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### The Effect of Teaching and Learning Vocabulary in Lexical Chunks on the Listening Comprehension of Adult Learners of Arabic

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The University of San Francisco

THE EFFECT OF TEACHING AND LEARNING VOCABULARY IN LEXICAL  
CHUNKS ON THE LISTENING COMPREHENSION OF ADULT LEARNERS OF  
ARABIC

A Dissertation Presented  
to  
The Faculty of the School of Education  
International and Multicultural Education Department

In Partial Fulfillment  
of the Requirements for the Degree  
Doctor of Education

by  
Bassam Al-Maqtari  
San Francisco  
May 2021

THE UNIVERSITY OF SAN FRANCISCO

Dissertation Abstract

The Effect of Teaching and Learning Vocabulary in Lexical Chunks on the Listening  
Comprehension of Adult Learners of Arabic

This study aimed to investigate how teaching and learning Arabic vocabulary items in multiword form (i.e., chunks and phrases), rather than in single form (i.e., one word at a time), affects learners' ability to comprehend Arabic listening passages and to examine the relationship between students' auditory knowledge of words, and that of phrases and listening comprehension.

Data sources included three types of tests: the Arabic listening comprehension test, the single-word auditory knowledge test, and the multiword auditory knowledge test. The sample consists of 39 students (experimental group=20, control group=19).

The study was separated into a quasi-experimental pretest-posttest portion (Phase 1) and a quantitative nonexperimental portion (Phases 2 and 3). The first purpose was to assess the effect of learning Arabic vocabulary in multiword form (experimental group), rather than in single form (control group), on the listening comprehension, while the second two purposes were used to examine the relationship between auditory knowledge and listening comprehension and how much of the listening comprehension is explained by auditory knowledge.

The results showed that post-intervention listening comprehension was significantly higher in the experimental group ( $F(1,36)=6.80, p=.013$ ). The results also showed that the correlation was significant and high between single-word score and

listening comprehension at both pre- ( $r=.79, p<.001$ ) and post-intervention ( $r=.80, p<.001$ ), as well as between the post-intervention multi-word score and listening comprehension score ( $r=.84, p<.001$ ). The regression analysis showed that the multi-word auditory knowledge scores positively predicted listening comprehension ( $\beta=.640, p=.002$ ), but the single-word auditory knowledge score was not a significant predictor. The whole model was statistically significant ( $F(2,36)=46.74, R^2=.72, p<.001$ ).

This study has implications for the fields of second language acquisition, listening comprehension, language research, and teaching methods. More research on learning vocabulary in lexical chunks would further expand the current understanding of this approach and its effect on listening comprehension.

This dissertation, written under the direction of the candidate's dissertation committee and approved by the members of the committee, has been presented to and accepted by the Faculty of the School of Education in partial fulfillment of the requirements for the degree of Doctor of Education. The content and research methodologies presented in this work represent the work of the candidate alone.

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May 20, 2021  
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May 20, 2021

## DEDICATION

I dedicate my dissertation work to my beloved family members: my dear parents, whose love, commitment, and set of values shaped the person I am today; my loving wife, and my adored children; my wonderful siblings; and my many genuine friends.

A special dedication goes to the loving memory of my father-in-law, who passed away while I was finalizing this work. He meant so much to me.

Last but not least, I dedicate this work and give my special thanks to the men and women who sacrifice their time, energy, and lives to protect all of us and our freedom: a thank you does not seem enough. You are so appreciated, and I am so grateful for your service.

## ACKNOWLEDGEMENTS

I would like to thank my Dissertation Committee members; Dr. Sedique Popal, Dr. Susan Roberta Katz, and Dr. Kevin Oh, for their astute guidance and valuable support during my challenging journey. These outstanding scholars supported me in every step of the way and encouraged me to see my complex and challenging work through to completion. Dr. Sedique Popal, the chair of the Dissertation Committee has been exceptionally supportive and always provided me with very meaningful insights and feedback; I thank him for making this journey possible and always being there for me. I am also grateful to Dr. Susan Roberta Katz for her valuable insights and guidance. Her unwavering support enabled me to strengthen the first chapter of this research. A special thank you to Dr. Kevin Oh, who helped me understand the limitations of my research and put my findings in perspective. I also thank Dr. Ben Baab who reviewed my work and provided me with crucial recommendations for strengthening the statistical analysis of the data I collected in this study.

Additionally, I wish to express my special thanks to my colleagues at DLIFLC, Colonel Gary Hausman, Dr. Robert Savukinas, Dr. Hiam Kanbar, Dr. Ali Goldoust, Dr. Anjel Tozcu, Dr. Farooq Babrakzai, Dr. Timothy Berndt, Dr. Lorraine Miller-Nara, Ms. Natela Cutter, and Ms. Marzenna Krol who supported my research and made it possible.

Above all, I would like to thank my family members who supported me throughout this endeavor. This would not have been possible without their love, support, perseverance, and encouragement.

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# **CHAPTER I**

## **RESEARCH PROBLEM**

### **Introduction**

“Listening is the basic skill in language learning. Without effective listening skills, learners will never learn to communicate effectively” (Nunan, 1998, p. 1).

Listening comprehension, which historically has been minimally studied in the fields teaching English as a second language (ESL) and teaching English as a foreign language (EFL), continues to be one of the most critical skills in language learning (Clement, 2007; Rubin, 1994). It is the first encounter that language learners experience with the target language (Berne, 2004). Furthermore, the mastery of listening comprehension is the first stride to the second language (L2) or foreign language (FL) acquisition (Liu, 2009).

Despite the importance of listening, however, L2 learners seldom receive instruction on how to listen effectively (Berne, 2004; Vandergrift, 2007). According to Field (1998), much of the early research on L2 listening comprehension focused mostly on examining the ability of L2 learners to listen to L2 spoken discourse and then answer related comprehension questions, without paying much attention to the skills and strategies entailed in answering these questions. Hence, the early body of literature dealing with listening comprehension implicitly implied an assumption that the development of learners’ abilities to comprehend L2 oral discourse occurs spontaneously through exposure to this discourse and improves over time through practice (Clement, 2007).

Additionally, before the relatively recent development of communicative and proficiency-based approaches to language teaching and learning, listening was considered

a passive and receptive skill as compared to speaking and writing that are perceived as active and productive skills.

Listening comprehension may seem reasonably simple to speakers who are native to a given language, but this is not true for foreign language learners to whom listening is often a source of frustration (Graham, 2006). Of all four language skills that second and foreign language learners develop throughout their studies, listening is perhaps the least explicit and, therefore, the most challenging skill to acquire. Thus, given the critical role of listening in language learning, students need to “learn to listen” so that they can “listen to learn” (Vandergrift, 2004, p. 3). Therefore, most linguists now perceive that listeners participate actively in communication experiences and that listening comprehension is essential for language acquisition (Feyten, 1991; Field, 2000). Several relatively recent studies (Berne, 2004; Carrier, 2003; Chamot, 2004; Clement, 2007; Graham et al., 2011; Liu, 2009) reveal a shift of focus to the development and implantation of learning strategies, or the “thoughts and actions that individual take to accomplish a learning goal” (Chamot, 2004, p. 14). Because listening comprehension is a complex active process, it entails the use of a set of highly integrated skills. In this process “the listener must discriminate among sounds, understand words and grammar, interpret intonation and other prosodic clues, and retain information gathered long enough to interpret it in the context or setting in which the exchange takes place” (Holden, 2004, p.257). Accordingly, developing and using effective listening comprehension strategies can help L2 learners take advantage of the spoken language input to which they are exposed. O’Malley and Chamot (1990) substantiated a body of language learning strategies and outlined a categorizing system based on cognitive theory in which learning strategies are

either cognitive or metacognitive. Metacognitive strategies refer to higher-order executive skills that L2 learners use to manage, organize, and control their learning, and involve stages of planning, monitoring, and evaluating the learning activities. In contrast, cognitive strategies refer to mental activities used to manipulate the input or material or to apply a specific skill or strategy to a given task. Socio-affective strategies fall into a third category of O'Malley and Chamot's system and refer to learning that occurs during cooperative interaction with classmates and the learners and their teachers.

Vocabulary knowledge has been established as a reliable predictor of learners' proficiency in L2 and FL for a long time (Staehr, 2009). Therefore, the acquisition of vocabulary and the practice of using lexical items in a meaningful way is a critical component of the process of language learning. Many studies have linked vocabulary knowledge to success in L2 reading comprehension (e.g., Hu & Nation 2000; Mecartty 2000; Qian 2002). Because listening is a dynamic and complex process that involves many variables and demands memory and attention, several researchers have attempted to identify crucial variables that contribute to successful L2 listening comprehension (Mecartty, 2000; Nation, 2006; Kim, 2008; Staehr, 2009; Vandergrift, 2007;). Yet, little is known about how vocabulary teaching and learning approaches could influence L2 listening proficiency. Lewis (1993) coined the term "lexical approach," which refers to an approach that focuses on the increased understanding of the attributes of lexis in language that occurs naturally and its potential contribution to language pedagogy. Lewis stressed the importance of successful communication rather than the production of accurate language and promotes the acquisition of lexical chunks for making the learner's communication more effective. Nonetheless, studies exploring the relationship between

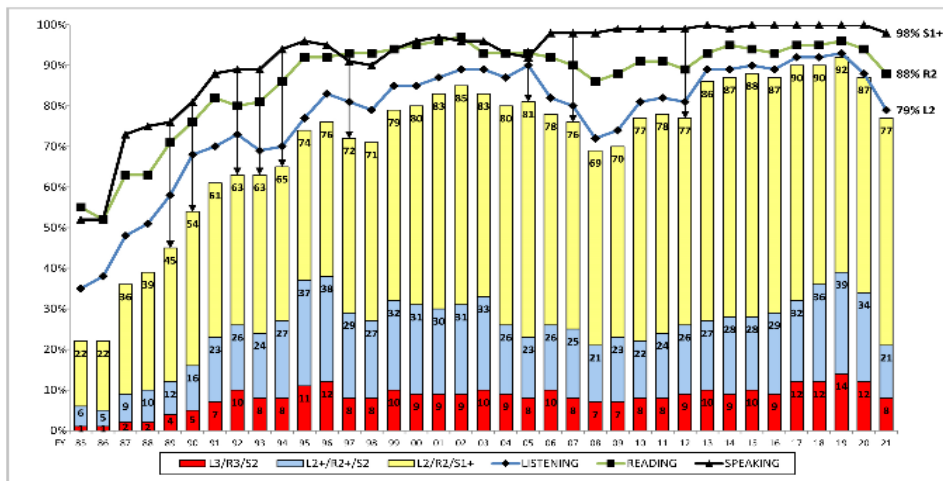
lexical knowledge and listening comprehension are limited. Thus, with the assumption that the knowledge of multiword lexical items (i.e., phrases) would have more impact on listening comprehension than the knowledge of single-word lexical items (i.e., words), there is a need to examine the roles that vocabulary knowledge and instruction play in L2 listening comprehension. Accordingly, this study will attempt to examine the effect of the lexical approach in teaching and learning L2 vocabulary on the learners’ listening comprehension.

### Statement of the Problem

Students of Arabic, like their fellow students of the 16 languages taught at the Defense Language Institute Foreign Language Center (DLIFLC) in Monterey, California, often score lower on their listening proficiency tests than on other language skills tests. Figure 1 below depicts an overall view of test results designed to measure language proficiency—the Defense Language Proficiency Test (DLPT) and Oral Proficiency Interview (OPI) from the Fiscal Year 1985 to the second quarter of the Fiscal Year 2021—and shows a lower percentage in listening than in reading and speaking.

**Figure 1**

*DLPT & OPI results from FY85 through 2<sup>nd</sup> quarter of FY21*





DLIFLC is a United States military educational and research institute that adopts a systematic approach to instruction and utilizes curricula deeply entrenched in a proficiency-oriented approach in which emphasis is placed on communicative competence. Accordingly, the institute ensures that teaching is conducted within a structure of intensive practice and interaction in the target language as spoken by native educated teachers (DLIFLC General Catalog, 2019).

Students can slow their reading speed without damaging comprehension (Buck, 2001), but unlike reading, listening entails real-time processing, usually without having the choice of reviewing earlier portions of the passage that the listener may miss. Therefore, slow listeners may miss information that cannot be recovered, whereas with the help of a dictionary, readers' mistaken utterances of some vocabulary items will not deter their ability to translate and understand the foreign language reading text.

Nonetheless, a breakdown of understanding could result from the student's knowing the word but attributing the wrong sense or failing to recognize a phonetic variation of a known word or knowing the word in written but not in spoken form, or being unable to segment the word out of a piece of connected speech (Field, 2004). Students can regularly figure out the content and details of a reading passage when they recognize each word individually and recall its meaning because they typically have a worse memory for spoken content than they do for written content, with more details and main ideas recalled when reading than when listening (Lund, 1991). This may have contributed to DLIFLC graduates' doing better in reading and speaking than in listening. Vandergrift (2004) concludes that because listening is a difficult skill to research, only a limited number of studies, particularly in listening instruction, exist. He asserts that

instruction that facilitates cognitive processing in listening comprehension needs more rigorous research, given the overall importance of listening for language learning. In other words, the strategy that second-language learners use to listen to the target language has a bearing on the learners' comprehension of the listening passages (Field, 2003).

One aspect of the difficulty the students face in listening is the variation of phonetic recognition of sounds and words. For example, sounds could be reduced, deleted, or indeed transformed into different sounds, depending on the context. These contextual effects temporarily reduce the intelligibility of spoken input (Cutler, 2012). Vocabulary assimilation and reduction does result in individual vocabulary items being phonetically changed. A regressive assimilation occurs in British English, for example, when a given sound changes because of the sound that follows it, like the sound *t* becoming *p* in *hot pies*. In addition, reduction changes phrases such as “*the phone is ringing*” to “*the phone’s ringing*,” or “*he has written*” to “*he’s written*” (Crystal, 2003). Comparably, the Arabic word for “library” is “مَكْتَبَةٌ” [maktabah] and the word for “the school” is “الْمَدْرَسَةُ” [al-madrasah]. Pronounced in isolation, the final syllable of each of the aforementioned words ends with a voiceless glottal fricative [h]. However, in the phrase “مَكْتَبَةُ الْمَدْرَسَةِ” “the school’s library,” the sound [h] becomes [t] with a short vowel added to each word’s ending to indicate the diacritical marks appropriate for the word place in the context. Thus, the two words combined form the phrase “مَكْتَبَةُ الْمَدْرَسَةِ” “the school’s library,” which is pronounced [maktabatulmadrasati], instead of [maktabah] [al-madrasah]. The above sample of sound transformation is obligatory in Arabic—it is part of the phonology and is applied to loan forms as well as to native forms. Factors

such as the ones noted above have been shown to interfere with listening comprehension for non-native listeners (Ito, 2001).

Furthermore, vocabulary knowledge has been established in research as a reliable predictor of learners' proficiency in a second or foreign language (Stæhr, 2009). Because most researchers have given more attention to the role of vocabulary knowledge in reading than listening, little is known about characteristics that affect L2 listening proficiency. Some studies sought to identify critical variables that affect and possibly contribute to the success of L2 listening comprehension (Nation, 2006; Stæhr, 2009; Vandergrift, 2007). Lewis (1993) downgrades the significance of the single isolated word as a unit, favoring the broader term lexical item, which encompasses multiword phrases. In his approach, lexical phrases provide the basis for a lexically based syllabus. With the assumption that the knowledge of larger lexical units (phrases) would have more impact on listening comprehension than the knowledge of smaller lexical units (words), the lexical approach focuses on the integration of words in chunks to help in facilitating L2 learners to comprehend listening materials integrally. In natural conversations, the short-term memory of listeners decides listening comprehension because an utterance takes place within seconds. Carroll (2008) accounts for three memory dimensions; sensory memory, short-term memory, and long-term memory. From the perspective of memory, the listening process works as follows: First, the sensory memory receives information within seconds. Then the short-term memory processes the information with 10 to 20 seconds. Finally, the long-term memory stores the input information. Students' ability to instantly identify a lexical chunk as a whole unit occurs only after they have recurrently internalized these chunks and practiced their

recognition in the classroom. Simply put, lexical chunks increase the processing of information in short-term memory, but the short-term memory insufficient for memorizing, identifying, and restructuring lexical chunks in a few contexts. When lexical chunks are combined with schema, however, they can be internalized, recognized, and restructured to enhance students' listening competence effectively.

Tang (2013) linked the acquisition of vocabulary in lexical chunks to the improvement of second-language learners' listening competence; it showed that the acquisition of chunks does help the second-language learners improve their listening competency. However, the participants of the experiment were only confined to students who studied the target language for specialty-purposes and did not include those majoring in language studies. Song and Jeong (2018), on the other hand, investigated two learner variables—learners' auditory knowledge of L2 words and phrases and their relative contribution to L2 listening comprehension among students majoring in Korean as a Foreign Language (KFL). Their study demonstrated that L2 learners' knowledge of phrases showed significant positive correlation with their L2 listening comprehension, whereas their knowledge of single words did not show this correlation at the early stage of learning.

Aside from the two studies mentioned above, research investigating the effect of L2 lexical chunks input on listening comprehension directly is scarce. Research on the same topic in the context of learning Arabic is nonexistent. The shortage and limitations of such studies represent a literature gap and pose a research problem. DLIFLC, where foreign languages are taught daily, offers an ideal setting for conducting further research to explore the problem.

Because “learning Arabic seems to be very challenging for native speakers of English” (Elkhafaifi, 2005, p. 206), the Arabic language program at DLIFLC could benefit from research that sheds light on the challenge. DLIFLC categorizes Arabic as one of the most difficult languages for native English speakers to learn (Jackson & Kaplan, 2001), and this difficulty stems from fundamental differences between Semitic Arabic and Franco-German English. Arabic, according to Holes (1995), has a very complex morphological system, along with some linguistic characteristics and features that English and other European languages do not have. One example of these differences is the Arabic script, which runs from right to left and is based on a small number of cursive shapes that serve as a vehicle for the complexities of the Arabic calligraphic tradition (Bergman, 2009). The Arabic alphabet consists of 28 letters that support the language phonologically, making it possible for speakers of Arabic to spell Arabic words exactly as they sound. Most sounds in Arabic are similar enough to English that English-speaking learners can recognize and produce these sounds without great difficulty; there are, however, several Arabic sounds that can take English-speaking learners a substantial amount of time “to learn, recognize, and reproduce” (Bergman, 2009, p. 5).

According to Daimi (2001), Arabic is an inflectional language, as opposed to English, which is more analytic. Additionally, derivation in Arabic rests on morphological patterns in which the verb plays a more significant inflectional role than in English. Whereas English utilizes the stem for generating words, Arabic derives its words from verb roots. Also, unlike English, Arabic allows the combining of particles and affixed pronouns with words. Furthermore, Arabic’s high syntactical flexibility

allows for a significant freedom to change word order with much less constraints than English. Even more, the syntax of an Arabic sentence can differ according to mechanisms of transformation, such as extra-position, fronting, and omission, or according to syntactic replacement, such as an agent noun in place of a verb. Arabic also has high context sensitivity (Daimi, 2001, p.335); in Arabic script, for example, the shape of the letter changes depending on which letter precedes it and which one follows it. In syntax, the different synthetic coherence relations, such as case-ending, matching, connecting and associating, represent various examples of syntactic sensitivity. Even more, the context sensitivity feature extends to the lexicon, where associated words influence a lot of lexical items. The context sensitivity feature is not only limited to letters, words, and sentences, but to the continuous context multiple sentences as well. Arabic sentences are embedded and usually connected by copulative, exceptive, and adversative particles. For this reason, it is more difficult in Arabic than in English to identify the end of a sentence (Daimi, 2001, p. 336).

The current approach to teaching Arabic vocabulary at DLIFLC is proficiency-oriented, employing authentic materials. Throughout the foreign language programs, emphasis is placed on the communicative approach (DLIFLC General Catalog, 2019). Nassaji (2003) contends that L2 context-based vocabulary learning strategies are more successful than local and word-based ones. In context-based learning, students learn words gradually through repeated exposures to a different discourse. To build up their L2 vocabulary knowledge, students tackle a few unknown words and infer their meaning from the context. Accordingly, L2 vocabulary retention and expansion occurs through repeated exposure to these vocabulary items in various contexts while practicing other

language skills. Lewis, (1993) recognizes the effectiveness of communicative approach in L2 teaching and learning and views the Lexical Approach as a supplement for advancing such approach.

