problem | Find way | Find place | Find job | Follow path | Follow example | Get call | Get ride | Get message | Get answer | Get job | Turn attention | Give advice | Give answer | Give chance | Give example | Give information | Give speech | Give way | Keep eye | Keep distance | Lose sight | Lose money | Lose weight | Shed light | Show talent | Receive treatment | Receive message | Receive support | Make difference | Make decision | Make friend | Make face | Make sense | Make use | Make visit | Make call | Make appointment | Make wall | Make progress | Make success | Make success | Make | Make love | Make name | Make joke | Make reservation | Make check | Make effort | Make point | Make law | Make call | Meet standard | Meet requirement | Meet need | Pay visit | Play role | Play part | Put end | Put money | Put pressure | Raise money | Run country | Set example | Set fire | Set record | Set standard | Solve problem | Stand chance | Stand trail | Take account | Take action | Take advantage | Take part | Take look | Take job | Take test | Take trip | Take pick | Take holiday | Take bus | Take boat | Take care | Take turn | Take picture | Take vacation | Take time | Take walk | Take year | Take chance | Take control | Take place | Take hand | Take walk | Take step | Take seat | Take pride | Take pleasure | Tell difference | Set fire | Set example | Put pressure | Express anger | Make judgment | Make list | Make room | Make rule | Make profit | Make payment | Make success | Make statement | Make sacrifice | Make copy | Make advance | Make movie | Make choice | Make claim | Run business | Run race | Run riot | Spend time | Pass exam | Have sex | Have trouble | Have effect | Use force | Open door | Hold hand | Tell truth | Raise question | Hold meeting | Give reason | Fight war | Send message | Answer questions | Tell story | Send letter | See reason | Set precedent | Improve image | Break oath | Break heart | Break law | Break silence | Break code | Harm brain | Give birth | Wear makeup | Cast doubt | Mock raid | Boost moral | Take route | Forge signature | Shrug shoulder | Renovate house | Arouse interest | Acquire knowledge | Relieve pressure | Compose music | Set alarm | Reject appeal | Keep competition | Make proposal | Pay attention | Propose action | Draw distinction | Reach conclusion | Draw comparison | Commit suicide | Make impression | Inflict wound | Express concern | Light fire | Cash cheque | Clear table | Resist temptation | Emit pollutants | Satisfy need | Withdraw money | Make impression | Keep diary |
APPENDIX B: COLLOCATIONS SELECTION

The following table provides adjective-noun collocations extracted from the previous studies:

| Absolute poverty/ acute shortage/ addled egg/ addled brain/ agricultural implements/ artificial limbs/ bake screech/ barren argument/ barren land/ best regards/ best wishes/ big mistake/ black horse/ black eye/ bleak prospect/ bilateral talks/ bright color/ broken English/ burning ambition/ capital punishment/ classical music/ close friends/ close interest/ dark horse/ dense traffic/ desperate attempt/ disappointing results/ drafting committee/ extenuating circumstances/ false teeth/ fast food/ final results/ fine arts/ fine weather/ flimsy excuse/ frozen food/ full time/ golden age/ hardened criminal/ harmful effect/ harsh measurements/ heavy buyer/ heavy drinker/ heavy rain/ heavy traffic/ high ambition/ high tide/ high winds/ ill effect/ immediate family/ important device/ last chance/ lasting peace/ light drizzle/ low tide/ middle class/ missing link/ mutual cooperation/ negative effect/ old age/ political party/ preliminary results/ prevailing silence/ profound effect/ public opinion/ quick glance/ red tape/ religious instructions/ residential area/ rising generation/ rough estimate/ rough sea/ second thoughts/ sharp pain/ short cut/ soft drinks/ sterner sex/ stifling atmosphere/ strong coffee/ Subsidential meal/ thin excuse/ torrential rain/ wet paint/ white coal/ white current/ white horse/ white lie/ |
APPENDIX C: QUESTIONNAIRE

Name: ____________________________________

Nationality: ____________________________________

Major:    ____________________________________

Degree: ____________________________________

Age: ____________________________________

Admission score: ____________________________________

Gender: □ M    □ F

Period of time you have learnt English: _______________

When did you come to the USA?   M   ________ /d   ________ / Year ________

What language(s) do you speak? _______________

What language do you use in the household? _______________

How many classes do you take per quarter? _______________

Choose the appropriate answer according to what you do on a daily basis:

1. Have you studied English abroad: □ Yes    □ No    if Yes where & for how long?

________________________________________________________________________

(If you studies abroad several times, please add all the period together)

2. Have you traveled to English speaking countries? □ Yes □ No if Yes where and for how long? ________________  (If you traveled abroad several times, please add all the period together)

3. How much time do you spend watching programs in English such as TV news or movies a day?

________________________________________________________________________
4. How much time do you spend watching programs in Arabic such as TV news or movies a day?