To sum up, enhancing the ability of students of Arabic to comprehend Arabic listening passages is an area of concern. The body of research can benefit of further studies addressing L2 vocabulary acquisition by introducing lexical items in the form of lexical phrases (i.e., natural phrases, collocations, fixed and semi-fixed expressions, and idioms), rather than in isolated individual words. Finding from such studies may prove critical for levitating the difficulties L2 students confront when listening to authentic spoken input. According to Zimmerman (1997), the functions of the chunks in L2 teaching were underrated throughout history. Krashen (1985) contended that language acquisition was accomplished through language input, and the ideal input procedure should be appealing and interesting. Therefore, the main focus of teaching should be placed on how to provide the students with the best method of language input. According to Skehan (1998), 90% of daily communication was achieved by those prefabricated chunks which existed as the phrases. The question of how chunks affect L2 learners' speaking comprehension competence is, therefore, essential for the meaningful understanding of an important aspect of L2 learning and teaching.

### **Background and Need for the Study**

Several studies (Johnston & Doughty, 2007; Lund, 1991; Osada, 2004) have concluded that listening to a foreign language is less studied relative to reading. The majority of research assessing comprehension of foreign languages has focused on reading rather than listening because of the ease of observing and manipulating the

process of reading (Osada, 2004). Nonetheless, findings from research on reading comprehension failed to yield constant and full connection with the processes involved in listening comprehension (Schmidt-Rinehart, 1994). For instance, coping with a fast speech rate or disfluencies are factors that affect listening but are not relevant to reading, and students have a better memory for written content than they do for spoken content and can proportionally recall more main ideas and details when they are reading than when they are listening (Lund, 1991). Moreover, listening comprehending of natural speech is usually challenging due to the speech having intonation patterns and frequent pauses that interrupt normal flow (Gilmore, 2007). The pronunciation of vocabulary items (words) in individual form differs greatly from the way they appear in speech and may be affected by its being assimilated with other words. In British English, for example, assimilation results in pronouncing the word “*tin*” as “*tim*” in the phrase “*tin barn*” (Crystal, 2003). Reductions also result in phrases like *I am going to go* being pronounced as *I’m gonna* (Ito, 2001). These factors have been shown to interfere with listening comprehension for non-native listeners (Ito, 2001). Additionally, differences between spoken and written texts may lead to a partial dissociation between reading skills and listening skills in the L2 learner (Song, 2008).

In general, listening is vital in any foreign language learning in that it provides input for the student; a student cannot learn anything without understanding inputs. However, the process of listening comprehension is highly complex (Vandergrift, 2002). Foreign language students must comprehend the text as they listen to it, retain the information in memory, integrate it with what follows, and repeatedly adjust their understanding of what they hear in accordance with prior knowledge and incoming



information. With this intense processing, listeners may quickly lose focus and, at times, quit listening altogether. Struggling students have even more serious problems. Many of them get completely busy with trying to identify and recognize the words used in the listening passage, and virtually have no room for top-down processing—in which one forms perceptions based on his or her existing experience, knowledge, expectations, motivations or on the context in which the perception occurs.

### **Purpose Statement**

This study had three main purposes: to investigate how teaching Arabic vocabulary items in multiword form such as natural chunks and phrases, rather than in single form (i.e., one word at a time) affects learners' ability to comprehend Arabic listening passages; to further examine the relationship between students' auditory knowledge of words and phrases and these students' listening comprehension, as measured by Immediate Recall Protocol (IRP) tests; and to explore the relative contribution of both the learners' auditory knowledge of words and their auditory knowledge of phrases to overall listening comprehension.

Recent studies (Ai, 2015; Song & Jeong, 2018; Tang, 2013) support the effectiveness of acquisition of vocabulary chunks in improving Second Language (L2) learners' listening competence. Analyses of the experimental data from both studies show that acquisition of chunks can effectively help L2 learners improve their listening competence. The result of the two experiments demonstrated that L2 learners' knowledge of phrases showed significant positive correlation with their L2 listening comprehension, thus demonstrating that chunks can boost L2 learners' efficiency in processing language information and predicting information while listening.

The researcher did not find any formal empirically based studies that quantify the impact of teaching Arabic vocabulary items in chunks on students' performance in listening comprehension. Similarly, formal qualitative research on this specific topic is scarce. This study will contribute to initial efforts for determining whether this method of teaching Arabic vocabulary is a significant contributor to listening comprehension success as measured by listening comprehension tests.

### **Research Questions**

Studying the effect of teaching vocabulary in multiword form (lexical phrases and chunks) on the students' listening comprehension was measured by a listening comprehension test administered before and after the intervention of the teaching of vocabulary in multiword—a method of teaching described by Lewis (1993). The researcher recruited students from Semester II of the Arabic Basic Course and measured their listening comprehension using a listening comprehension test. After that, the researcher split the participants into two groups and then taught Arabic vocabulary to each group for duration of the study. Although both groups studied the same Arabic vocabulary items, the researcher taught these vocabulary items in multiword form to the experimental group and in single form to the control group. In the end, the Arabic listening comprehension of students in both groups combined was measured, using the listening comprehension test. Data from the pretest and posttest served in measuring the effect of the lexical approach in teaching vocabulary on the students' Arabic listening comprehension. The following were the research questions for this study:

1. Does teaching Arabic vocabulary in multiword chunks and natural phrases affect the listening comprehension competence of Arabic Basic Course students in the experimental group as compared to their peers in the control group?
2. Is there a relationship between the Arabic Basic Course students' auditory knowledge of Arabic words and that of Arabic phrases and these students' listening comprehension as measured by Immediate Recall Protocol-based listening comprehension tests?
3. What is the relative contribution of the Arabic Basic Course students' auditory knowledge of Arabic words and that of phrases to their Arabic listening comprehension?

### **Theoretical Framework**

The study used Michael Lewis' (1993) book entitled, "The Lexical Approach" as an underlying conceptual framework. The main principle of the lexical approach is its emphasis on lexis. According to Lewis, an important part of learning a language consists of being able to understand and produce lexical phrases as chunks. Hence, emphasis should be placed on natural phrases, clusters of words or lexical chunks rather than grammatical structures. Language learners can perceive patterns of language (grammar) and have meaningful sets of words at their disposal when they learn vocabulary in chunks (pairs or groups of words which are commonly found together, or in close proximity). Therefore, instruction should focus on fixed expressions that frequently occur in dialogues, which according to Lewis comprise a remarkable part of discourse than discrete phrases and sentences. Consequently, vocabulary is valued over grammar, because language consists not of traditional grammar and vocabulary, but rather of

multiword natural lexical phrases. In this way, vocabulary and grammar are not different from each other, and the grammar/vocabulary dichotomy is invalid.

Lexical chunks are accordingly productive resources for language learners that help them produce, comprehend, and reflect on the structure and semantics of the target language. Instead of analyzing the target language, the Lexical Approach focuses on an increased understanding of the nature of lexis in naturally occurring language, and its potential contribution to language pedagogy. The lexical approach, like many communicative approaches, emphasizes communicative proficiency and focuses on successful communication rather than the production of accurate language. It promotes the concept that the acquisition of lexical chunks makes a learner's communication more effective. Erman (2009), Millar (2011), and Wood (2002) have supported the claim that using chunks could be viewed as a good strategy to promote second language learning.

### **Delimitations and Limitations of the Study**

#### **Delimitations**

The scope of the study was narrowed down to include only students of Arabic, typically 18 to 40-year-old military service members or government agency employees. The Arabic proficiency of the students was restricted to beginner level (semester II) in this study due to class availability and the site's permission. Additionally, the researcher used a quasi-experimental nonrandomized control group pretest-posttest design because the study participants were already structured in small sections and could not be randomly assigned to groups. Quasi-experiments are studies that intend to assess interventions; however, they do not apply randomization. Despite the fact that randomized controlled experiments usually yield the highest level of credibility with

regard to evaluating causality, the researcher selected not to randomize because of the difficulty of randomizing participants and the difficulty to randomize by locations (e.g., by classes), and the small available sample size. Although this design had practical advantages because it dealt with intact groups and, therefore, did not disturb the existing research setting, it was more sensitive to internal validity problems. In other words, even when differences in the posttests between groups were present, these differences could have been attributable to characteristic differences between groups rather than to the intervention. However, the random assignment to experimental and control groups helped in equalizing groups on existing characteristics and, in that way, isolated the effects of the intervention.

### **Limitations**

There is much more to L2 listening and reading comprehension than just recognizing words and accessing their meanings, although this process may be a potentially important initial constraint on comprehension (Samuels, 1987 cited in Bonk, 2000). One of the main limitations of this study was the sampling bias: i.e., the small convenience sample size. DLIFLC usually divides students into small-size sections, averaging six to eight students per section, but the situation is different elsewhere. Accordingly, a sampling bias existed due to this study using a convenience sampling of student participants.

Moreover, students attending the Arabic program at DLIFLC at the time of this study were different from those attending Arabic programs in other institutions. The aforementioned difference stemmed from the fact that DLIFLC is the only language school in the world where students of Arabic, usually 18 to 40-year-old military service

members or government agency employees, attend 7 hours of language instruction on a daily basis for 16 months. Furthermore, students attending the Arabic program at DLIFLC may differ from students who have attended this program in the past or will attend it in the future. Therefore, the results of the study cannot be generalized comprehensively.

When participants either drop out or refuse to participate in the study, a potential threat to internal validity in the experiment occurs. A total of 13 participants out of the 52 that were initially recruited for this study dropped out. This study was conducted to assess the effects of the intervention (teaching and learning vocabulary in lexical chunks) on the listening comprehension of adult learners of Arabic. If the 13 participants who dropped out represented specific types of individuals more often than individuals with other characteristics, then a differential attrition may have occurred. In other words, if the intervention was so difficult that many of the slowest learners dropped out of the study, the participants who remained in the study would have experienced an increase in the average listening comprehension score. The reason they experienced an increase in these scores could have been the outcome of the worst learners leaving the study, not because the intervention improved students' listening comprehension skills.

### **Definitions of Terms**

Below are the operationalized definitions of the terms used in this study.

**Authentic Material:** According to Carter & Nunan (2001, p. 68) authentic materials are “ordinary texts not produced specifically for language teaching purposes.”

**Assimilation:** “A general term in phonetics which refers to the influence exercised by one sound segment upon the articulation of another, so that the sounds become more

alike, or identical.” The study of assimilation (and its opposite, dissimilation) is an important part of historical linguistic study, but it has been a much-neglected aspect of synchronic speech analysis, owing to the traditional manner of viewing speech as a sequence of discrete words. If one imagines speech to be spoken “a word at a time”, with pauses corresponding to the spaces of the written language, there is little chance that the assimilations (or assimilatory processes) and other features of connected speech will be noticed. When passages of natural conversation came to be analyzed, however, assimilation emerged as being one of the main means whereby fluency and rhythm are maintained” (Crystal, 2003).

**Breadth of vocabulary knowledge:** The size of a learner’s vocabulary—the number of words for which the learner has some knowledge of meaning (Nation, 2001).

**Communicative language teaching:** A learner-centered meaning-based approach to foreign or second language teaching that prioritizes fluency over accuracy and comprehension and production of messages over the teaching or correction of language form (Spada, 2007).

**Depth of vocabulary knowledge:** The quality of lexical knowledge that reflects how well a learner knows individual words or how well words are organized in the learner’s mental lexicon (Akbarian, 2010).

**Immediate Recall Protocol:** A listening comprehension measure in which listeners write down, from memory, what they recall after hearing a text (Lund, 1991). For the purpose of this study, this measure is referred to as L2 listening comprehension test.

**L1:** An abbreviation for one’s first (native) language occasionally used to refer to speakers who are speaking their native language.

**L2:** An abbreviation for one's second language, or any language other than one's native language. This abbreviation is occasionally used to refer to speakers who are speaking a second language.

**Learning Strategies:** For the purpose of this study, this term refers to non-observable mental processes as well as observable behaviors (e.g., jotting down notes or summaries or using reference materials) that participants utilize to learn, comprehend, and retain new information (Richards & Schmidt, 2010).

**Lexical Approach:** A language teaching approach in which learning and understanding commonly-used phrases (word combinations or chunks) is the primary method of language learning and teaching (Lewis, 1993).

**Lexical Phrases:** Multi-word lexical phrases of different lengths that are stored and generated as a whole; they occur more frequently and have a more idiomatically-determined meaning than language that is put together each time (Nattinger & Decarrio, 1992). Many different terms have been used to describe lexical chunks, such as *sentence stems* (Pawley & Syder, 1983), *chunks* (Ellis, 1996), *multiword lexical items* (Nation, 2013), and *formulaic sequences* (Wray, 2002).

**Listening Comprehension:** One's ability to comprehend spoken language at the discourse level – including conversations, stories (i.e., narratives), and informational oral texts – that involves the processes of extracting and constructing meaning (Kim, 2016).

**Reduction:** A reduced clause which lacks one or more of the elements required to enable it to be used as a full, independent construction. Such clauses may be referred to as “abbreviated”, elliptical or contracted; but different approaches often introduce



distinctions between these terms. Other units are sometimes referred to as “reduced”, such as phrases (e.g. phone’s ringing) and words (e.g. it’s him) (Crystal, 2003).

### **Significance of the Study**

To explore the importance of vocabulary knowledge in Arabic listening comprehension, this study investigated how teaching Arabic vocabulary items in multiword form (i.e., lexical phrases and chunks), rather than in single form words (one word at a time) affected the Arabic Basic Course learners’ ability to comprehend Arabic listening passages. It further investigated the relationship between Arabic Basic Course students’ vocabulary knowledge and their listening comprehension scores. It also examined the extent to which vocabulary knowledge predicts listening comprehension competence. Accordingly, this study will contribute to testing the assumption that Arabic learners with knowledge of larger Arabic vocabulary units (i.e., multiword lexical phrases) would be better at listening comprehension than those with knowledge of smaller vocabulary units (i.e., words). To this end, the study revealed information about the lexical approach in vocabulary acquisition that could be crucial for developing and revising curriculums.

A large body of research on the effect of learners’ vocabulary knowledge has frequently addressed this knowledge in relation to reading rather than listening. Additionally, students and foreign language educators could take advantage of learning how vocabulary acquisition methods relate to listening comprehension. Improving the understanding of this relationship could inform student and teacher decisions about what approaches they should use to achieve more successful language learning. Hence, foreign language students could benefit from the newly learned concepts in increasing

their ability in listening comprehension in L2. Lastly, the findings from this study are hoped to provide researchers with information that can be used as foundation for further research into vocabulary acquisition and the development of listening comprehension competence. The present study shows that teaching vocabulary in chunks has a significant influence on students' success in listening comprehension. The researcher hopes that this study will alleviate listening comprehension difficulties and make a genuine contribution to the existing body of knowledge. Given that listening-comprehension research does not thrive in the literature when compared to that of reading comprehension (Osada, 2004), it is hoped that this study will provide some direction for teaching and facilitate future inquiry by identifying productive research questions.

## **CHAPTER II**

### **LITERATURE REVIEW**

This study had three main purposes: to investigate how teaching Arabic vocabulary items in multiword form such as natural chunks and phrases, rather than in single form (i.e., one word at a time) affects learners' ability to comprehend Arabic listening passages; to further examine the relationship between students' auditory knowledge of words and phrases and these students' listening comprehension, as measured by Immediate Recall Protocol (IRP) tests; and to explore the relative contribution of both the learners' auditory knowledge of words and their auditory knowledge of phrases to overall listening comprehension.

This chapter concentrates on the body of literature applicable to this dissertation in the primary research areas. This review will cover some of the most and recent research in the field of second language acquisition (SLA) relevant to listening comprehension as it relates to lexical knowledge and vocabulary acquisition. It will shed light on the significance of listening comprehension in L2 teaching and learning, the process of listening comprehension, and listening comprehension problems. Accordingly, it will cover general principles in teaching listening comprehension and examine the role of vocabulary in teaching approaches and strategies that might improve students' listening comprehension. This review will also explore the theory and functions of lexical chunks and how they work in improving students' listening abilities.

#### **What Is Listening Comprehension?**

Listening is defined as one's ability to comprehend spoken language at the discourse level – including conversations, stories (i.e., narratives), and informational oral

texts – that involves the processes of extracting and constructing meaning. Listening comprehension is the aptitude to receive and interpret messages correctly in the communication process. As Rost (2005) puts it, listening is a "complex cognitive process ... encompass[ing] receptive, constructive, and interpretive aspects of cognition."

Listening plays a vital role in language acquisition because it enables learners to internalize language rules and to develop other language skills (Mendelsohn, 1995; Rost, 2002). It is critical for students of a second language (L2) to develop their listening skill to communicate effectively in that language (Rost, 2002), especially that more communication time is typically spent in listening than in speaking or in reading (Mendelsohn, 1994). Students of L2 are exposed to new input necessary for their learning progress through listening; if they cannot comprehend this input, then they may face great difficulty in learning the language. Thus, listening can affect the learners' speaking, reading, and writing abilities. Furthermore, listening comprehension is a requirement for participating in spoken conversation as there is no spoken language without listening (Rost, 2001).

However, research concerned with the evaluation of L2 comprehension has been mainly concentrated on the connection between reading comprehension rather than listening comprehension and vocabulary acquisition (Lund, 1991; Osada, 2004; Rubin, 1994; Thompson, 1995). Due to the complexity of its processes, listening is a difficult skill to acquire (Chang & Read, 2006; Chou, 2013; Field, 2004; Graham, 2006; Richards, 2005; Vandergrift, 2007). Field (2004) and Graham (2006) are examples of studies that attempted to identify the specific difficulties that second language (L2) learners face in listening. Whereas Berne (1995; 2004), Chang and Read (2006), Field (1998), LeLoup

and Ponterio (2007), and Mendelsohn (2001) are examples of studies that sought to find ways to help L2 learners overcome difficulties, develop more effective listening strategies, and improve their listening skills.

Understanding how L2 and FL learners develop and improve their listening comprehension abilities requires knowledge of the skills that contribute to listening comprehension. Text comprehension has been mostly examined in the context of ‘reading’ comprehension but exploring its theoretical constructs can still inform the understanding of listening comprehension—that is because text comprehension includes comprehension of the spoken input (Kintsch, 1988). Several text-comprehension studies (Kintsch, 1988; McNamara & Kintsch, 1996; van den Broek, et al., 2005) focused on cognitive skills, like working and long-term memory, comprehension monitoring, inference-making, and background knowledge and indirectly stressed the importance of vocabulary and syntactic knowledge needed for text analysis. Evidence mounting from recent research indicate that working memory (Florit, et al., 2013; Was & Woltz, 2007), vocabulary (Florit, et al., 2009; Florit, et al., 2014; Kendeou, et al., 2008; Kim, 2015a, 2016; Tompkins, et al., 2013), syntactic knowledge (Kim, 2016), and inference (Florit et al., 2014; Kendeou, et al., 2008; Kim, 2016; Lepola et al., 2012; Tompkins et al., 2013) are linked to learners’ listening comprehension as well as text comprehension in all languages.

On the other hand, some literature namely points out the difference in many aspects between listening comprehension and reading comprehension and asserts that this difference explains why findings from research on reading comprehension have not steadily yielded full connection with the processes involved in listening comprehension

(Schmidt-Rinehart, 1994). For example, speech and fluency rates affect listening but do not affect the reading. Accordingly, listening is different from reading in that it requires immediate processing, where the listener does not have the option to review portions of the listening passage that he or she might have missed (Buck, 2001). In contrast, readers are prone to recall more information and main ideas than listeners (Lund, 1991), and can slow down their reading pace without worsening their comprehension. Moreover, listeners' lack of control over the speed of speech delivery may lead to irrecoverable loss of information that could make comprehension of the listening passage difficult (Buck, 2001). The extents to which a listener may have control over the speed of speech differ extensively from one situation to another (Osada, 2004). In a conversation, for instance, listeners may exercise some control over the speech rate of the people with whom they communicate, but they cannot do the same when they watch a play or listen to the radio and, therefore, they must adapt to the speech rate to comprehend its content. Speech in conversations is typically spontaneous (Richards, 1983), and it contains false starts, intonation patterns, and occasional pauses that may impact comprehension (Gilmore, 2007).

Furthermore, the pronunciation of spoken lexical items almost always differs from that of the written ones and could be changed because of assimilation with the other lexical items (Crystal, 2003), or due to reduction (Ito, 2001). Reduction has been shown to interfere with listening comprehension for non-native listeners because it could frequently cause spoken language to contain less lexical information than printed language (Ito, 2001). It is crucial then to provide students with adequate training in

strategies that compensate for gaps in word recognition in their listening experience (Field 2000).

The terms, “bottom-up processing” and “top-down processing” appear in the literature concerning listening processes. The above terms were generated into the field of computer science and eventually came into use in the field of linguistics. Field (1999) clarifies that in computer science, bottom-up processing refers to “data-driven” processing, whereas top-down refers to “knowledge-driven” processing. Clement (2007), however, explains that the terms bottom-up processing and top-down processing refer to the cognitive processes of second language listening or reading in the field of second language acquisition. According to Vandergrift (2007), when listeners relied on their linguistic knowledge to recognize linguistic elements such as phonemes, syllables, words, phrases, and sentences, they favored bottom-up processes to build meaning. Conversely, the top-down processes worked in the opposite direction when listeners used their prior knowledge and familiarity with context, genre, topic, culture, and other knowledge stored in their long-term memory to construct meaning.

To avoid the terms bottom-up processing and top-down processing being misinterpreted as conflicting stances on comprehension, Field (2008) suggests the use of “decoding” and “meaning building” as alternative terms. According to him, the decoding process begins with sound elements, such as phonemes and syllables, then progresses into words, phrases, and sentences, whereas the meaning building process entails external information like world knowledge, individual experiences, or prior knowledge acquired in academic situations. Nevertheless, research implies that for L2 listeners to complete a

comprehension task, they need to know both types of processes, in accordance with the purpose of listening (Mendelsohn, 2001; Vandergrift, 2004).

### **Bottom-up processing**

Language learners depend greatly on sound input in listening comprehension in the bottom-up processing (Clement, 2007). Listening comprehension takes place upon the learners' paying attention to linguistic features and decoding sound for semantic meaning (Siegel, 2011). Learners exert effort to guess what the words in the listening text by attempting to match the initial spoken input they hear to different lexicons that they know and increasingly deduct possibilities until they discover the most accurate match to the spoken words. To explain further, a learner initially hears the first phoneme of a word, and then activates his or her memory of possible words that sound familiar. Thus, when the learner hears the next sound, he or she deducts the words that start with the same phoneme but do not match the sounds that follow anymore. Then he or she continues to discover appropriate matches in this way until the final sound takes place (Clement, 2007). Consequently, the learners depending on their language proficiency may deduce the meaning of the word based on the connection between a word and its derivative. According to Field (1999), the above deduction process typically takes 0.25 second or less. The process of analysis beginning with the first phoneme all the way even to the sentences may all happen simultaneously.

### **Top-down processing**

Wilson (2003) asserts that L2 learners who come across a spoken input of which they have no previous knowledge may have to resort to top-down processing to compensate for their lack of knowledge. Top-down processing entails employing



background knowledge and expectations of the spoken input to infer its true meaning (Clement, 2007). The demonstration of such preexisting knowledge or the general concept of the topic at hand is referred to as a schema. L2 learners may utilize different types of schemata that help them interpret the spoken input. This knowledge could also help language learners to decipher the spoken input, bridge the missing information gaps, and adjust or incorporate a new schema to facilitate their comprehension.

Sometimes, however, L2 learners could misinterpret the meaning of the spoken input while utilizing the top-down process; but this is inherited in the strategy that entails a mixture of questions and world knowledge employed to brainstorm and evaluate logical possibilities as the interpretation of the listening input continues (Vandergrift, 2003).

In sum, L2 learners use top-down processing when they utilize their background knowledge of the listening input but use bottom-up processing when they attempt to decode the sounds and grammatical patterns of the language. Hence, for listening comprehension to occur, learners must combine top-down and bottom-up processing as they use their preexisting knowledge and their linguistic knowledge to understand messages (Vandergrift, 2004).

In addition to tendencies of listening processes, the literature indicates that differences in listening strategy use between language learners influence the efficacy of listening comprehension. For example, Murphy (1985) examined the differences between proficient and less proficient college-level L2 listeners. In his study, Murphy categorized more and less skilled listeners by the frequency of their use of listening strategies and the sequential patterns of listening strategies they followed. The study showed that more proficient listeners demonstrated openness to and flexibility with the

use of listening strategies, frequency and variety wise. Conversely, less skilled listeners tended to familiarize themselves with a high level of details in the text or on their world knowledge. Additionally, they seemed much slower in responding to the text information during the listening process. Murphy contended that the effective listeners were able to utilize a more extensive variety of listening strategies and interact with the text more actively than the less effective listeners. An absence of a systematic taxonomy of language learning strategies at the time of Murphy's study limited its ability as to the distinctions between metacognitive and cognitive strategies.

Berne (2004) offers an example of a study that investigated the listening process and strategy use tendencies for proficient and less proficient L2 learners. The latter showed trends such as processing input at the word level, lack of verification of predictions and assumptions, and lack of preexisting knowledge activation for listening comprehension, heavy reliance on translation and critical words, developing low level of inference or elaboration in listening comprehension, suffering linguistic and attention obstruction, concentrating on the pronunciation or definitions of words. In contrast, proficient listeners demonstrated trends such as, interactive use of strategies, frequent and increased use of diverse listening strategies, focus on the comprehensive organization and meaning of the listening input, use of wide range of listening strategies, attention to large chunks of spoken input, constant planning, monitoring, and evaluation of strategy usage, , and relating spoken content to preexisting experiences.

Vandergrift (1997) reported on an investigation of listening strategy applications by 21 high school French learners from four different course levels. He examined the types of strategies used and the differences in strategy use by more skilled and less

skilled listeners while these students listened to authentic texts in French. Then he coded and analyzed think-aloud data both quantitatively and qualitatively. The study showed significant differences in the use of the category of metacognitive strategies as well as in individual strategies for comprehension monitoring, questioning for elaboration, and translation. The think-aloud procedure consisted of two phases: a training phase and a data collection phase. In a training phase, students used mathematical problems or verbal reasoning tasks and oral French texts to understand and practice how to think aloud. Each session of data collection took from 30 to 40 minutes and occurred within a week after the training session. The data were then transcribed verbatim and later analyzed using the predefined taxonomy of listening comprehension strategies. All participants reported that among the three categories, cognitive strategies were the most used, followed by metacognitive strategies and a few socio-affective strategies. Vandergrift reported that the depth of processing in strategy use was an essential distinction between more and less proficient listeners. He stated that the less effective listeners used more surface-processing cognitive strategies, such as repetition, translation, and transferring, whereas the more effective listeners used more in-depth processing metacognitive strategies, such as comprehension monitoring and problem identification. Vandergrift (2003) was a study similar to the above research focusing on 36 7th-grade Canadian students of French. This study employed the same procedure, and data analysis method as (Vandergrift, 1997). All data were analyzed in the manner. The findings from both studies were similar. Once again, the more skilled listeners used more metacognitive strategies, mainly comprehension monitoring. Students in both groups favored different

cognitive strategies; whereas the more skilled learners reported using questioning elaboration more frequently, the less skilled ones seemed to use more translation strategy.

A more recent study by Liu (2009) examined the utilization of listening strategies among 166 more and less skilled college-level Chinese and Korean students from three public universities in the southwest of the United States. All participants were non-native speakers of English. The participants' TOEFL scores determined the participants' categorization as more and less skilled listeners. The researcher used a Likert-scale questionnaire to evaluate students' strategies use. The researcher analyzed data using SPSS, and three statistical tests, including Spearman's rho rank correlation, *t* test, and ANOVA, to answer several research questions. The quantitative analysis results confirmed differences in the use of listening strategies between the skilled and less skilled non-native English-speaking participants. Students from both groups reported having used memory strategy the most and socio-affective strategy the least in listening comprehension. However, the more effective listeners employed more memory strategy components in comparison to the less effective listeners. Because of the students' limited English language proficiency, cognitive and metacognitive strategies were not reported regularly in the study, but the statistics showed that the more skilled listeners utilized particular cognitive strategies, such as jotting notes and employing preexisting knowledge, and metacognitive strategies, such as directed attention, more frequently than the less skilled learners.

Despite the different contexts in which the researchers conducted them, the above studies depict listening strategies used by L2 learners and highlight the significant differences in strategy use between the more and less skilled listeners. Their general

findings indicate that the use of metacognitive strategies did distinguish the two groups. While the more effective listeners reported using a variety of in-depth processing strategies, such as selective attention, elaboration, and self-monitoring, the less skilled listeners were inclined to use surface processing strategies, mainly translation strategy. To sum up, the above studies have indicated the students' need for gradual and comprehensive strategy orientation.

The purpose of the current study is not aimed at distinguishing the more and the less skilled listeners. The researcher, however, is interested in the relationship between students' auditory knowledge of words and phrases and these students' listening comprehension and the learning outcome in listening comprehension as measured by listening proficiency tests.

### **The Role of Vocabulary in SLA**

Linguistics has traditionally divided language into six components – vocabulary (lexicon), morphology (word structure), phonology (sound system), syntax (grammar), nonverbal structures, and discourse (ways to connect sentences and organize information) – to serve language description and analysis (Saville-Troike, 2012). All of these components have their part in second language learning and usage.

However, learning vocabulary is a crucial part of mastering a second language (Schmitt, 2008), and it has been one of the challenging subjects in SLA. There is agreement among vocabulary specialists that lexical knowledge is the heart of language learning (Coady, 1997; Coady & Huckin, 1997).

Thus, vocabulary is a central constituent of language proficiency and comprises much of the foundation for improving learners' communication. Vocabulary is also one

of the most complicated of all areas in the teaching and learning of language (Kalyuga & Kalyuga, 2008). It is clear that accumulating and maintaining a large number of vocabulary items is a challenging undertaking, and it raises questions about which strategies and tasks are more effective in helping the learners acquire and retain as many words as they can in the most reasonable way. Vocabulary, therefore, is the most critical knowledge the language learner needs to learn to be able to function with the target language. Every language's core vocabulary includes function words—words that carry grammatical information. Beyond that, the most necessary vocabulary elements depend on language usage. For example, vocabulary elements needed for the language used for academic purposes will differ from those required for the language used for interpersonal purposes (Saville-Troike, 2012). Hence, it is important to do more research on different genres of language and their role in vocabulary acquisition. Accordingly, the question that poses itself is: Should learners that need to use the language for academic purposes utilize the same learning strategies and techniques used by learners that need to use the language for daily interaction with native speakers? Research has shown that larger vocabulary correlates positively to communicative effectiveness that appears in the proficiency levels in reading (Anderson & Freebody, 1981), in writing (Engber, 1995), and general language proficiency (Meara & Jones, 1988). However, it is imperative to distinguish between active and passive forms of vocabulary. Most research concentrates on measuring passive vocabulary since it is much more challenging to measure productive vocabulary knowledge (Meara, 2009). Therefore, thorough research on the roles of active and passive forms of vocabulary (particularly on and how efficient are

different learning techniques regarding transferring certain words into passive or active vocabulary items) is needed.

The literature reveals that three types of knowledge contribute to the effective use of context for vocabulary learning; linguistic knowledge, world knowledge, and strategic knowledge (Nagy, 1997). Vocabulary knowledge is accordingly acquired in several stages; first, learners recognize the word they hear. After that, they produce the words themselves in some contexts. Then ultimately, they fully control the usage of the words and their connotations, collocational behaviors, as well as metaphorical use. The L2 speakers' ability to extract the latter information from contexts in which the words are used, according to Saville-Troike (2012), affect the number of words they learn as well as the level of their vocabulary knowledge.

More often than not, the literature on vocabulary acquisition reveals the assumption that learning vocabulary items based on their contextualization (i.e., guessing the meaning of unknown words from their context) is the most effective method of acquisition. Nonetheless, research, i.e., Nation (2002), has shown that explicit, decontextualized study of vocabulary is also a very effective method for increasing the size of the vocabulary items acquired, and that learning in this way results in rapid vocabulary acquisition and long-lasting vocabulary retention.

### **Vocabulary acquisition techniques**

No single theory of vocabulary acquisition is widely accepted, perhaps partially because of the lack of cooperation and agreement between the multi-discipline subject-matter experts. In other words, the broadness and multifacetedness of vocabulary acquisition make it too difficult to acquire consensus among scholars. Even within the

field of linguistics, definitions such that of the basic concept of “word” can be numerous—it can simply be defined in multiple ways depending on any of the varying points of view. Additionally, the level of importance given to the “word” concept differ from one language to another. Therefore, the learned components are often referred to as lexical items instead of words. (Pavičić Takač, 2008). Even though language learning strategies play a vital role in second language acquisition, the learning strategy is not the only determinant in vocabulary acquisition and retention. The study of Pavičić Takač (2008) has shown that the role of factors such as the first language, the learning context, and the inherent linguistic features of lexical items must be taken into consideration when examining vocabulary acquisition and retention.

Examples of additional factors that researchers need to consider include learner's age, gender, sex, and motivation and personality traits. These factors influence learners' choice of strategies and the effectiveness of these strategies. Thus, one could infer that there will be a need for an empirical study to examine these factors and their effect on vocabulary acquisition. As for vocabulary retention, a substantial factor that plays a crucial part is the memory. Learning lexical items is not linear because learners always forget part of the information they learn, and this forgetting takes place in both short-term and long-term memory (Pavičić Takač, 2008). Naturally, in the short-term stage, the forgetting is much faster. Hence, it is important to find ways to transfer the learning material into long-term memory. Thornbury (2002) has compiled a list of principles that ease this transfer process. These include multiple encounters with a lexical item (preferably at spaced intervals), retrieval and use of lexical items, cognitive and practical depth, personalization, imaging, use of mnemonics, and strict attention.



In the following paragraphs, the review explores three of the most basic techniques of learning vocabulary in learning settings that are formal. These techniques include learning through reading, learning in a group through negotiation, and language-focused instruction. Paul Nation reviews these techniques in his 2002 article titled, “Best Practice in Vocabulary Teaching and Learning.”

### **Language-Focused Instruction**

Language-focused instruction implies that learners direct their attention to language items (under the supervision of a teacher) to gain knowledge about the item as part of the language system—which means that the motive is not in the practical usage of a particular word or message. Language-focused instruction includes, besides learning the meaning of words, studying the pronunciation and spelling of words, as well as memorizing collocations, phrases, and sentences (Nation, 2002). Since the teacher plays a vital role in language-focused instruction, it would be essential to have more research about what kind of effect the teacher and his or her values and beliefs have on vocabulary learning and acquisition.

A body of research by Newton (1995), Joe (1995) as well as Joe, et al., (1996) show that working with a group of learners through negotiation actively promotes vocabulary learning. In this kind of communicative tasks, learners have to speak or write together and to negotiate and discuss the meanings of words. The negotiation of the meaning of unknown vocabulary increases the chance of learning the words. Correspondingly, the more vocabulary the learners use, the better they learn it (Nation, 2002).

On the other hand, some researchers have long regarded reading as a significant source of vocabulary growth. This perspective on reading, however, is not a self-evident fact, because research with native speakers of English has shown a close relationship between the vocabulary growth and the amount and variety of meaning-focused instruction (Nagy et al., 1985). This finding leads to the assumption that for learning to occur and continue, vocabulary knowledge and meaning-focused input are needed. Nevertheless, this kind of learning is fragile because it largely depends on the quality of the learner's reading skill. Furthermore, the type of reading done heavily influences the learned vocabulary. Therefore, Nation in general advocates language-focused vocabulary instruction as part of reading exercises and any language course material.

A sizeable portion of SLA research has been concentrating on natural learning techniques, such as learning through negotiation or reading. Ellis (2002) shows that it is essential for the learner to use the target language for communicational purposes to become a fluent user of the target language. Different learning situations, materials, and environments need to be better analyzed to constitute a more coherent picture of the nature of natural learning.

In spite of reading and working with a group being effective ways to enhance one's vocabulary acquisition and retention, many researchers strongly stress the importance of language-focused instruction. In SLA learning situations, it is merely natural for children to adopt the language in informal settings, but the same is not valid for adults. In the latter, it is imperative to pay close attention to words and language systems rather than to rely on practical usage alone. Consequently, one could argue that communicative and instructive approaches are both essential to achieve SLA and that

these two approaches complement and supplement each other. In the next few paragraphs, the review will delve into the actual vocabulary acquisition process and will allude to research that addresses the use of multi-word lexical chunks as part of the learning process.

### **Vocabulary Acquisition and Multiword Lexical Chunks**

Grammar and vocabulary have methodologically fallen in the past into two separate divisions. In other words, grammar represented mere structures (e.g., tenses, passive and active voice, direct and indirect speech, etc.), whereas vocabulary ranked secondary in value and served to explain the meaning and scope of the grammar (Sinclair & Renouf, 1988). Therefore, SLA programs did not initially place great emphasis on vocabulary teaching and learning, because until recently there was an assumption that vocabulary learning occurs gradually throughout learning of other language components (Richards & Renandya, 2002).

Until the 1980s, SLA programs viewed vocabulary as an example of simple and mostly rote learning of the meaning of individual words. They even regarded long word lists as curricular materials and expected learners to learn one word at a time without regard to other words. From the latter perspective, word lists represented curricular materials that lacked internal complexity and interactivity, and as such, placed a low cognitive burden on the learner. The same attitude viewed grammar as a highly interactive curricular material that puts a substantial load of cognitive demand on the learner. From the 1990s onward, SLA and language teaching disciplines have witnessed a rising interest in the role of idioms and other multi-word lexical chunks. Multi-word lexical chunks, such as fixed and semi-fixed expressions, strong collocations, pragmatic

functions, idioms and so on, can be as an effective way to learn multiple words simultaneously. Research by Skehan (1998) supports the theory that this kind of ready-made chunks helps learners to produce fluent language in real-life situations. Additionally, the work of Sinclair (1987), Nattinger (1988), Nattinger and DeCarrico (1992), Willis (1990), Lewis (1993, 1997a, 1997b) and others disputed the view of vocabulary as a collection of separate words with set meanings. They promote a vocabulary-acquisition approach in which the learners recognize, learn and apply patterns of language as meaningful lexical chunks or phrases and process them as a whole. They claim that such an approach will result in decreased learning burden and processing time and an increased level of fluency. The approach above has recently become a popular alternative to many grammar-based approaches. Additional consequent studies stressed that the ability to comprehend and produce lexical chunks or groups of words commonly found together is an integral part of language acquisition (e.g., Nation 2001; Willis 2003).

### **The Role of Vocabulary in Listening Comprehension**

Vocabulary plays a very crucial role in second language acquisition and foreign language teaching and learning, for it is an essential element that connects the four basic skills of a language (i.e., speaking, listening, reading, and writing). For learners to be able to communicate well in a foreign language, they must acquire a sufficient number of lexical items (words) and must learn to use them in different contexts. Research findings from Bonk (2000) and Stæhr (2009) support a strong correlation between vocabulary knowledge and listening comprehension. Bonk (2000) studied the relationship between 59 L2 students' level of familiarity with the lexis in the listening texts and the students' gist comprehension. The study results showed that students who knew fewer than 75%

of the lexical items of the input texts content could not achieve satisfactory comprehension scores, whereas all of those who knew more than 90% of the same attained good comprehension scores. In other words, the study found that 'acceptable comprehension levels were significantly associated with higher text-lexis familiarity' (Bonk, 2000, p. 14).

Even though there is a substantial number of studies proposing that vocabulary knowledge is imperative for success in reading comprehension in second or foreign language education (e.g., Hu & Nation, 2000; Pigada & Schmitt, 2006; Shen, 2008;), a few studies (e.g., Bonk, 2000; Stæhr, 2009) address on the importance of vocabulary knowledge in listening comprehension. That said, the prior experience that an L2 learner applies to his or her effort to comprehend a listening passage plays a crucial role in interpreting the spoken input and, therefore, should be taken into account when evaluating an L2 learners' listening comprehension (Chiang & Dunkel, 1992; Long, 1990). Kelly (1991) contended that ignorance of lexical items is the main impediment that hinders listening comprehension among L2 learners. She suggested that adult L2 learners focus their efforts on increasing their knowledge of the L2 vocabulary and grammar, and especially on their ability to recognize these words in their natural spoken input. The prior knowledge that an L2 listener brings to the task of comprehending a listening passage is a vital element in interpreting the material and should be considered in the evaluation of subjects' listening comprehension (Chiang & Dunkel, 1992; Long, 1990; Raphan, 1996). However, the task he used in his (1991) study does not truly represent how lexical ignorance can deter listening comprehension in real life because most of the daily listening tasks do not typically recycle text.

Additionally, it was unclear whether the dictations offered a concrete foundation for explanations of the level of comprehension among listeners. While the percentage of familiar lexis may not accurately predict the level of comprehension, it may, however, determine a statistical basement effect for a good comprehension of a text. Specifically, it is likely that a learner who has a low enough percentage of familiar text-lexis would not be able to get the gist after one listening, regardless of whether or not he or she used effective listening strategies (Bonk, 2000).

### **The Theory of Chunks and Lexical Approach**

In his book entitled, “The Lexical Approach,” Lewis (1993) coined the term “lexical approach.” Lewis’s theory is founded on the concept that a critical element of language acquisition is the capability to comprehend and produce lexical phrases as unanalyzed wholes or chunks that become the raw data by which learners recognize patterns of language, i.e., grammar. Accordingly, “language consists of grammaticalized lexis, not lexicalized grammar.” Hence, lexis, not grammar is the basis of language. Therefore, considering this theory, language teaching should concentrate on regular fixed expressions in spoken language rather than on originally created sentences (Lewis, 1997).