☐ None ○ Less than one hour ○ 1-3 hours ○ More than 4 hours

5. How much time do you spend surfing English websites on the internet a day?

☐ None ○ Less than one hour ○ 1-3 hours ○ More than 4 hours

6. How much time do you spend surfing Arabic websites on the internet a day?

☐ None ○ Less than one hour ○ 1-3 hours ○ More than 4 hours

7. How much time do you spend listening to English programs on the radio a day?

☐ None ○ Less than one hour ○ 1-3 hours ○ More than 4 hours

8. How much time do you spend listening to Arabic programs on the radio a day?

☐ None ○ Less than one hour ○ 1-3 hours ○ More than 4 hours

9. How much time do you spend going out with native English-speaking friends a day?

☐ None ○ Less than one hour ○ 1-3 hours ○ More than 4 hours

10. How much time do you spend going out with native Arabic-speaking friends a day?

☐ None ○ Less than one hour ○ 1-3 hours ○ More than 4 hours

11. How much time do you spend listening to English songs a day?

☐ None ○ Less than one hour ○ 1-3 hours ○ More than 4 hours

12. How much time do you spend listening to Arabic songs a day?

☐ None ○ Less than one hour ○ 1-3 hours ○ More than 4 hours

13. How much time do you spend watching English movies a day?

☐ None ○ Less than one hour ○ 1-3 hours ○ More than 4 hours
14. How much time do you spend watching Arabic movies a day?
□ None □ Less than one hour □ 1-3 hours □ more than 4 hours

15. How much time do you spend reading English books a day?
□ None □ Less than one hour □ 1-3 hours □ more than 4 hours

16. How much time do you spend reading Arabic books a day?
□ None □ Less than one hour □ 1-3 hours □ more than 4 hours

17. How much time do you spend chatting with English friends online a day?
□ None □ Less than one hour □ 1-3 hours □ more than 4 hours

18. How much time do you spend chatting with Arabic friends online a day?
□ None □ Less than one hour □ 1-3 hours □ more than 4 hours

19. How much time do you spend making a phone call in English a day?
□ None □ Less than one hour □ 1-3 hours □ more than 4 hours

20. How much time do you spend making a phone call in Arabic a day?
□ None □ Less than one hour □ 1-3 hours □ more than 4 hours

21. How much time do you spend speaking with native English speakers a day?
□ None □ Less than one hour □ 1-3 hours □ more than 4 hours

22. How much time do you spend speaking with native Arabic speakers a day?
□ None □ Less than one hour □ 1-3 hours □ more than 4 hours
APPENDIX D: FIRST PRODUCTION TEST

Put the verb which best completes the sentence in the blank. You have 10 minutes.

1. It's true that we ______________ weight when we eat more than we can burn off.
2. Governments should ______________ the necessary actions to stop global warming.
3. Inborn abilities always ______________ an effect on what we become.
4. Tom’s wife ______________ birth to a son yesterday.
5. She usually ______________ a lot of her time reading.
6. The robbery ______________ place at about 3:30 a.m. yesterday.
7. It will ______________ you good to get out of the house very often.
8. Do you think there is a chance that John will ______________ his mind?
9. It usually ______________ time to change laws.
10. Parents can ______________ a role in preventing childhood obesity.
11. The lantern was knocked over and the barn ______________ fire.
12. Don’t lie, just ______________ the truth!
13. Could you ______________ an eye on my bag while I go to the toilet?
14. Last July, Mike ______________ the mistake of going to work on a strike day.
15. What difference does it ______________ if your friend does not have a car?
APPENDIX E: SECOND PRODUCTION TEST

Put the adjective which best completes the sentence in the blank. You have 10 minutes.

1. Are you having ____________ thoughts about coming to Brighton with me?
2. If you do not take the ____________ cut, it is four miles further.
3. The most dominant ____________ parties in the US are the Democratic and the Republican.
4. Today is your ____________ chance to submit your final project.
5. The majority of people die of ____________ age all over the world.
6. McDonald's is the largest ____________ food advertiser in the US.
7. The boxer gave him a ____________ eye, so he was taken to hospital.
8. The term ____________ arts is used to refer to the visual arts such as painting and architecture.
9. Although no executions took place, the state reestablished ____________ punishment in 1982.
10. The forecaster predicted ____________ rain and strong winds during the afternoon storm.
11. Everyone knows that a little ____________ lie is sometimes necessary in a time of crisis.
12. China hopes to grow its ____________ class to more than half of its total population by 2020.
13 Bureaucracy and______________ tape are the real problems.
14. The 1930s and 1940s are considered the _____________ age of Hollywood.