The lexical approach distinguishes between vocabulary in its traditional understanding as a stock of single words with fixed meanings and lexis that includes not only the individual words but also the word combinations that stored in the mental lexicons. Proponents of the lexical approach assert that language comprises meaningful chunks that produce continuous coherent text when they are combined, and that only a small number of spoken sentences are entirely original creations.

The existence and importance of the above concept have been discussed in earlier research. Richards and Rodgers (2001) attest that language acquisition literature had emphasized the importance of formulaic, multi-word phrases as whole units. In work earlier than Lewis's, these units appeared labeled by different terms. For example, Keller (1979) refers to them as "gambits," Pawley and Syder (1983) dub them as "lexicalized stems," and Peters (1983) as "Speech Formulae," whereas Nattinger and DeCarrico (1992) refer to them as "lexical phrases."

However, Zimmerman (1997) accredits Sinclair (1985), Nattinger and DeCarrico (1992), and Lewis (1993) for having revived the research interest in an essential role for accurate language description disputed a traditional perspective of word limitations and emphasizing the language learners' need to recognize and utilize patterns of lexis and collocation. Zimmerman (1997), therefore, perceives the above work as a significant theoretical and pedagogical shift from the past literature. Accordingly, the underlying claim of the theory of lexical approach is that language production is not a syntactic process governed by rules, but rather a retrieval of larger multi-word units from memory.

In light of the above, Moudraia (2001) contends that bringing about radical methodological changes in the language classroom does not occur by merely implementing a lexical approach, but by a change in the teacher's mindset through adopting language activities aimed at naturally occurring language and at raising learners' awareness of the lexical nature of language.

### **Types of Lexical Phrases**

Linguists often view figurative idioms (common multi-word figurative expressions) or "*prefabs*" as an integral part of the core of the linguistic system and as an effective way

for acquiring, enhancing, and retaining vocabulary. During the last decade, the use of prefabs has become a major focus of interest in English as a Foreign Language (EFL). Sylviane Granger's 1998 article entitled, "*Prefabricated Patterns in Advanced EFL Writing*," presents collocations and lexical phrases as two kinds of prefabs.

The work of Granger (1998) borrows the definition of collocation from Van Roey (1990). Collocation is defined as “the linguistic phenomenon whereby a given vocabulary item prefers the company of another item rather than its 'synonyms' because of constraints which are not on the level of syntax or conceptual meaning but on that of usage” (Van Roey, 1990, p. 46). Granger (1998) provides three phrases, i.e., “commit suicide,” “sound asleep,” and “pitched battle,” as examples of collocations. Expectedly, Granger’s investigation shows that native language users tend to use prefabs in their writing much more than L2 learners do. Even so, L2 learners do use collocations in their writing, but they have “an underdeveloped sense of salience and of what constitutes a significant collocation” (Granger, 1998, p. 152). For that reason, paying more attention to collocations in L2 teaching will contribute to raising the level of the learner’s writing skill, making it more native-like.

In addition to their being an integral part of language systems and, as such, essential to learning, collocations also offer a good way for memorizing new words. “While giving a clue to memorize new words the method to learn words by collocations also instructs learners to use right words in right time” (Duan & Qin, 2012). Memorizing words by collocations is, therefore, useful in many ways: it enables learning multiple words at the same time, and the learner will also learn to use the language more correctly



and native-like (Duan & Qin, 2012; Nation, 2004;). Nagy (1997) calls this called acquiring strategic vocabulary knowledge.

Lexical phrases are “multi-word lexical phenomena that exist somewhere between the traditional poles of lexicon and syntax, conventionalized form/function composites that occur more frequently and have more idiomatically determined meaning than language that is put together each time” (Nattinger & DeCarrico, 1992: p. 1). Lexical chunks which are fixed or semi-fixed frequently used syntactical structures with discourse functions are stored and generated as a whole in the process of language learning. The classification of lexical chunks by Nattinger and Decarrio (1992) falls into four types, namely poly words, institutional expression, sentence builders and phrasal constraints.

Granger (1998) provided examples of passive lexical phrases, i.e., “it is said/thought that,” and an example of an active lexical phrase, i.e., “I maintain/claim that.” The results of Granger’s study show that native and L2 learners of English both similarly use passive lexical phrases, but both types of learners overuse active lexical phrases massively. This over-usage, as Granger (1998) sees it, is partly inter-lingual and can be justified by the argument that “learners' repertoires for introducing arguments and points of view are very restricted and they, therefore "cling on" to certain fixed phrases and expressions which they feel confident using” (p. 156). Drawing from the above argument, one could conclude that vocabulary learning occurs in the form of lexical phrases, but less so with collocations.

### **Collocations and Lexical Phrases in L2 Teaching**

Presumably, learning in L1 occurs when a child first acquires the vocabulary from chunks, analyzes the underlying patterns, and then generalizes them into regular syntactic rules. This presumption has paved the way for researchers such as Willis (1990) to adopt the same model for SLA teaching. Based on this pattern, Willis suggests having the teachers expose the learners to the most common trends in such a manner that they rely on the learners' innate ability to recreate the grammar based on the target language.

Granger, however, argues that although there should be great emphasis placed on prefabs in ELT, the role of prefabs in SLA should not be exaggerated because in the end adult learners do not acquire language the same way in which children do. Also, there is a large variety of learner's language acquisition strategies that have varying degrees of efficiency (Granger, 1998). Thus, identifying different learning strategies and examining each of these strategies very closely is crucial for exploring how they differ and what strategy works better than others for a particular learning setting or purpose. Further research that sheds light on the construct of vocabulary acquisition is needed to help in shaping a coherent view of its subject matter.

In 1989, James Nattinger and Jeanette DeCarrico published a research article entitled, "*Lexical phrases, speech acts, and teaching conversation.*" The article provided a review of the role of lexical phrases in SLA and L2 teaching. In their article, the researchers identified numerous advantages for teaching lexical phrases as part of the teaching process. They asserted that lexical phrases allow for expressions that learners are not yet able to construct creatively, merely because they are stored and retrieved as whole chunks, which should alleviate frustration and simultaneously promote motivation

and fluency. These phrases also ought to prove highly memorable, since they are embedded in socially appropriate situations (Nattinger & DeCarrico, 1989). Thus, advantages in practical language usage and advantages in memorization go hand in hand. Lexical phrases are an essential tool to use in conversations while the learner is not yet fluent in the target language. Moreover, using lexical phrases in a conversation allows feedback and thus promotes transferring new vocabulary into the long-term memory.

Nattinger and DeCarrico (1989) also advocate the idea that second language acquisition follows the same path as children's L1 learning; they assert that second language learners, like first language learners, seemingly learn the rules of conversational interaction before they learn the rules of sentence structure. In this case however one must consider that most of the newer research does not agree with this point of view (Granger, 1998).

However, Nattinger & DeCarrico (1989) concluded that "Even if we do not yield to the argument that conversation precedes syntax, there remain all the other reasons why socially motivated lexical phrases are an integral part of language acquisition" (p. 133). This above information should be exploited in the practice of L2 teaching. Nattinger and DeCarrico emphasize the importance of practicality and context. They infer that lexical phrases should be utilized in reading and speaking exercises, and the topics should be chosen following the situations that the students will most likely encounter in their linguistic lives.

Nonetheless, Nattinger and DeCarrico also recognized that not everything has to be context-based. They state, "There is nothing wrong with memorizing some essential chunks, especially at the beginning stages of language learning" (p. 133).

Furthermore, Nattinger and DeCarrico (1992) point out quite a few advantages of learning lexical phrases. Primary, learners can use their stored and reprocessed phrases as whole chunks to create sentences, which can, in turn, lessen the learners' stress and increase their motivation and fluency.

Additionally, because phrases are already contextualized, they are easier for learners to memorize than separate individual words. Moreover, phrases can generate social motivation for learning the target language because they work as productive tools for communicating with other people. Finally, phrases can help learners understand the grammatical rules of the language because most phrases are classified into patterns that can be analyzed by regular grammatical rules.

### **Conclusions**

Wilkins (1972) asserts that "Without grammar very little can be conveyed, but without vocabulary, nothing can be conveyed" (p. 111). Over the last few decades, researchers, such as Nation (2002) and Read (2000), have also underlined the necessity of vocabulary in practical language learning and usage. Hence, vocabulary is essential for L2 learners, regardless of their level of proficiency or their motive for learning or using the target language.

The following are some conclusions that one could draw from research review in the field of vocabulary acquisition. The literature primarily reveals that learning and teaching L2 vocabulary in assimilated lexical chunks is highly effective and that chunks, such as collocations and lexical phrases, promote vocabulary retention. Moreover, the familiarity with collocations and lexical phrases is very advantageous to the learners' overall language sub-skills of speaking and writing: Lexical chunks are important tools in

one's language production, and they make the language sound more native-like. The literature also establishes that the lexical approach in teaching vocabulary brings about significant changes to the language-learning theoretical and pedagogical practices so that the role of grammar in language teaching is no longer the point of emphasis. These changes challenge the traditional view of word boundaries and emphasize the language learners' need to recognize and utilize patterns of lexis and collocation. Hence, the retrieval of larger phrasal chunks from memory should govern the process of producing language instead of the syntactic rules. Further, the adoption of a lexical approach in language teaching classrooms requires more than changes in basic methodologies, as it entails a mindset change on behalf of the language learners and their teachers. Should the mindset occur, techniques for the language teaching activities will be geared toward naturally occurring language and toward raising the learners' awareness of, and interest in the lexical versus the syntactic nature of the language. To put these new ideas into practice, second language educators must develop a design and foundation for lexically based language teaching and adopt lexical syllabi along with matching instructional methodologies that focus on language usage. The designed syllabi need to identify the lexical items and their meanings and to place them in common phrases suitable for their usage while demonstrating the natural environment and situations in which they can be used. In other words, the new syllabi should not only focus on structures but also illustrates how the structures are used in real and natural language.

This review of the literature has identified a few gaps in the studies about vocabulary acquisition. The most significant of these gaps is perhaps the lack of empirical research examining the relationship between the different vocabulary-learning

techniques and their effect on language sub-skills, especially listening comprehension and speaking. Accordingly, there is a need to investigate the various aspects of vocabulary-acquisition techniques regarding their influence on the processes of developing the learners' language skills. There are indeedntly several factors that need to be controlled. The role of a teacher and his or her actions and beliefs, the role of learning materials, and the role of the learner and his or her traits are but a few examples of the factors mentioned above.

## **CHAPTER III**

### **METHODOLOGY**

#### **Restatement of the Research Purpose**

This study has three main purposes: to investigate how teaching Arabic vocabulary items in multiword form such as natural chunks and phrases, rather than in single form (i.e., one word at a time) affects learners' ability to comprehend Arabic listening passages; to further examine the relationship between students' auditory knowledge of words and phrases and these students' listening comprehension, as measured by Immediate Recall Protocol (IRP) tests; and to explore the relative contribution of both the learners' auditory knowledge of words and their auditory knowledge of phrases to overall listening comprehension.

This section covers description of the research design, the research setting, the participants, sources of data collection, the variables examined, the procedures, data analysis, and information about the researcher.

#### **Research Design**

##### **Overview**

To address the three purposes of the study, the researcher separated the study into a quasi-experimental pretest-posttest portion (Phase 1) and a quantitative nonexperimental portion (Phases 2 and 3). The quasi-experimental pretest-posttest section of the study investigated the effect of teaching Arabic vocabulary in multiword form—rather than in single-form—on the adult learners' ability to comprehend Arabic listening passages. For second two purposes, the researcher used a quantitative nonexperimental design. Creswell (2008) states that experimental researchers may use a

pretest, which provides a baseline measurement for the attribute or characteristic that the researcher wishes to assess before the participant receives a treatment. After the treatment, the researcher remeasures the same attribute or characteristic using a posttest, which is “a measure on some attribute or characteristic that is assessed for participants in an experiment after a treatment” (p. 301). However, because the 39 study participants were already structured in eight predetermined groups in several separate Arabic departments within three different DLIFLC Middle East schools, the researcher used a nonrandomized control-group pretest-posttest design. Accordingly, he assigned participants from four out of the eight sections participating in the study to an experimental group, and the participants from the remaining four sections to a control group. This design has practical advantages because it allows the groups to remain intact and, therefore, does not disrupt the research setting or the participants’ studies. This decreases the reactive effects of the experimental procedure and consequently improves the external validity of the design (Dimitrov & Rumrill, 2003). The researcher took measurements from the experimental and control groups, both before and after an intervention. This part of the study was conducted in three phases: pretest, intervention, and posttest.

### **Phase 1: Pretest**

In the pretest phase, the researcher used Microsoft® Teams—a digital communication platform that enables document sharing, instant messaging, audio and video calling, and online meetings—to conduct eight online instructional sessions of Arabic listening comprehension to the combined experimental and control groups. Each of these eight online instructional sessions involved teaching a new 40-second authentic



Arabic listening passage, along with its vocabulary. The researcher taught the new vocabulary lists by applying the traditional approach of teaching the vocabulary items in their single form (i.e., a vocabulary list of single words). The researcher provided the students with an auditory reference to study and review these new words by recording the vocabulary items as MP3 audio files using Audacity<sup>®</sup>, a free open-source digital audio editor and recording software application. He then shared these files with the students via Microsoft<sup>®</sup> Teams. Next, the researcher asked the students to study the vocabulary items independently, and to prepare for a quiz on the material prior to the online session in which he would teach the passage and its vocabulary list. The students' quiz scores served as a supplementary source of data to track their vocabulary acquisition progress. In each online instruction session during this phase, the researcher taught one 40-second authentic Arabic listening passage, as well as the vocabulary list for the next day's passage. On the first instructional day following the completion of the initial eight listening passages, the researcher measured each student's auditory knowledge of single words and listening comprehension of the Arabic listening passages by a single-word auditory knowledge test and a listening comprehension test for each passage. He then documented each student's test score data. This phase lasted three weeks, during which all online teaching and testing sessions were completed.

## **Phase 2: Intervention**

In the intervention phase, the researcher assigned participants from four out of the eight sections to an experimental group, and the participants from the remaining four sections to a control group. Next, the researcher taught eight new 40-second authentic Arabic listening passages, including their new vocabulary, as follows: For the control

group, he repeated the steps from the pretest phase, including recording and providing each new single-word vocabulary list to the participants in an MP3 audio file, as well as quizzing the participants on the vocabulary. For the experimental group, however, the researcher applied the lexical approach (the intervention) by introducing the new vocabulary items in multiword form. The researcher also used Audacity<sup>®</sup> to record the new multiword chunks and phrases in native fluency for the students to study and review in preparation for the vocabulary quiz in the next online instructional session. This phase lasted three weeks to complete the teaching of all the eight 40-second authentic Arabic listening passages and associated vocabulary items.

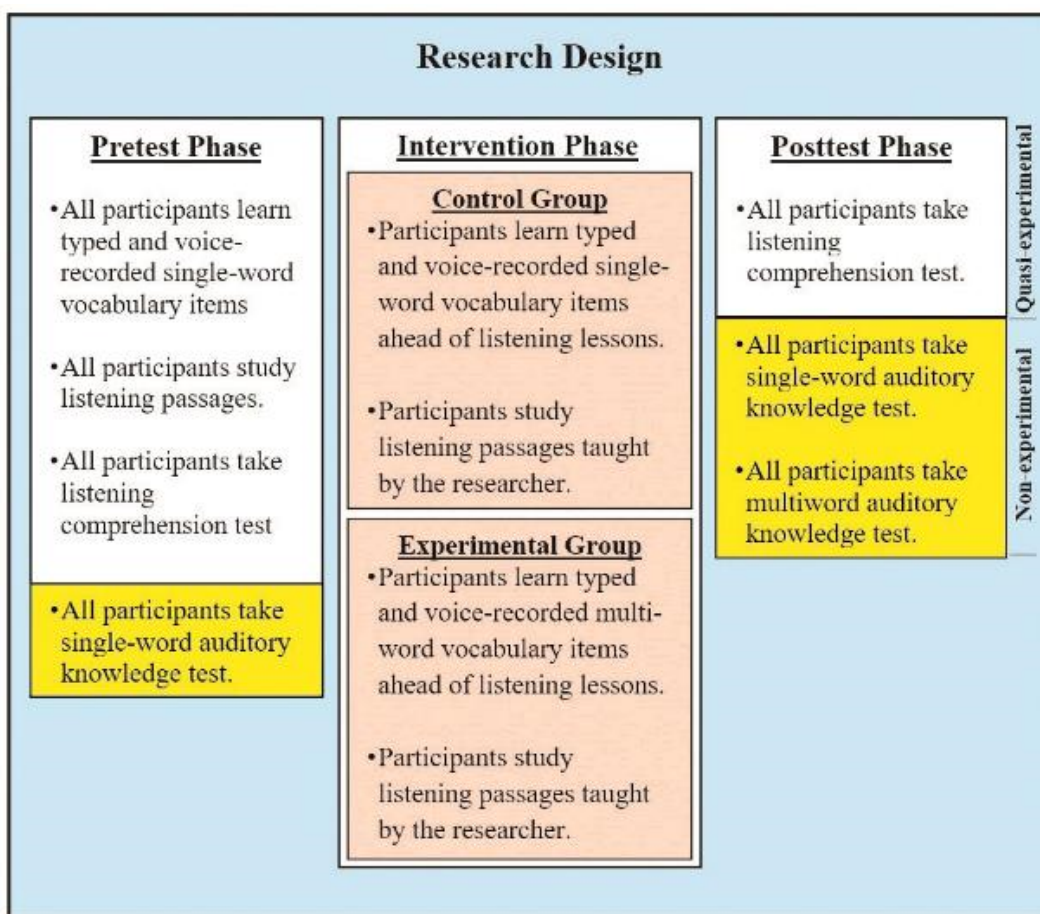
### **Phase 3: Posttest**

In the posttest phase, after completing teaching the new vocabulary and the eight new authentic Arabic listening passages, the researcher measured each student's auditory vocabulary knowledge and their comprehension of the listening passages by conducting three Immediate Recall Protocol (IRP) assessments: a single-word auditory knowledge test, a multiword auditory knowledge test, and a listening comprehension test for both groups. The researcher then graded the tests and documented the test score data. Concurrently, the researcher examined the relationship between students' auditory knowledge of words, auditory knowledge of phrases, and these students' listening comprehension, as well as the relative contribution of these variables to the learners' overall listening comprehension. For this portion of the study, the researcher used a quantitative nonexperimental design. In this design, the researcher used two instruments—the single-word auditory knowledge test and the multiword auditory knowledge test—to measure the learners' variables among all study participants.

The flowchart in (Figure 2) shows the procedures in each phase of this study's research design.

**Figure 2**

*Research Design*



**Research Setting**

The research setting is the resident Arabic Basic Course housed in three Middle East schools under DLIFLC's Undergraduate Education Directorate. Each of these schools is composed of several departments in which the instruction of the Arabic Basic Course occurs. Each department has a chairperson whose duties include supervising the assigned faculty members and overseeing language instruction. Within each department,

teams of Arabic faculty members teach classes, evaluate student performance, and develop and maintain course materials (“Language Schools,” n.d., para 7). Like the vast majority of DLIFLC’s foreign-language educators, Arabic faculty members have native fluency, advanced degrees in language-related disciplines, and extensive teaching experience. Therefore, they approach teaching within a framework of intensive practice and interaction in the target language as spoken by native, educated teachers. To enhance learning, faculty and students receive government-issued MacBook Pro computers and iPads, as well as interactive whiteboards with high-speed internet access in their classrooms (DLIFLC, 2018, p. 10).

The institute breaks down languages into four categories based on the level of their difficulty for a native English speaker, with Category I being the least difficult and Category IV being the most difficult. French and Spanish are Category-I languages, Indonesian is a Category-II language; Hebrew, Persian Farsi, Dari, Russian, Tagalog, and Urdu are Category-III languages; and Arabic, Chinese, Japanese, Korean, and Pashto are Category-IV languages. The length of a basic course depends on the language’s category, ranging from 26 weeks for Category-I languages to 64 weeks for Category-IV languages (DLIFLC, 2018, p. 26). According to this framework, the Arabic Basic Course is 64 weeks long, broken down into three semesters. Language basic courses usually rotate in and out of the schools throughout the year. Therefore, it is typical for students to be in different instructional semesters at any given time. Instruction in classrooms and language laboratories generally lasts for six hours a day, five days a week. Additionally, students can expect two to three hours of homework each day (DLIFLC, 2018, p. 24).

Because of the need for higher levels of proficiency in Arabic, as well as other Category-IV languages, the institute implements team-teaching with an average staffing ratio of two instructors per section. Teachers in the Arabic Basic Course use institute-developed learning materials and supplement these materials with their own teaching aids. Semester I materials are often non-authentic and are aimed at survival-level communicative needs, such as ordering food or making a medical appointment. The majority of Semester II and Semester III materials, however, is authentic and encompasses themes like society, politics, culture, etc. (“Curriculum Development Principles,” 2014). Throughout the three semesters, the textbook lessons follow the same structure consisting of a few key components: presentation, grammar and usage, using Arabic in context, and a vocabulary list. The curriculum stresses vocabulary learning throughout the course and teachers often start by introducing new vocabulary items and administering vocabulary quizzes ahead of teaching the lesson that incorporates them. Most language classrooms have the students memorize a large vocabulary list every day (Cario, 2019). Typically, students study the vocabulary on their own, but some faculty members may teach new vocabulary explicitly at the beginning of the course. Students are expected to master approximately 1,200 words by the end of Semester I, 3,200 words by the end of Semester II, and 5,000 words by the end of Semester III (Wang, 2018).

### **Participants**

The study participants consisted of 16 female and 23 male students of Arabic Basic Course who qualified to participate in the study by virtue of their good academic standing (GPA of 3.0 or higher). The participants were divided into eight separate sections by their schools. Each section consisted of six to eight students. These students

were mainly active and reserve members of the U.S. military, but occasionally included civilian personnel working in the U.S. federal government and law-enforcement agencies. At the time the researcher began recruiting participants for this study, 52 students from the three DLIFLC Middle East schools qualified for participation based on their good academic standing in Semester II of the Arabic Basic Course. The researcher sent a letter of solicitation to the 52 students in the three Middle East schools explaining the research being conducted (see Appendix C). All 52 students initially agreed to participate. However, the total number of actual participants dropped down to 39 as the rest of the students left the study at various times during the first three weeks. The 39 participants who remained demonstrated high interest in being part of the study and were dedicated to studying the vocabulary as well as attending the instructional sessions. The few participants who had to occasionally miss an instructional session for whatever reason were quick to ensure receiving a make-up session later the same day. All 39 participants attended their scheduled instructional sessions, completed studying the vocabulary items provided to them before each instructional session, and sat for all scheduled tests.

Usually, Arabic Basic Course students are presumed to have a high aptitude for learning foreign languages, as per the Defense Language Aptitude Battery (DLAB). The U.S. Department of Defense (DoD) uses DLAB, which is scored out of a possible 164 points, to gauge a prospective student's potential for learning a foreign language ("Defense Language Aptitude Battery," n.d.). A prospective student must attain a DLAB score of 110 points or higher to qualify for entry in the Arabic Basic Course (DLIFLC, 2018, p. 26). The Arabic Basic Course at DLIFLC runs for 64 weeks broken down into three semesters, as mentioned previously. Under DLIFLC's Proficiency Enhancement

Plan (PEP), the faculty-to-student ratio in Arabic is two instructors per six students (DLIFLC, 2018, p. 6). Thus, each class in the Arabic Basic Course consisted of two to three sections averaging six to eight students that received language instruction from a teaching team consisting of six or more faculty members. The researcher obtained each student's grade point averages (GPA) at the beginning of the study. The GPA is reflective of scores in all language skills (i.e., listening, reading, and speaking), as determined by the institute's formative evaluation system. The researcher also collected additional information, such as teachers' accounts of all students' academic counseling statements and the initial assessment of students' learning styles that teachers conducted before the beginning of the Arabic Basic Course. The additional information about the participants assisted the researcher in designing classroom activities that appeal to the participants to ensure their engagement. The researcher also collected the biographical and demographical data of the participants.

### **Sampling**

Because the participants in this study were accessible to the researcher (who is a member of the same institute) he used a convenience sample. As a statistical representation of data, convenience sampling permits researchers to select participants due to the ease of accessibility to the research population. Convenience sampling is an opportunity sample that offers the benefits of increased data availability and collection speed.

The researcher recruited participants from all sections, rather than individual participants because the study participants were already divided into small sections across the Arabic departments. He included all sections, for a total of 52 participants—though

only 39 of them carried on participation through the end of the study. The selection of the participants was based on their level of competence in the Arabic Basic Course and their maintaining a good academic standing (a GPA of at least 3.0).

### **Protection of Human Subjects**

The following paragraphs describe the steps taken for protection of human subjects during this study. As of January 12, 2021, the researcher obtained proper approvals from the Institutional Review Boards of the University of San Francisco and the Defense Language Institute Foreign Language Center (see Appendices A and B). After that, the researcher recruited qualified students. The researcher provided all participating students with informed consent forms (see Appendix D) before the study began. In the consent form, the researcher informed participants of their rights, including their right to withdraw from participation in the study at any time. Participants in the study did not receive any financial award but did receive explanation of the potential educational benefits that the study findings may reveal. The researcher invited all academically qualified Arabic Basic Course students from all Semester-II sections to participate in this study, regardless of student gender, race, social class, ethnicity, national origin, religion, military rank, political affiliation, or any other personal background. The researcher selected participants from sections with students at the same level of competence (second semester) in the Arabic Basic Course and maintaining good academic standing. To protect their identities, the researcher assigned gender-true Arab pseudonyms to the participants in place of their real names. Additionally, the researcher gave a unique study identification code to each participant before collecting data. On a separate document, he noted each participant's name along with its respective study



identification code (e.g., CG-01) and stored this document separately from data documents. During the data collection phase, the researcher provided the participants with their unique study identification codes and asked them to insert them onto their data documents.

### **Sources of Data Collection**

The researcher collected data within the online classroom context and during scheduled online instructional session hours. The primary instruments for quantitative data collection were three tests: the Arabic listening comprehension test; the single-word auditory knowledge test; and the multiword auditory knowledge test. The Arabic listening comprehension test adopts the Immediate Recall Protocol (IRP), whereas the other two tests utilize a listening measure which has demonstrated good validity and reliability, discriminates over a wide range of proficiency, and is easy to construct and grade. The test is called Listening Recall, and is a type of listening cloze procedure, without random deletion (Bernhardt, 1983; Berkemeyer, 1989). The testing events the researcher deemed crucial for data collection were the ones planned for the end of the pretest phase and the posttest phase. The following section provides a description of these instruments.

#### **Arabic listening comprehension test**

The Arabic listening comprehension test is a learners' listening comprehension test adopting the Immediate Recall Protocol (IRP), which is designed for evaluating students' listening comprehension outcome. In this type of testing, students listen to an entire Arabic passage twice with a five-second pause and then write in English everything they hear on a blank sheet of paper, which is used as a recall protocol sheet.

Afterwards, students' protocols are collected and graded to measure their listening comprehension.

### **The single-word auditory knowledge test**

A single-word auditory knowledge test measures the learner's recall of single Arabic words. The researcher randomly selected eight Arabic words from each of the eight authentic Arabic listening passages covered in the intervention phase and recorded them so that each word was repeated twice with a three-second pause in between utterances. The researcher asked each participant to use a blank sheet of paper as a protocol sheet. Then, the researcher played the audio file through Microsoft® Teams and asked the students to write the meaning in English of the Arabic chunks and phrases they have heard. Afterward, the researcher used the file sharing feature of Microsoft® Teams to collect the students' protocols and graded them to measure each student's auditory knowledge of single-word vocabulary items.

### **The multiword auditory knowledge test**

The multiword auditory knowledge test measures the learner's recall of multiword Arabic vocabulary items. The researcher randomly selected eight Arabic chunks or phrases from each of the eight listening passages covered in the intervention phase and recorded them so that each chunk or phrase was played twice with a three-second pause in between utterances. The researcher then asked each participant to use a blank sheet of paper as a protocol sheet. Next, the researcher played the audio file through Microsoft® Teams and asked the students to write the meaning in English of the Arabic chunk or phrase they heard. Finally, the researcher used the file sharing feature on Microsoft®

Teams to collect the participants' protocols and graded them to measure each participant's auditory knowledge of multiword chunks and phrases.

### **Variables Chosen for the Study**

The first research question in this study addresses the effect of teaching Arabic vocabulary items in multiword form, rather than in single form, on the learners' ability to comprehend Arabic listening passages. In this study, the dependent variable is listening comprehension of eight Arabic listening passages, as measured by a listening comprehension test using the Immediate Recall Protocol. The independent variable is teaching Arabic vocabulary by adopting the Lexical Approach (Lewis, 1993) of teaching vocabulary in natural multiword chunks and phrases. Additionally, the study examines the correlation between two independent variables—Arabic Basic Course student's auditory knowledge of Arabic words and their auditory knowledge of Arabic of phrases—and the students' Arabic listening comprehension as a dependent variable.

### **Procedures**

Upon successful completion of sample selection and obtaining the approval of the Institutional Review Board (IRB), the researcher utilized the Microsoft® Teams platform to conduct all the teaching and testing sessions online. This platform was selected in response to the spread of COVID-19 since March 17, 2020 and the need for remote work capabilities. Accordingly, faculty members have been teleworking and students have been attending their language classes online from their residences. The Microsoft® Teams platform has allowed foreign language instructors and students to continue their language training while maintaining safe social distancing.

The researcher taught authentic Arabic listening material to the Semester-II Arabic Basic Course students recruited from eight Semester-II Arabic Basic Course sections placed in three different Middle East schools within DLIFLC. The researcher conducted the study within the online classroom context and during scheduled online instruction sessions. The researcher excluded any student who failed to maintain a cumulative overall GPA of at least 3.0 from participation in the study.

### **Phase 1: Pretest**

In the pretest phase of the study, the researcher combined all participants from all sections into one group for the duration of the first eight online instructional sessions. He added all participants to a Microsoft® Teams channel that he used for conducting the teaching sessions. In each virtual session, the researcher covered one new passage and its vocabulary list. The listening passages consisted of level-appropriate authentic Arabic listening materials. The instructional material covered in this study consisted of 8 authentic Arabic listening passages, each 40 seconds in length, in addition to 8 new vocabulary lists containing 39 to 44 new words. In this phase, the researcher taught the new vocabulary lists by applying the traditional approach of teaching the vocabulary items in their single form.

On the first day of instruction, the researcher taught the new vocabulary list and listening passage simultaneously. For all subsequent lessons, the researcher taught the new vocabulary list for the next passage and provided its recorded vocabulary audio file at least one day prior to the online instruction session during which he would teach the passage. To prepare the audio files, the researcher recorded each vocabulary item from the new vocabulary list in native fluency using Audacity® software and saved the

recording in MP3 audio format. In each online instructional session, the researcher shared this audio file containing his voice-recorded pronunciation of each vocabulary item on the new vocabulary list with participants via Microsoft® Teams for them to study and review in preparation for the vocabulary quiz at the next online instructional session. On the first instruction day following the teaching of the eight authentic Arabic listening passages and their vocabulary lists, the researcher measured each student's vocabulary knowledge by conducting a single-word auditory knowledge test. To do so, the researcher randomly selected eight Arabic words from each of the listening passages covered in the pretest phase of the study and voice recorded them in such a way that each word was played twice with a three-second pause in between utterances. He then asked each participant to use a blank sheet of paper as a protocol sheet for him or her to write the meaning in English of the Arabic words he or she heard when the researcher played the voice-recorded words on Microsoft® Teams. Afterward, the researcher utilized the file sharing feature on Microsoft® Teams to collect and grade the participants' protocols and to properly document their test score data. The score data from this test served as an instrument to measure the participants' auditory knowledge of single-word vocabulary, as well as a method of tracking their vocabulary acquisition. Next, the researcher used Microsoft® Teams to administer an Immediate Recall Protocol Arabic listening comprehension test to all participants to measure their comprehension of each of the eight authentic Arabic listening passages covered in the pretest phase. The researcher then collected the protocols through the file sharing feature of Microsoft® Teams to grade and properly document the students' test score data. The pretest phase lasted three weeks to complete all the required teaching and testing.

## **Phase 2: Intervention**

In the intervention phase, the researcher divided participants from all sections into two groups, placing participants from four sections in the control group and those from the remaining four sections in the experimental group (about 50% of the participants in each group). The material the researcher covered in the intervention phase consisted of another eight new 40-second long authentic Arabic passages and their respective vocabulary lists. The intervention consisted of applying the lexical approach (Lewis, 1993) to teach the new vocabulary lists in multiword form, such as natural chunks and phrases. In other words, the researcher took multiword lexical chunks and phrases from each of the remaining authentic listening passages to develop eight new vocabulary lists. He additionally used Audacity<sup>®</sup> to voice record each of the newly created vocabulary lists in native fluency to produce a separate MP3 audio files for each of these lists. The researcher then taught the newly created eight multiword vocabulary lists and the remaining eight listening passages to participants in the experimental group, with each online instructional session covering one new multiword vocabulary list and one listening passage. As in the pretest phase, the researcher continued to ensure that he taught the new vocabulary list for the next passage and provided its voice-recorded audio file at least one day prior to the online instructional session during which he would teach that passage. Prior to each online instruction session, the researcher shared the audio file containing the voice-recorded vocabulary list with the participants through the file sharing feature on Microsoft<sup>®</sup> Teams, thus providing the participants with an auditory reference for their study and review of the new vocabulary list. The participants took a vocabulary quiz at the beginning of the following online instructional session. The

participants' quiz scores continued to serve as a progress-tracking measure of participants' acquisition of the new vocabulary items.

For the control group, however, the researcher repeated the steps from the pretest phase to teach the same remaining eight listening passages to participants in this group but using the typical single-word vocabulary lists instead of the newly created multiword ones. The intervention phase ended, and the posttest phase began when all eight additional authentic Arabic listening passages and their respective vocabulary lists had been taught.

### **Phase 3: Posttest**

In the posttest phase, the researcher utilized the Microsoft® Teams platform to administer the Immediate Recall Protocol-based Arabic listening comprehension test to all participants in both groups and measure their comprehension of each of the 40-second long authentic Arabic listening passages covered in the intervention phase. In this test, the researcher asked each participant to use a blank sheet of paper as a protocol sheet. He then took a couple of minutes to read the test instructions. After that, the participants listened to each of the eight authentic Arabic passages covered in the intervention phase played through Microsoft® Teams twice with a five-second pause between each utterance. Then, they wrote in English the meaning of everything they heard on their recall protocol sheets. Afterward, the researcher collected the participants' protocols via the file sharing feature on Microsoft® Teams to grade them and properly document the participants' score data.

Next, the researcher administered the single-word auditory knowledge test to all participants in both groups via Microsoft® Teams to measure the students' recall of single

Arabic words. He had previously selected a random set of eight Arabic words from each of the eight authentic Arabic listening passages covered in the intervention phase and voice recorded them in such a way that each word would be played twice with a three-second pause in between each utterance. At the beginning of the test, the researcher asked each participant to use a blank sheet of paper as a protocol sheet. Once the researcher provided the test instructions, the participants listened to each of the prerecorded words with a three-second pause in between each utterance and wrote in English the meaning of each word they heard on their recall protocol sheets. After that, the researcher collected the participants' protocols via the file sharing feature on Microsoft® Teams to grade them and properly document the participants' score data.

Upon completing the two tests above, the researcher administered a multiword auditory knowledge test to all participants in both groups to measure the participants' recall of multiword Arabic vocabulary items (i.e., natural chunks and phrases). The researcher had previously randomly selected eight Arabic chunks and phrases from each of the eight authentic Arabic listening passages covered in the intervention phase and recorded them in such a way that each chunk and phrase would be played twice with a three-second pause in between each utterance. At the beginning of this test, the researcher asked each participant to use a blank sheet of paper as a protocol sheet. Once the researcher provided the test instructions, the participants listened to each of the prerecorded chunks and phrases twice with a three-second pause in between each utterance and wrote the meaning in English of the Arabic chunk or phrase they heard. Once the participants completed the test, the researcher collected participants' protocols via the file sharing feature on Microsoft® Teams to grade them and properly document



the participants' score data. The researcher then graded each test and documented the participants' score data in preparation for data analysis.

### **Data Analysis**

The research questions for this study were as follows:

1. Does teaching Arabic vocabulary in multiword chunks and natural phrases affect the listening comprehension competence of Arabic Basic Course students in the experimental group as compared to their peers in the control group?
2. Is there a relationship between the Arabic Basic Course students' auditory knowledge of Arabic words and that of Arabic phrases and these students' listening comprehension as measured by Immediate Recall Protocol-based listening comprehension tests?
3. What is the relative contribution of the Arabic Basic Course students' auditory knowledge of Arabic words and that of phrases to their Arabic listening comprehension?

To answer the study's first research question, the researcher analyzed the participants' score data, comparing groups with pretest and posttest data using Analysis of Covariance (ANCOVA) on the gain scores to correct for initial group differences that exists on the dependent variable. In other words, the researcher adjusted means on the dependent variable to correct for individual differences. As for the study's second research question, the researcher used a correlation analysis to determine the relationship between the participants' auditory knowledge of words and phrases and their comprehension of Arabic listening passages. Lastly, the researcher used multiple regression analysis to determine how much of the learners' listening comprehension is

explained by their auditory knowledge of Arabic words and phrases, and to check the reliability of the participants' listening comprehension scores.

### **Background of the Researcher**

The researcher has been working as a passionate foreign language educator for 29 years. His career in this field started when he attended the School of Higher Education at University of Aden in Yemen as an undergraduate student in the English Department and earned his BA in Teaching English as a Foreign Language (TEFL) in 1989. Two years after that, he did his Master of Arts in English Literature at Tishreen University in Syria, while working as an adjunct professor at the same, teaching English for specialty purposes to students of medicine, dentistry, and economics. In 1994, the researcher immigrated to the United States and served with the U.S. military as a senior military language instructor, leading a team of professional foreign language teachers who provided instruction in five different foreign languages to members of the military unit in which he served. After the end of his military enlistment in 1998, the researcher served as a contracted lead linguist and cultural advisor for a U.S. government agency. In 2005, the researcher joined the Defense Language Institute Foreign Language Center as a professor of Modern Standard Arabic. His work at the institute included language teaching, teaching team leading, and chairing a foreign language department and serving for 10 years as an assistant dean. The researcher has study interests that include foreign language acquisition, foreign language faculty professional development, emotional intelligence, multicultural education, and intercultural competence. Accordingly, the researcher hopes to contribute to the description, prediction, and understanding of foreign

language education phenomenon based on empirical evidence and to use the findings to improve the practice of foreign language education.

## **CHAPTER IV**

### **FINDINGS**

#### **Overview**

This chapter contains detailed presentation and discussion of data analysis and the findings of the current study and describes the process used to analyze the data, demonstrate how the data analysis ties back to the research questions. The first few paragraphs serve as a brief reminder of the research problem, the threefold purpose of the study, the research questions, and a description of the research sample.

This study was conducted in response to the research problem resulting from students of Arabic at DLIFLC systematically scoring lower on their listening proficiency tests than on other language skills tests over five decades, indicating that listening comprehension has been more challenging to adult learners of Arabic than reading and speaking. Upon reviewing the relevant literature, the researcher found numerous studies suggesting that difficulties could stem from reasons such as the real-time processing required for listening (e.g., Bonk, 2001; Field, 2004; Vandergrift, 2004), the variation of phonetic recognition of sounds and words (e.g., Cutler, 2012), and assimilation (Crystal, 2005). Because little is known about how vocabulary teaching and learning approaches could influence L2 listening proficiency and about characteristics that affect L2 listening proficiency, the researcher conducted the current study using Lewis's (1993) "lexical approach," which focuses on the increased understanding of the attributes of lexis in language that occurs naturally and its potential contribution to language pedagogy.

The study had three purposes: to investigate how teaching Arabic vocabulary items in multiword form such as lexical chunks and phrases, rather than in single form

(i.e., one word at a time) affects learners' ability to comprehend Arabic listening passages; to further examine the relationship between students' auditory knowledge of words and phrases and these students' listening comprehension; and to explore the relative contribution of both the learners' auditory knowledge of words and their auditory knowledge of phrases to overall listening comprehension.

The findings reported in this chapter intend to answer the following three research questions set forth in this study:

1. Does teaching Arabic vocabulary in multiword chunks and natural phrases affect the listening comprehension competence of Arabic Basic Course students in the experimental group as compared to their peers in the control group?
2. Is there a relationship between the Arabic Basic Course students' auditory knowledge of Arabic words and that of Arabic phrases and these students' listening comprehension as measured by Immediate Recall Protocol-based listening comprehension tests?
3. What is the relative contribution of the Arabic Basic Course students' auditory knowledge of Arabic words and that of phrases to their Arabic listening comprehension?

The final section of this chapter presents a summary of the data findings as they relate to the above research questions.

### **Description of the Research Sample**

The research sample of the current study consisted of 39 participants, of whom 16 were female and 23 were male students of the Arabic Basic Course at DLIFLC. Initially, these participants were preassigned to eight different sections, with each section

consisting of six to eight students. Thus, the students were physically spread out in classrooms across numerous physical locations across DLIFLC. However, on March 17, 2020, DLIFLC started to use the Microsoft® Teams platform to conduct all the teaching and testing sessions online to allow remote work capabilities in response to the spread of COVID-19. By utilizing the above platform, the researcher was no longer subject to the restraints imposed by the physical locations of the classrooms and, therefore, became able to assign participants to the experimental and control groups randomly.