15. Politicians are trying to influence the _____________ opinion on the topic.

16. Coca Cola mainly produces _____________ drinks rather than juices or water.
APPENDIX F: ACCEPTABILITY JUDGMENT TEST

Write your name here: _______________________________________

Circle the number corresponding to the unacceptable sentences:

1. The dentist will fix my artificial teeth.

2. After the death of his son, Mark had a heart attack.

3. Eating soup at the start of a meal fills the stomach.

4. Are you having second thoughts about coming to Brighton with me?

5. There was a wide public desire to read good novels.

6. Tom’s wife gave birth to a son yesterday.

7. If you do not take the short cut, it is four miles further.

8. The poor peasant was murdered in hot blood.

9. It will do you good to get out of the house very often.

10. The most dominant political parties in the US are the Democratic and the Republican.

11. She excused herself and went upstairs to put her makeup.

12. The robbery took place at about 3:30 a.m. yesterday.

13. Today is your last chance to submit your final project.

14. Students are expected to do more efforts to pass the exam.

15. What difference does it make if your friend does not have a car?

16. The majority of people die of old age all over the world.

17. Last July, Mike made the mistake of going to work on a strike day.

18. The growing generation is the nation’s hope for building a happy future.

19. John left his mind in the days before his suicide.
20. Although no executions took place, the state reestablished capital punishment in 1982.

21. The lantern was knocked over and the barn caught fire.

22. You need to run more vitamins and minerals in your diet.

23. McDonald's is the largest fast food advertiser in the US.

24. Don’t lie, just tell the truth!

25. The 1930s and 1940s are considered the golden age of Hollywood.

26. The boxer gave him a black eye, so he was taken to hospital.

27. This book describes ten ways to take advantage of the web.

28. Coca Cola mainly produces soft drinks rather than juices or water.

29. Ok, I think I will put the risk.

30. The term fine arts is used to refer to the visual arts such as painting and architecture.

31. Could you keep an eye on my bag while I go to the toilet?

32. The heavy traffic made me late for my appointment.

33. Fixing false limbs has now become possible.

34. Inborn abilities always have an effect on what we become.

35. The forecaster predicted heavy rain and strong winds during the afternoon storm.

36. Governments should take the necessary actions to stop global warming.

37. This tourist speaks broken English.

38. She usually spends a lot of her time reading.

39. Everyone knows that a little white lie is sometimes necessary in a time of crisis.

40. Parents can play a role in preventing childhood obesity.
41. Politicians are trying to influence the public opinion on the topic.
42. It's true that we gain weight when we eat more than we can burn off.
43. The student studies hard to get success.
44. China hopes to grow its middle class to more than half of its total population by 2020.
45. It usually takes time to change laws.
46. It was mainly a quiet residential area with many family homes and a few businesses.
47. Do you think there is a chance that John will change his mind?
48. A wide imagination stimulates the thinking process and the ability to create.
49. If you take my advice, you'll stop seeing him.
50. Bureaucracy and red tape are the real problems.
APPENDIX G: WORD RECOGNITION TASK

Write your name here: --------------------------------------------------.

For each word: if you know what it means, underline it, if you aren't sure, do not underline it:

1: Take                          2: flort                          3: second                          4: give
5: short                        6: haque                         7: political                        8: do
9: last                         10: old                          11: ralling                         12: twose
13: travity                     14: fast                         15: black                          16: make
17: wear                        18: cantileen                    19: lose                           20: cold
29: troake                      30: capital                     31: keep                           32: lannery
33: change                      34: spend                        35: tooley                         36: broken
37: pomino                      38: achieve                     39: middle                         40: kiley
41: rich                        42: balfall                      43: public                         44: trab
45: tenemy                      46: residential                 47: rising                         48: eat
49: fine                        50: simitate                    51: white                          52: degate
53: brab                        54: have                        55: balfour                        56: false
57: artificial                  58: bance                        59: large                          60: gain
A determination has been made that the following research study is exempt from IRB review because it involves:

Category 2 - research involving the use of educational tests, survey procedures, interview procedures or observation of public behavior

Project Title: L1 Influence on the Reception and Production of English Collocations by Arabic Speaking Learners of English

Project Director: Asmaa Shehata

Department: Linguistics

Advisor: Scott Jarvis

Robin Stack, C.I.P., Human Subjects Research Coordinator
Office of Research Compliance

Date: 11/19/07

The approval remains in effect provided the study is conducted exactly as described in your application for review. Any additions or modifications to the project must be approved by the IRB (as an amendment) prior to implementation.
APPENDIX I: AMENDMENT APPROVAL

The amendment, detailed below, and submitted for the following research study has been approved by the Institutional Review Board at Ohio University. Approval date of this amendment does not affect the expiration date of the original approval.

Amendment: Reduce items on tests and use selected items in new fixed structures. Delete translation test; add vocabulary recognition test.

Project: L1 Influence on the Reception and Production of English Collocations by Arabic Speaking Learners of English

Project Director: Asmaa Shehata

Advisor: Scott Jarvis
Department: Linguistics

Robin Stack, C.I.P., Human Subjects Research Coordinator
Office of Research Compliance

[Signature]

Date: 2/12/08