As a result of this randomization, nine male students and 11 female students were assigned to the experimental group, whereas 14 male students and five female students were assigned to the control group. Participants who were 19 to 30 years of age spread out evenly between the experimental and control groups, amounting to 19 in each group. However, one participant in the experimental group fell into the range of 31 to 40 years of age. Additionally, the participants had various levels of formal education, ranging from having a high school diploma to having a bachelor's degree. Of the 21 participants with high school diplomas, 10 were in the experimental group, whereas 11 were in the control group. Only three participants had some college education but no degrees; two were in the experimental group and one in the control group. Furthermore, participants with associate degrees amounted to six, two in the experimental group and four in the control group. Lastly, five of the remaining nine participants who had bachelor's degrees were in the experimental group, whereas four were in the control group. The research sample demographics are presented in Table 1.

**Table 1***Research Sample Demographics*

Baseline characteristic	Experimental		Control		Full sample	
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
Gender						
Male	9	45.0	14	73.6	23	58.9
Female	11	55.0	5	26.3	16	41.0
Age						
19-30 years	19	95.0	19	100.0	38	97.4
31-40 years	1	0.05	0	0.0	1	2.5
Level of Education						
High school diploma	10	50.0	11	57.8	21	53.8
Some college	2	0.10	1	0.5	3	7.6
Associate degree	2	0.10	4	21.0	6	15.3
Bachelor's degree	5	25.0	4	21.0	9	23.0

**Summary of findings**

The researcher used data collected from the instruments after the pre-test and posttest phases that were conducted three weeks apart. Then the researcher examined the three research questions using descriptive statistics including means and standard deviations. The mean offered the central tendency for each area studied, while the standard deviations offered an available definition to explain potential variations for each distribution. The data were analyzed using a one-way analysis of covariance (ANCOVA). Statistical significance was set at an alpha level of  $\alpha = .05$ . Effect sizes

were measured with partial eta squared ( $\eta_p^2$ ), which estimates the proportion of variance in the dependent variable (after being adjusted for the covariate) explained by the grouping variable. Values of  $\eta_p^2 = .01$ ,  $.06$ , and  $.14$  were considered to be small, medium, and large effects, based on Cohen's (1988) guidelines. Descriptive statistics for each measure and group at each testing point are presented in Table 2.

**Table 2**

*Descriptive Statistics for All (N = 39), Control (n = 19) and Experimental Groups (n = 20) at Pre- and Post-Intervention*

Measure	Testing Period	All	Control	
		<i>M (SD)</i>	Group <i>M (SD)</i>	Intervention Group <i>M (SD)</i>
Listening	Pre	60.08 (18.21)	60.25 (18.03)	59.93 (18.85)
Comprehension	Post	63.81 (19.74)	60.06 (20.34)	67.37 (18.97)
Single-Word Auditory Test	Pre	48.85 (15.46)	48.86 (14.21)	48.85 (16.94)
	Post	53.04 (17.21)	49.43 (16.34)	56.47 (17.72)
Multi-Word Auditory Test	Pre	-	-	-
	Post	50.44 (22.11)	46.12 (22.76)	54.55 (21.22)

### **Research Question One:**

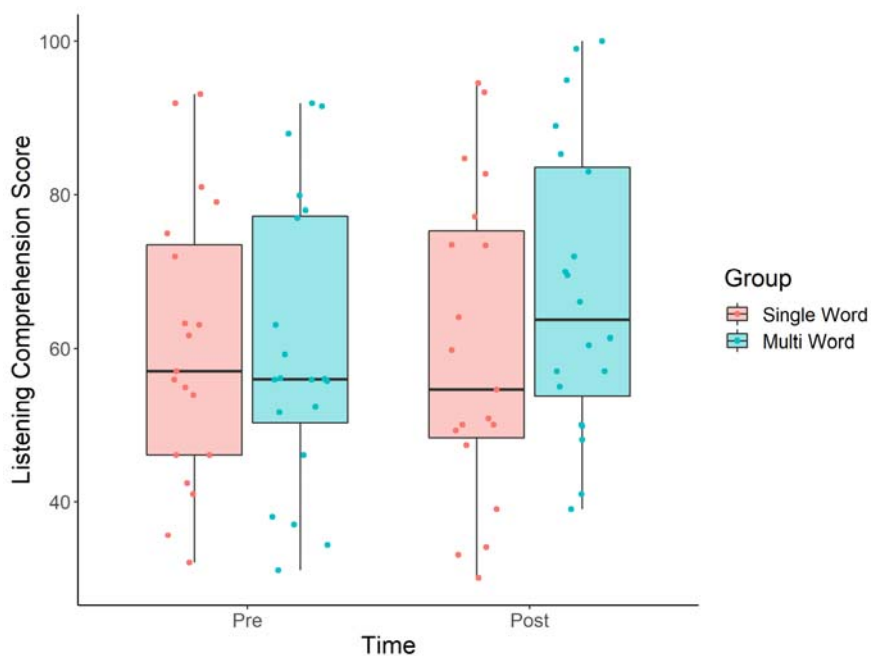
Does teaching Arabic vocabulary in multiword chunks and natural phrases affect the listening comprehension competence of Arabic Basic Course students in the experimental group as compared to their peers in the control group?



The first research question asked whether teaching Arabic vocabulary in multiword chunks and natural phrases affects listening comprehension competence of Arabic Basic Course students in the experimental group as compared to their peers in the control group. To test the first question, a one-way analysis of covariance (ANCOVA) was conducted with group (single-word learning control group vs. multi-word learning experimental group) as the independent variable, listening comprehension score at post-intervention as the dependent variable, and listening comprehension score at pre-intervention as the covariate. Outliers were tested for by examining the boxplots of each variable and using the interquartile range rule of 1.5, however no outliers were observed in pre- or post-intervention listening comprehension for either group (see the boxplots presented in Figure 3).

**Figure 3**

*Boxplots of listening comprehension scores for each group at pre- and post-intervention*

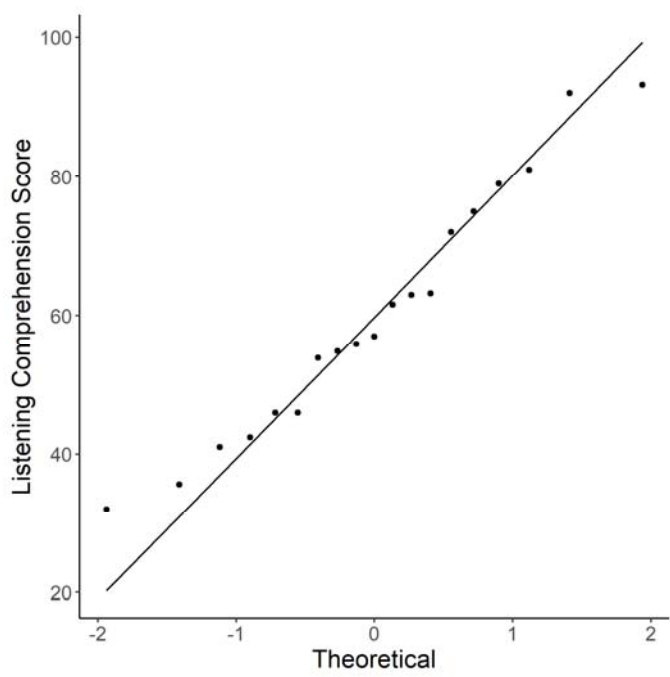


*Note.* Colored dots represent scores for each participant.

Additionally, the data were tested for normality by examining the Q-Q plots for and conducting Shapiro-Wilk tests on Listening Comprehension scores for each group and time point separately. The Shapiro-Wilk tests were all non-significant (single word pre-intervention  $p = .624$ ; multi word pre-intervention  $p = .153$ ; single word post-intervention  $p = .313$ ; multi word post-intervention  $p = .279$ ). Additionally, the Q-Q plots (Figures 4-7) did not show any meaningful deviation from normality.

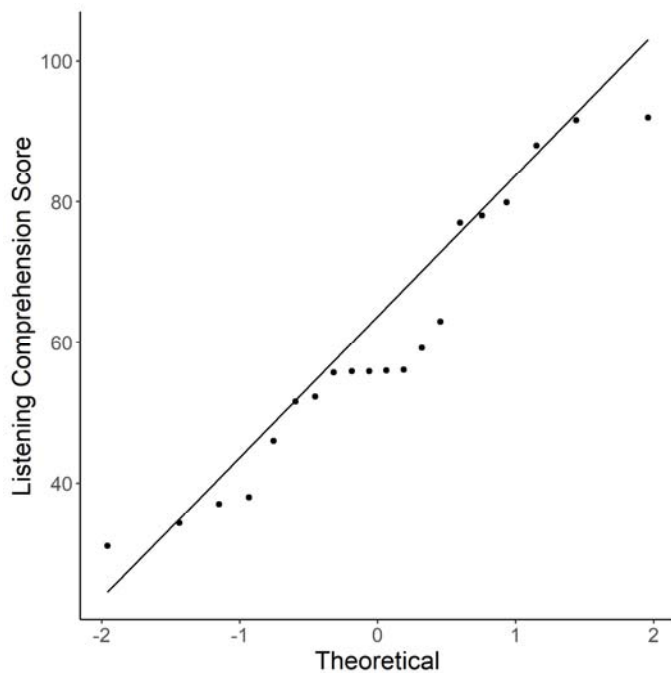
**Figure 4**

*Q-Q plot of listening comprehension score at pre-intervention for the single word group*

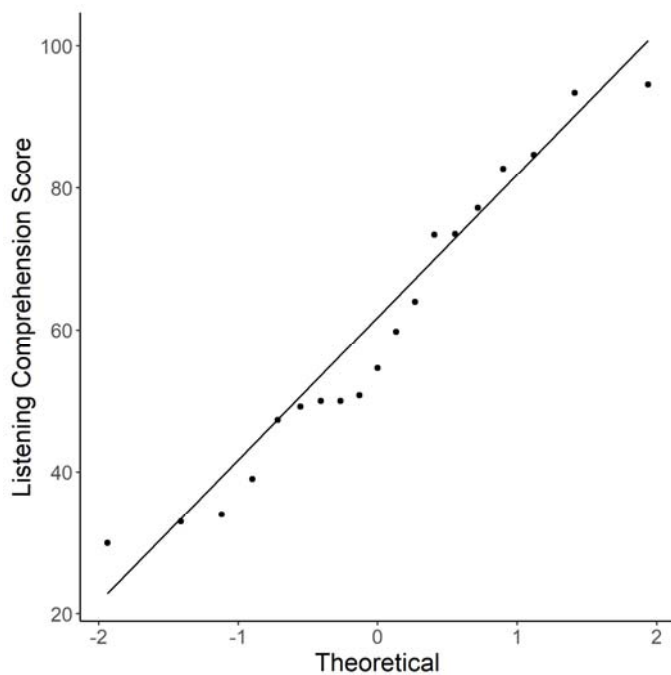


**Figure 5**

*Q-Q plot of listening comprehension score at pre-intervention for the multi word group*

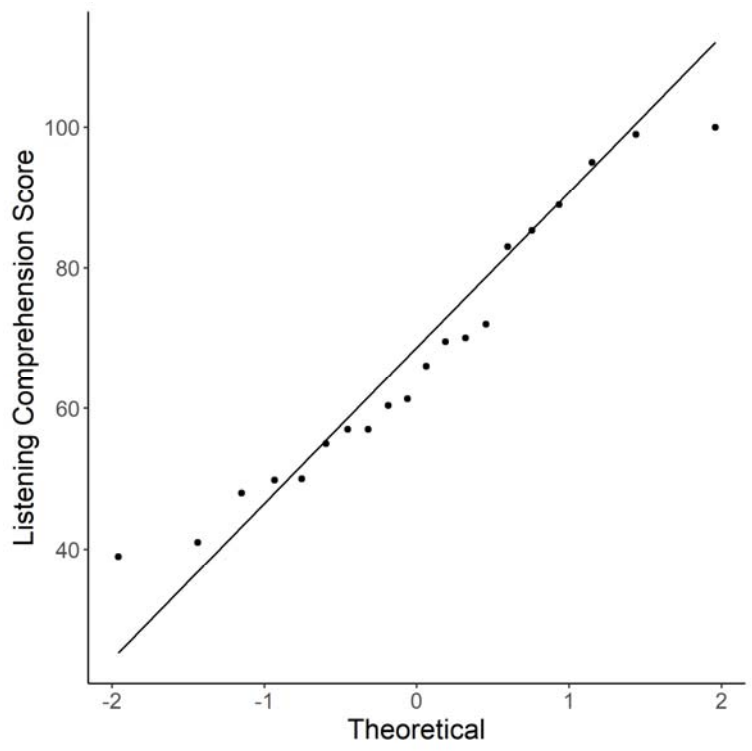
**Figure 6**

*Q-Q plot of listening comprehension score at pos-intervention for the single word group*



**Figure 7**

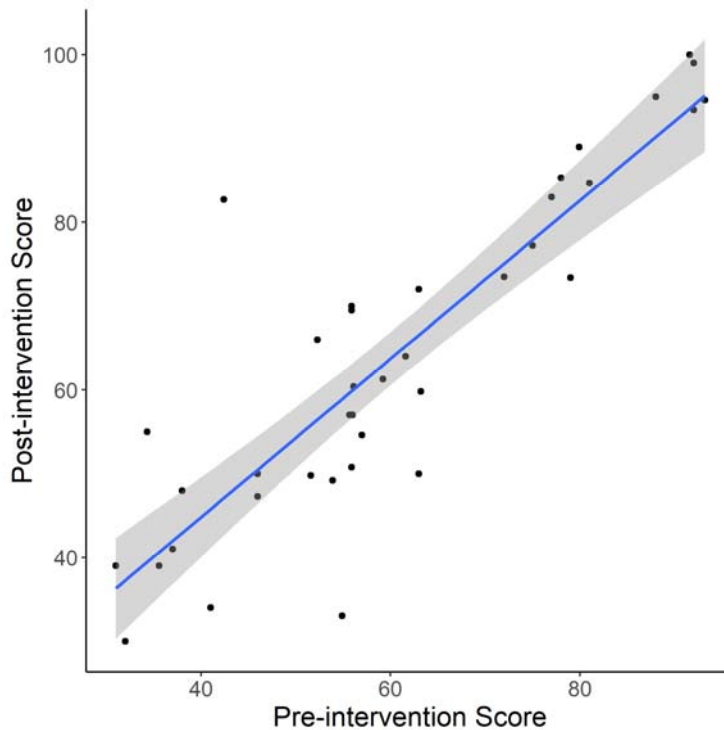
*Q-Q plot of listening comprehension score at post-intervention for the multi word group*



Additionally, the assumption of linearity was tested by correlating the covariate (pre-intervention scores) with the dependent variable (post-intervention scores). It was found that the Pearson correlation was very high,  $r = .87, p < .001$ , implying that there was a linear association between the covariate and dependent variable. Figure 8 also clearly shows this association.

**Figure 8**

*Scatter plot of pre-intervention and post-intervention listening comprehension scores*

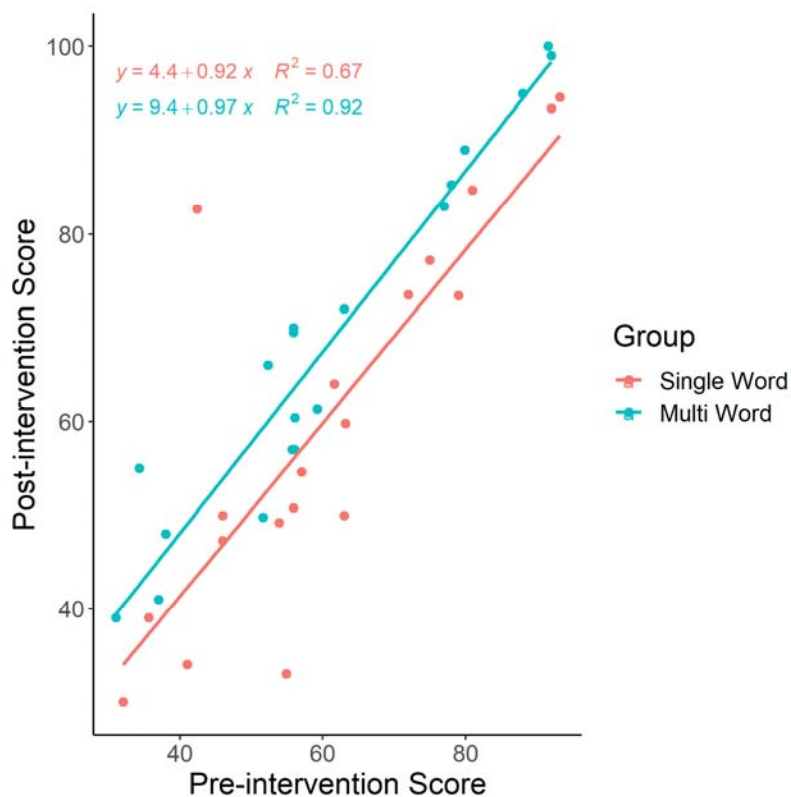


*Note.* Blue lines represent line of best fit, and surrounding shaded regions represent 95% confidence intervals.

The assumption of homogeneity of regression slopes was tested by examining the interaction term between the covariate and the independent variable, and also by visually inspecting a scatter plot with regression lines of best fit for each group plotted on it (see Figure 9). It was found that the interaction was not statistically significant,  $F(1, 35) = 0.06$ ,  $p = .801$ , implying that the assumption of homogeneity of regression slopes was met. Visual inspection of the scatter plot (Figure 9) also supported this.

**Figure 9**

Scatter plot of pre-intervention and post-intervention listening comprehension scores for each group

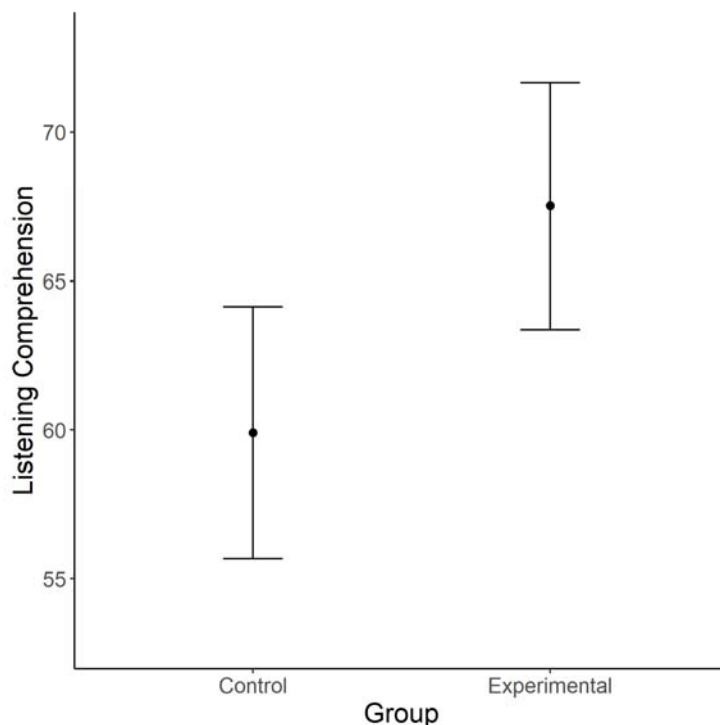


Lastly, Levene's test of equality of variances was non-significant,  $F(1, 37) = 1.56$ ,  $p = .219$ , implying that the assumption of equal variances between groups had been met. The main effect of group was statistically significant,  $F(1, 36) = 6.80$ ,  $p = .013$ ,  $\eta_p^2 = .159$ , with the covariate-adjusted post-hoc test showing that post-intervention listening comprehension was higher in the experimental group than the control group, and that this was a large effect. Figure 10 displays the post-intervention listening comprehension scores after being adjusted for pre-intervention listening comprehension scores. Specifically, the plot shows the estimated marginal means of the post-intervention

listening comprehension scores for each group, when the pre-intervention score was set to the mean score of all participants ( $M = 60.08$ ).

**Figure 10**

*Covariate-Adjusted Means and 95% Confidence Intervals of the Post-Intervention Listening Comprehension Scores for the Control and Experimental Groups*



Based on the pretest and post-test listening comprehension test results above, the intervention seems to have influenced the students' listening comprehension performance. The results suggest that teaching and learning vocabulary in lexical chunks rather than in single words positively impact students' listening comprehension performance. The difference between the pretest and post-test listening comprehension scores, which was large and statistically significant, affirmatively answered the question as to whether teaching Arabic vocabulary in multiword chunks and phrases affects the listening comprehension competence of Arabic Basic Course students. In other words,

the students in the experimental group demonstrated greater gains in their listening comprehension scores. Because the results derive from just one located study, one would seek to limit the extent to which these results could be generalized. However, the researcher feels that these results offer exciting insights into using the lexical approach in teaching and learning vocabulary in listening comprehension classes. This outcome can inform the teaching of lexical chunks. Considering this study, it appears as though Lewis's approach produced improved performance under the test conditions.

### **Research Question Two:**

Is there a relationship between the Arabic Basic Course students' auditory knowledge of Arabic words and that of Arabic phrases and these students' listening comprehension as measured by Immediate Recall Protocol-based listening comprehension tests?

In order to determine the association between participants' auditory knowledge of words and phrases and their comprehension of Arabic listening passages, Pearson correlations were conducted between the single-word score and listening comprehension score at pre-intervention, and single-word score, multi-word score, and listening comprehension score at post-intervention. Based on Cohen's (1988) guidelines, values of  $r = .10$ ,  $.30$ , and  $.50$  were used as cut-offs for small, medium, and large effects, respectively.

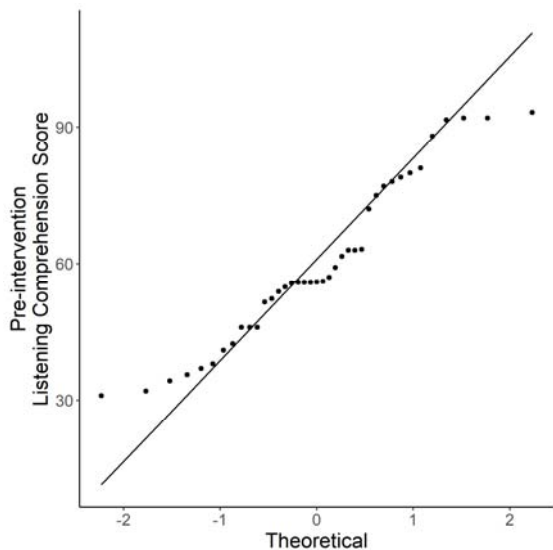
Normality for each variable was assessed with Shapiro-Wilk tests and inspection of Q-Q plots. All Shapiro-Wilk tests were non-significant (pre-intervention listening comprehension  $p = .057$ ; pre-intervention single word  $p = .219$ ; post-intervention listening comprehension  $p = .171$ ; post-intervention single word  $p = .105$ ; post-



intervention multi word  $p = .080$ ). Additionally, the Q-Q plots (Figures 11-15) did not meaningfully deviate from normal, so normality was assumed.

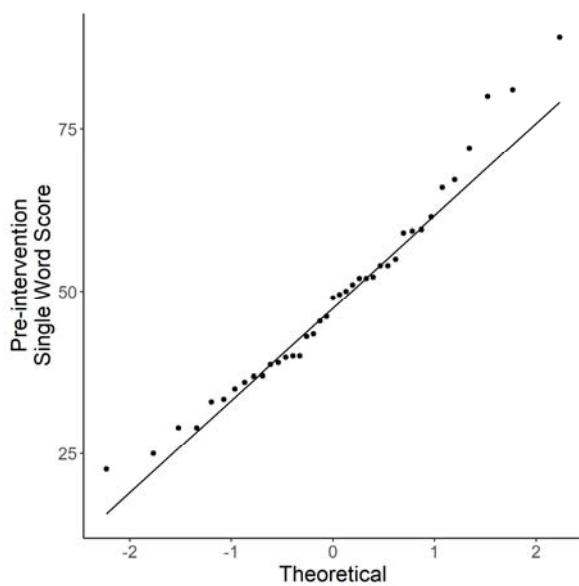
**Figure 11**

*Q-Q plot of listening comprehension score at pre-intervention*



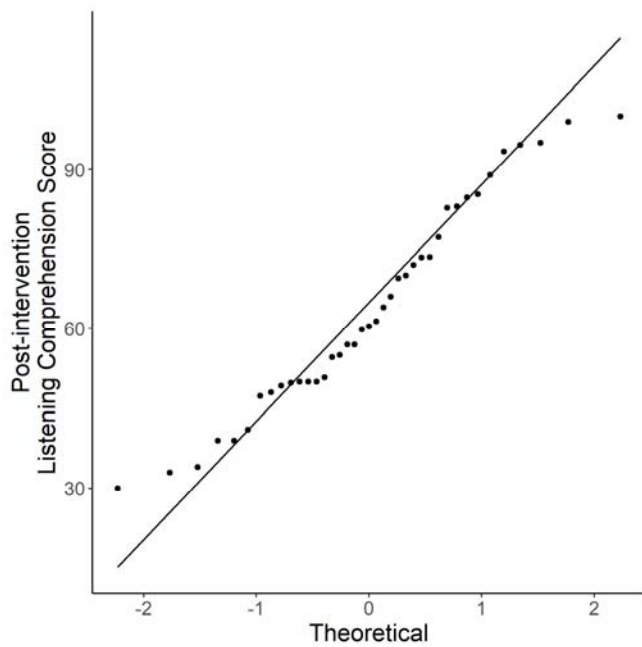
**Figure 12**

*Q-Q plot of single word score at pre-intervention*

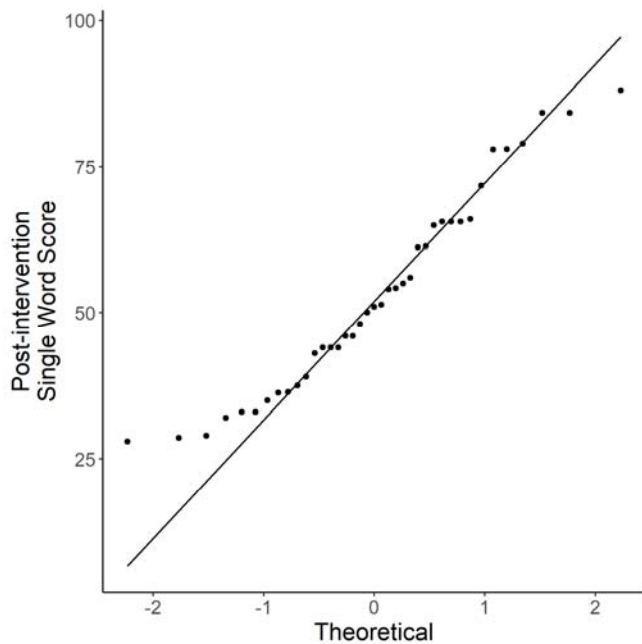


**Figure 13**

*Q-Q plot of listening comprehension score at post-intervention*

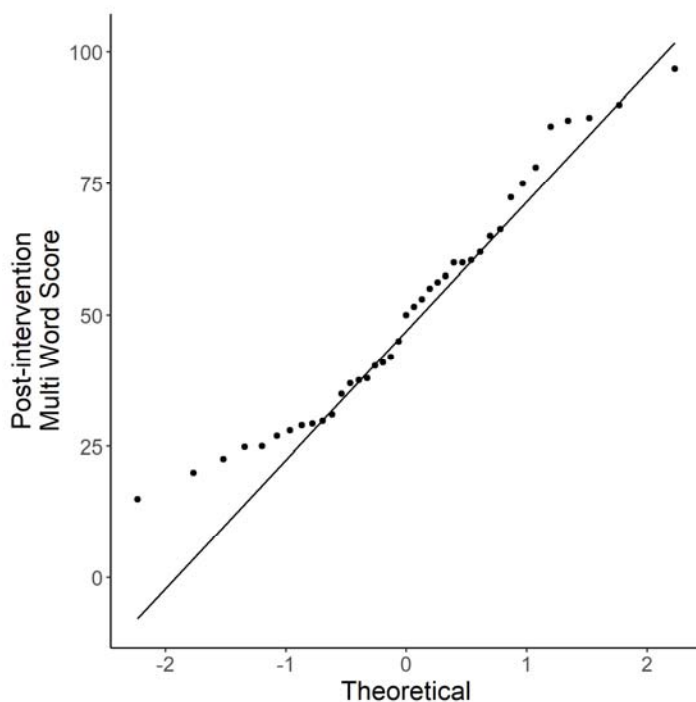
**Figure 14**

*Q-Q plot of single word score at post-intervention*



**Figure 15**

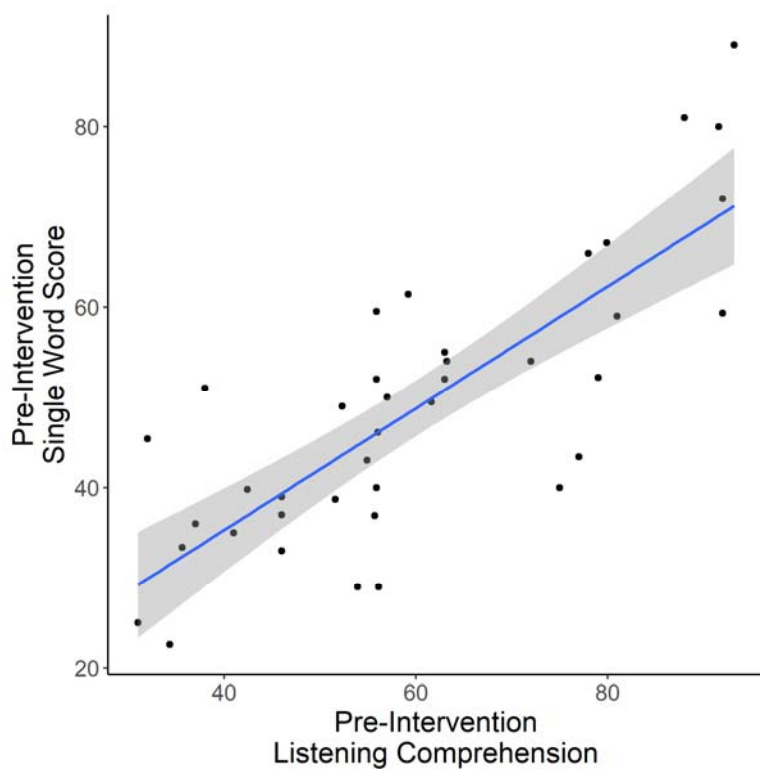
*Q-Q plot of multi word score at post-intervention*



The correlation between single-word score and listening comprehension was very high at both pre- ( $r = .79, p < .001$ ) and post-intervention ( $r = .80, p < .001$ ). The post-intervention multi-word score and listening comprehension score also correlated very highly ( $r = .84, p < .001$ ). The large effect sizes observed in the current study imply a high degree of common variance to each pair of variables. Specifically, the single word score and listening comprehension scores had 62.41% and 64% shared variance at pre- and post-intervention, respectively, and the post-intervention multi word and listening comprehension share 70.56% of their variance. Scatter plots for these three correlations are displayed in Figures 16-18.

**Figure 16**

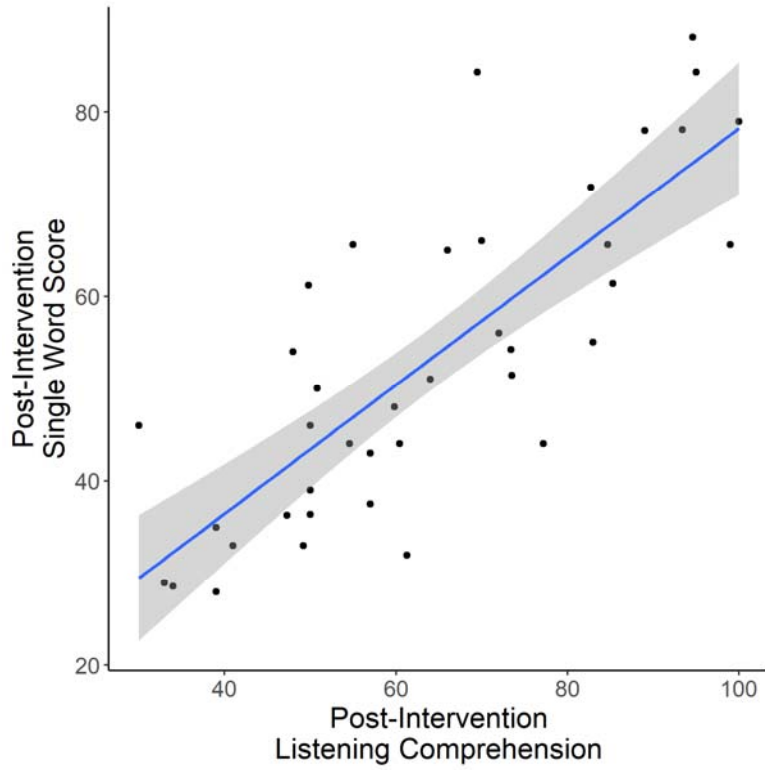
*Scatter plot between pre-intervention single word score and pre-intervention listening comprehension*



*Note.* Blue lines represent line of best fit, and surrounding shaded regions represent 95% confidence intervals.

**Figure 17**

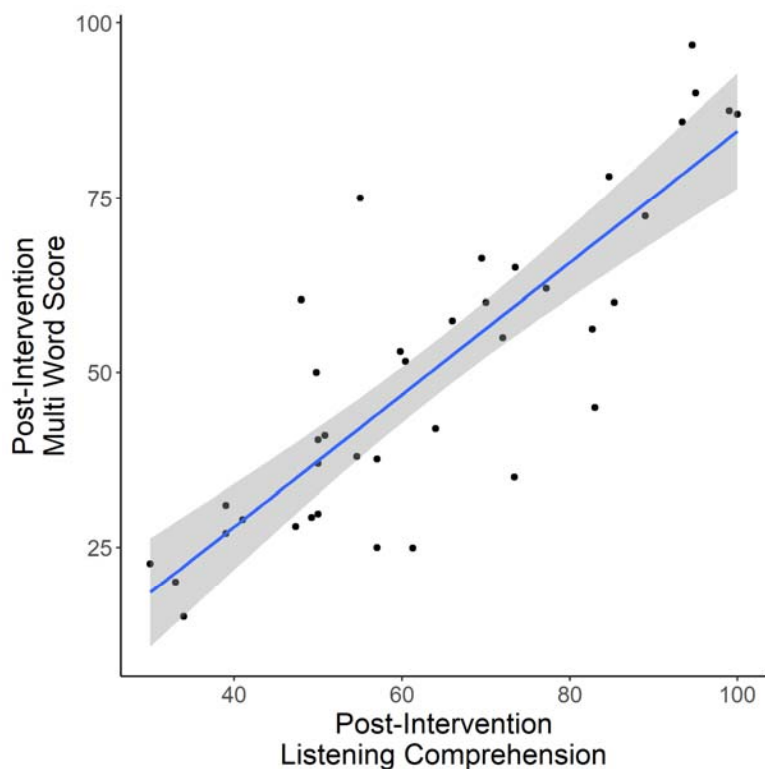
*Scatter plot between post-intervention single word score and post-intervention listening comprehension*



*Note.* Blue lines represent line of best fit, and surrounding shaded regions represent 95% confidence intervals.

**Figure 18**

*Scatter plot between post-intervention multi word score and post-intervention listening comprehension*



*Note.* Blue lines represent line of best fit, and surrounding shaded regions represent 95% confidence intervals.

Overall, the results of the analyses indicated that both students' knowledge of words and knowledge of phrases had a very strong positive relationship to listening comprehension.

### **Research Question Three:**

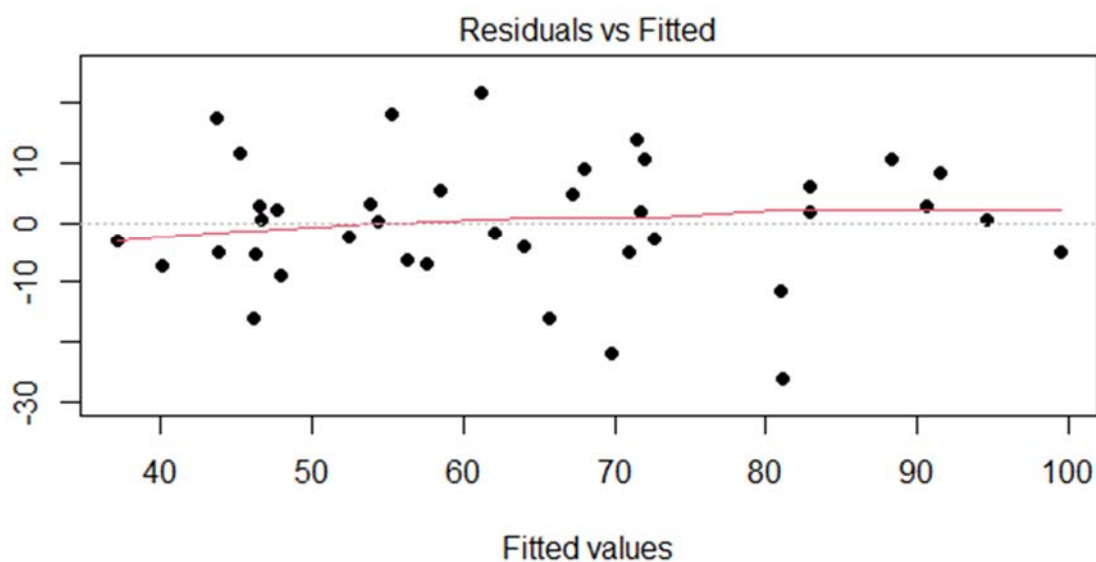
What is the relative contribution of the Arabic Basic Course students' auditory knowledge of Arabic words and that of phrases to their Arabic listening comprehension?

To determine the relative contribution of the participants' auditory knowledge of Arabic words and that of phrases to their Arabic listening comprehension, a multiple regression was conducted with post-intervention multi-word auditory test score and post-intervention single word auditory test score predicting post-intervention listening comprehension.

Examination of the residual scatter plot (Figure 19) provides a test of assumptions of normality, linearity, and homoscedasticity between predicted DV scores and errors of prediction. The scatter plot is symmetrically and evenly distributed around zero on the y-axis, implying normality, linearity, and homoscedasticity.

**Figure 19**

*Scatter plot of regression residuals and predicted values*

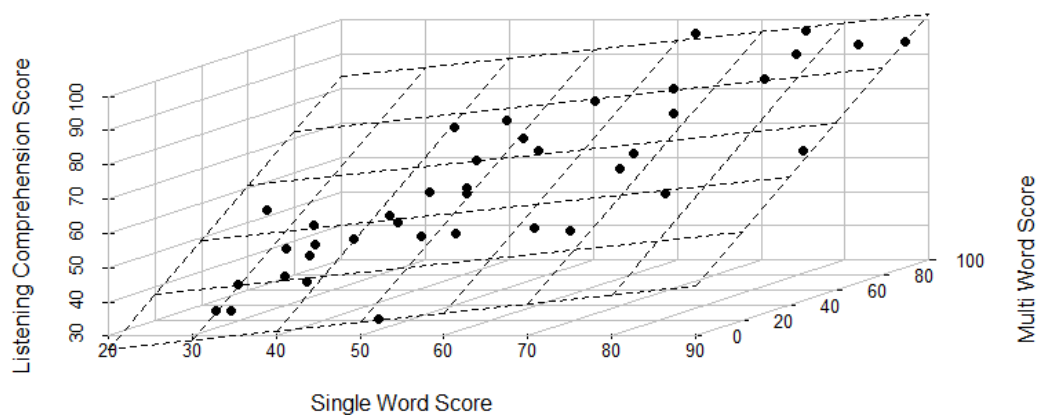


The model was statistically significant,  $F(2, 36) = 46.74, p < .001$ , and the two predictors explained most of the variance ( $R^2 = .722$ ; adjusted  $R^2 = .706$ ). It was found

that multi-word score positively predicted listening comprehension ( $B = 0.571$ ,  $SE = 0.173$ ,  $\beta = .640$ ,  $p = .002$ ), but single-word score was not a significant predictor ( $B = 0.262$ ,  $SE = 0.222$ ,  $\beta = .228$ ,  $p = .247$ ). However, it should be noted that the two predictor variables were highly correlated ( $r = .891$ ) and as such displayed some multicollinearity ( $VIF = 4.86$ ). Therefore, it is possible that single-word score may also be predictive of listening comprehension, albeit not in a model that also has multi-word score as a predictor as well. As to the predicting power of listening comprehension, knowledge of phrases was slightly more significant than knowledge of words, as measured by the listening recall test. Figure 20 shows the 3-D scatter plot and regression plane of the multiple regression, which shows a slope between the listening comprehension and multi word planes, but not between the listening comprehension and single word planes.

**Figure 20**

*3-D scatter plot and regression plane showing listening comprehension, single word score, and multi word score*





## Summary

This study aimed to investigate how teaching and learning Arabic vocabulary items in multiword form (i.e., chunks and phrases), rather than in single form (i.e., one word at a time), affects learners' ability to comprehend Arabic listening passages and to examine the relationship between students' auditory knowledge of words, and that of phrases and listening comprehension. Data sources included three types of tests: the Arabic listening comprehension test, the single-word auditory knowledge test, and the multiword auditory knowledge test. The sample consists of 39 students (experimental group=20, control group=19). The study was separated into a quasi-experimental pretest-posttest portion (Phase 1) and a quantitative nonexperimental portion (Phases 2 and 3). The first purpose was to assess the effect of learning Arabic vocabulary in multiword form (experimental group), rather than in single form (control group), on the listening comprehension, while the second two purposes were used to examine the relationship between auditory knowledge and listening comprehension and how much of the listening comprehension is explained by auditory knowledge.

The results showed that post-intervention listening comprehension was significantly higher in the experimental group. This study has implications for the fields of second language acquisition, listening comprehension, language research, and teaching methods. A discussion of the results of the present study, recommendations for future research, suggested implications for practice, and conclusions drawn from the study will be presented in Chapter V.

## CHAPTER V

### DISCUSSION, RECOMMENDATIONS, IMPLICATIONS, AND CONCLUSION

#### Overview

This chapter comprises five sections. In the first section, the researcher provides a summary of the study. The second section includes a discussion of the findings along with a comparison between them and findings of previous similar research studies. The fourth section offers recommendations for future research. The fifth section suggests implications for practice, whereas the final section drives conclusions from the study.

#### Summary of the Study

This study was conducted in response to the research problem, background, and need identified in Chapter I of this **work**. The three purposes of the study were as follows: to investigate how teaching Arabic vocabulary items in a multiword form, such as lexical chunks and phrases, rather than in single form (i.e., one word at a time) affects learners' ability to comprehend Arabic listening passages; to examine the relationship between students' auditory knowledge of words and phrases and these students' listening comprehension; and to explore the relative contribution of the learners' auditory knowledge of words and their auditory knowledge of phrases to overall listening comprehension. The results from the statistical analysis showed that post-intervention listening comprehension was significantly higher in the experimental group. The results also showed that the correlation was significant and high between single-word auditory knowledge score and listening comprehension score at both pre- and post-intervention, as well as between the post-intervention multi-word auditory knowledge score and listening comprehension score. The regression analysis showed that the multi-word auditory

knowledge score positively predicted listening comprehension, but the single-word auditory knowledge score was not a significant predictor. The whole model was statistically significant.

### **Discussion**

This section presents the discussion of the research findings. Then the researcher relates the current findings to the results of previous research on the effects of teaching vocabulary in lexical chunks on the learners' ability to comprehend listening passages to determine if they are consistent.

For the first portion of the current study, the researcher examined the effect of teaching Arabic vocabulary by adopting the Lexical Approach (Lewis, 1993) of teaching vocabulary in natural multiword chunks and phrases as the independent variable on the participants' listening comprehension of eight Arabic listening passages as the dependent variable. Results of data analysis for the quasi-experimental portion of the study showed that post-intervention listening comprehension was higher in the experimental group than the control group. Thus, the findings showed that teaching and learning vocabulary in multiword chunks and phrases was associated with improved students' listening comprehension performance on average, implying that this approach was effective in improving students' performance in the listening skill. However, the researcher would seek to limit the extent of generalizing these results because they derive from just one located study. The researcher also acknowledges that the new instruction method of multiword chunks and phrases in the current study may have generated a high level of enthusiasm and interest among the participants in the experimental group and that this enthusiasm may have partly contributed to these students' significant gain in the listening

comprehension test scores. Because lexis comprise sequences of words that function as individual units that have meanings different from single words (i.e., lexical chunk), however, the researcher feels that these results offer exciting insights into using the lexical approach in teaching and learning vocabulary pedagogy. Willis (1990) that promotes the usage of authentic audio materials and a task-based methodology as well as an analysis of samples from the corpus. Moreover, Nattinger and DeCarrico (1992), stress the practical roles of many lexical chunks and viewed them as pedagogically applicable, especially in the initial phases of language development where L2 learners are yet to become creative in their usage of the L2. It appears that the corpus-driven language description that Sinclair (1991) offered has affected L2 syllabuses in such a way that their emphasis began to shift from grammar-based instruction to a greater focus on lexis. Additionally, recent studies (Boers et al., 2006; Hsu & Chiu, 2008; Keshavarz & Salimi, 2007; Stengers et al., 2011) show that L2 learners' knowledge of multiword vocabulary is significantly correlated with these learners' proficiency scores. Moreover, Martinez and Murphy (2011) demonstrate that knowledge of numerous idiomatic expressions is essential for adequate comprehension. Because listening is a dynamic and complex process that involves many variables and demands memory and attention, several researchers have attempted to identify crucial variables that contribute to successful L2 listening comprehension (Kim, 2008; Mecartty, 2000; Nation, 2006; Staehr, 2009; Vandergrift, 2007;). In native speaker communication, two proposed functions have been attributed to lexical chunks, a psycholinguistic one and a sociolinguistic one. Of interest to this discussion is the first function, which relates to the concept of holistic recall is associated with language processing efficiencies. Pawley and

Syder (1983, p. 191) observe that the employment of lexical chunks accounts for the speakers' ability to commonly produce fluent multi-clause utterances, even though their capacities for encoding novel speech in advance, or while speaking, appear to be severely limited. Newell (1990) clarifies how a chunk is a unit of memory organization, formed by combining a set of already created elements in memory and bonding them together into a larger lexical unit. Thus, chunking implies the ability to develop such structures leading to a hierarchical organization of memory. If the use of fixed contiguous chunks is presumed to afford the best processing advantages, then the use of partially fixed sequences requiring lexical insertions or morphosyntactic adjustments should still be more efficient than formulating utterances entirely from scratch (Wray, 2000, p. 474). The suggestion that chunks facilitate comprehension is supported by Wray and Namba (2003) who state that favoring lexical chunks enables the reduction of processing load of the listener (the larger the lexical units, the fewer the operations needed to interpret the message) (p. 26). Accordingly, the benefit of lexical chunks is that they can be retrieved from memory as prefabricated units, thus bypassing the need to assemble the sequences word by word. Wray (2002) offered a model inferring that lexical chunks are not created word by word but as one whole chunk. According to this model, one potential processing benefit to the learners of lexical chunks is that the strong associations between specific chunks' component words could help the learner who encounters them frequently enough to recall a whole chunk by recalling a part of it. Based on the above, the outcome of the current study's quasi-experimental portion can inform the teaching of lexical chunks. Considering the current study, it appears that the lexical approach is strongly associated with improved listening comprehension performance under the test conditions.

It is noteworthy that the current study focused on learners' auditory rather than their visual knowledge of words and phrases because, unlike reading, listening occurs in real-time, and the listener does not have the option of revising the information presented in the audio input or controlling the speed of such input (Vandergrift & Baker, 2015). As shown by the findings, L2 learners' vocabulary knowledge is a strong indicator of listening comprehension. Although L2 learners typically acquire L2 words through their visual sense (i.e., viewing vocabulary lists). However, auditory vocabulary knowledge seems more crucial than visual knowledge for listening comprehension because the learners in listening interpret spoken input rather than written text. In the non-experimental portion of the current study, the researcher presumed that learners who know larger vocabulary units (i.e., lexical chunks and phrases) would have a better listening comprehension than those who know only smaller vocabulary units (i.e., words). The findings showed that knowledge of lexical chunks and phrases was a stronger predictor of listening comprehension than knowledge of single words. Boers and Lindstromberg (2009) suggest that L2 learners process some multiword chunks as unanalyzed units. Therefore, these learners process lexical chunks and phrases significantly faster than the non-formulaic control strings (Conklin & Schmitt, 2008; Jiang & Nekrasova, 2007).

Hence, L2 listeners who comprehend input in chunks and phrases spend less time and effort processing the spoken input than those who comprehend input word by word. The latter would have to connect the single words to process the meaning of the message. Recognizing that vocabulary is the core element of L2 learning (Coady & Huckin, 1997; Nation, 2001; Read, 2000; Teng, 2016), learners spend considerable time exerting

remarkable effort in learning vocabulary items. Adult students of Arabic at DLIFLC are no exception; they devote a good portion of their course using flashcards and other learning applications to memorize vocabulary lists consisting of single words. Findings from the non-experimental part of the current study show that teaching and learning vocabulary items in the form of lexical chunks and phrases are crucial for boosting their understanding of the content of the listening passages. In other words, comprehending multiword chunks at once rather than decoding the input word by word is much faster and more efficient. Processing spoken input word by word would cause the students to miss a considerable part of the speech while connecting individual words and figuring out their meaning. Vandergrift (2003) noted that highly skilled listeners processed larger lexical chunks and guessed the meaning of unknown words from the context using a top-down approach but processed single words when processing larger lexical chunks failed. Meanwhile, less skilled listeners were inclined to segment what they heard on a word-by-word basis, using a bottom-up approach (p. 467). Therefore, shifting the focus to teaching and learning vocabulary in lexical chunks and phrases rather than single words allows the students to comprehend L2 audio input with enhanced speed and efficiency. Although the non-experimental portion of the current study has shown some valuable findings, the researcher acknowledges that the current study's sample size was too small to generalize these findings. A larger sample would have offered stronger insight into the effect of L2 learners' knowledge of multiword chunks on listening comprehension compared to the effect of the learners' knowledge of single words. Additionally, the researcher assumes that studies exploring the abovementioned effect among students of languages other than Arabic may result in different findings.

### **Current Findings and Previous Studies**

The current study examined the effect of teaching and learning vocabulary in lexical chunks on the listening comprehension of adult Arabic learners. Some of the findings in this study supported those of previous studies in the following ways:

First, the quantitative analysis of data from the quasi-experimental portion of the current study suggested that students' listening comprehension performance had improved as a result of the lexical approach of teaching vocabulary. These results were consistent with the findings in the relevant literature. For example, in an empirical study that used the theory of chunks and information processing mode as theoretical frameworks, Tang (2013) aimed to explore the impact of mastering chunks in second language acquisition and the effectiveness of the lexical approach in L2 listening. The results of the experiment showed that the number of chunks mastered by the language learners closely correlated with those learners' listening scores. It also concluded that the lexical approach can effectively enhance students' listening competency and that the learners should, therefore, focus their attention on the usage and functions of chunks and master chunks by adopting appropriate chunk acquisition strategies. Tang (2013) adopted a "lexical method" to focus on the input of lexical chunks and a communicative approach in teaching the experimental group. This method entailed teaching and training students to recognize and notice chunks encountered in the listening discourse. When the students became able to identify lexical chunks, they received guidance raising their awareness of using chunks and learned to base their listening comprehension on chunks in context. Tang claimed that recognizing and mastering chunks of listening discourse could decrease the students' memory burdens and enable them to comprehend the



listening materials naturally. The first portion of the current study and Tang (2013) shared the objective of exploring the effectiveness of learning vocabulary in chunks on improving the learners' listening comprehension. The findings from the quasi-experimental portion of the current study and Tang (2013) both support the notion that the lexical approach showed association with improvement in students' listening comprehension performance. Nonetheless, the participants in Tang (2013) were confined to students who studied English for specialty purposes whereas participants in the current study were students majoring in language studies. Moreover, Tang (2013) trained participants in the experimental group to recognize and notice chunks encountered in the listening discourse, whereas the current study provided participants with auditory reference in the form of audio recorded chunks for them to study individually before receiving instruction of the listening passages in which those chunks were used. Similarly, Ai (2015) investigated whether the chunking approach could improve adult language learners' listening comprehension. The participants in the experimental group of this study received a teaching treatment that focused on lexical chunks through three systematic steps: pre-listening activities, while-listening activities, and post-listening activities. The posttest was a listening comprehension test administered to participants. Its results suggested that lexical chunks played a significant role in listening comprehension and that the memorization of phrases can improve the listening comprehension of English learners. The findings from quasi-experimental portion of the current study were consistent with findings from the Ai (2015), although the participants in Ai (2015) were students who studied the target language for specialty-purposes, unlike the participants in the current study who were students majoring in Arabic. Moreover,

the treatment in Ai (2015) was mainly concerned with raising the participants' awareness of lexical chunks encountered in the listening discourse and training them to recognize and focus on studying those chunks, whereas the treatment in the current study had the participants study and acquire the audio recorded chunks before receiving instruction on the listening passage that contained them. Moreover, a quasi-experimental study by Pan et al. (n.d.) investigated the effectiveness of two different levels of 18-week vocabulary support teaching intervention on enhancing students' listening comprehension ability. The first level was an expanded vocabulary instruction support that focused on multiword vocabulary units. In contrast, the second level was unexpanded vocabulary instruction support with focusing on single-word vocabulary units only. Among other main findings, Pan et al. (n.d.) showed that the students who received multiword vocabulary instruction for 18 weeks had a significant gain in their listening comprehension test. The findings from the quasi-experimental portion of the current study supported those of Pan et al. (n.d.).

Second, the quantitative analysis of data from the non-experimental portion of the current study provided insight into that the relationship between the Arabic Basic Course students' listening comprehension and their auditory knowledge of Arabic words and Arabic phrases. The findings showed a very high correlation between the students' auditory knowledge of single words and their listening comprehension at both pre and post-intervention. Likewise, the findings showed very high correlation between the students' post-intervention auditory knowledge of multi-word and their listening comprehension. Upon investigating the relative contribution of the Arabic Basic Course students' auditory knowledge of Arabic words and that of phrases to their Arabic

listening comprehension, multiple regression analysis indicated that the students' multi-word auditory knowledge positively predicted listening comprehension, but the single-word auditory knowledge was not a significant predictor. These findings are consistent with previous studies. For example, research findings from Bonk (2000) and Stæhr (2009) support a strong correlation between vocabulary knowledge and listening comprehension. Bonk (2000) studied the relationship between 59 L2 students' level of familiarity with the lexis in the listening texts and the students' gist comprehension. The study results showed that students who knew fewer than 75% of the lexical items of the input texts content could not achieve satisfactory comprehension scores, whereas all of those who knew more than 90% of the same attained good comprehension scores. In other words, the study found that 'acceptable comprehension levels were significantly associated with higher text-lexis familiarity' (Bonk, 2000, p. 14). Sinclair (1987), Nattinger (1988), Nattinger and DeCarrico (1992), Willis (1990), Lewis (1993, 1997a, 1997b) promote a vocabulary-acquisition approach in which the learners recognize, learn and apply patterns of language as meaningful lexical chunks or phrases and process them as whole units. Although there is a substantial number of studies suggesting that vocabulary knowledge is essential for success in reading comprehension in L2 education (e.g., Hu & Nation, 2000; Pigada & Schmitt, 2006; Shen, 2008;), a few studies (e.g., Bonk, 2000; Stæhr, 2009) address on the importance of vocabulary knowledge in listening comprehension. Yet, the prior experience that an L2 learner applies to his or her effort to comprehend a listening passage plays a crucial role in interpreting the spoken input and, therefore, should be taken into account when evaluating an L2 learners' listening comprehension (Chiang & Dunkel, 1992; Long, 1990). Kelly (1991) contended

that ignorance of lexical items is the main impediment that hinders listening comprehension among L2 learners. She suggested that adult L2 learners focus their efforts on increasing their knowledge of the L2 vocabulary and grammar, and especially on their ability to recognize these words in their natural spoken input. The prior knowledge that an L2 listener brings to the task of comprehending a listening passage is a vital element in interpreting the material and should be considered in the evaluation of subjects' listening comprehension (Chiang & Dunkel, 1992; Long, 1990; Raphan, 1996). However, the task he used in Kelly's (1991) study does not truly represent how lexical ignorance can deter listening comprehension in real life because most of the daily listening tasks do not typically recycle text. Furthermore, it was unclear whether the dictations offered a concrete foundation for explanations of the level of comprehension among listeners. While the percentage of familiar lexis may not accurately predict the level of comprehension, it may, however, determine a statistical basement effect for a good comprehension of a text. Specifically, it is likely that a learner who has a low enough percentage of familiar text-lexis would not be able to get the gist after one listening, regardless of whether he or she used effective listening strategies (Bonk, 2000). The lexical approach differentiates between vocabulary in its traditional understanding as a list of single words with fixed meanings and lexis that includes not only the individual words but also the word combinations that stored in the mental lexicons. Advocates of the lexical approach assert that language comprises meaningful chunks that produce continuous coherent text when they are combined, and that only a small number of spoken sentences are entirely original creations. The latter concept and its importance have been discussed in earlier research. For example, Richards and Rodgers (2001)

indicate that language acquisition literature had underlined the importance of formulaic, multi-word phrases as whole units. It is probably worthy of note here that in work earlier than Lewis (1993), these units appeared labeled by different terms. To cite a few, Keller (1979) refers to them as “gambits,” Pawley and Syder (1983) dub them as “lexicalized stems,” and Peters (1983) as “Speech Formulae,” whereas Nattinger and DeCarrico (1992) refer to them as “lexical phrases.”

To sum up, “Without grammar very little can be conveyed, but without vocabulary, nothing can be conveyed” (Wilkins, 1972, p. 111). Over the last few decades, researchers, such as Nation (2002) and Read (2000), have underlined the necessity of vocabulary in practical language learning and usage. According to the previous studies cited above, vocabulary is essential for L2 learners, regardless of their level of proficiency or their motive for learning or using the target language. These studies largely show that learning and teaching L2 vocabulary in assimilated lexical chunks is highly effective and that lexical chunks, such as collocations and phrases boost vocabulary retention. Additionally, the familiarity with collocations and lexical phrases is very advantageous to the learners’ overall language sub-skills of speaking and writing: Lexical chunks, hence, are important tools in one’s language production that make the language sound more native-like. The studies indicated in the above sections also establish that the lexical approach in teaching vocabulary generates important transformations to the language-learning theoretical and pedagogical approaches in such a way that the role of grammar in language teaching is no longer emphasized. These transformations challenge the traditional view of word boundaries and accentuate the language learners’ need to recognize and utilize patterns of lexis and collocation. In this

manner, the process of producing language is not regulated by syntactic rule; instead, it is the retrieval of larger phrasal chunks from memory.

It must be noted that the new instruction method of multiword chunks and phrases in the current study seems to have created a high level of enthusiasm and interest among the participants in the experimental group. The participants demonstrated utmost commitment to attending in a timely manner and on a regular basis and made sure to retain the visual and audio references provided to them (i.e., the vocabulary lists that the researcher provided in printed form as well as in voice-recorded audio) before attending the instructional sessions covering the listening passages to which the vocabulary lists belong. While documenting the vocabulary quizzes scores, the researcher observed these scores were very high, thus indicating the enthusiasm and motivation of the participants during the study. Therefore, the students' enthusiasm may have partly contributed to these students' significant gain in the listening comprehension test scores. Lastly, yet very importantly, the researcher choice of multiword vocabulary items provided for the students as auditory reference ahead of covering the listening passages focused not only on naturally existing collocations and phrases but also on assimilated vocabulary items bearing in mind that the pronunciation of words in connected speech often change from the way they are pronounced in isolation. To explain further, the researcher focused on raising the students' awareness of various features of spoken language, especially lexical chunks in which pronunciation of words differed from the way they appear in speech due to their being affected by assimilation. Hence, the researcher paid close attention to providing the students with examples of Arabic lexical chunks in which the assimilation results mimicked those present in English (e.g., the word "*tin*" being pronounced as "*tim*")

in the phrase “*tin barn*” (Crystal, 2003). Similarly, the researcher actively helped learners overcome challenges resulting from inherent difficulties created by continuous speech. For example, many students were not aware that word boundaries in connected speech tend to seem absent. As a result, they inadvertently found themselves facing an implicit myth, expecting pauses between spoken words, when realistically words in continuous speech do not sound the way they do in their single form (Cauldwell, 2018a). When word boundaries were hard to define, spoken word recognition became difficult for some students, leading them to misperceive their failure to understand as an outcome of their own poor listening skills rather than the inherent difficulties created by continuous speech. Finally, the researcher managed to help the students make a partial dissociation between the skills needed reading and those needed for listening through elaborated class discussions.

### **Recommendations for Future Research**

To examine the effect of teaching and learning vocabulary in lexical chunks on the adult L2 learners, recommendations for future research are presented below.

First, more empirical studies are needed to validate the findings from the current study. Given the recent research findings that support the usefulness of the lexical approach in language learning, it will be important to conduct a large-scale empirical study that directly examines the effects of teaching and learning vocabulary in lexical chunks and phrases versus single-word instruction on the listening comprehension of L2 learners. Nonetheless, the future study must have clear control of all variables to ensure that teaching and learning of vocabulary in lexical chunks and phrases is the only variable being examined. Furthermore, the 16 listening passages the researcher taught in this

study are somewhat narrow. In other words, the amount of overlap of lexis between texts of similar types and on similar participants could have been greater than that of a larger amount of highly varied passages. Consequently, it is not clear whether the significant positive effect of the intervention is limited to such small number of listening passages, where pre-taught and learned vocabulary had a better chance of being re-encountered. The recommended future study may, therefore, need to determine the effectiveness of the intervention on a larger number of varied listening passages.

Second, the researcher has a recommendation that relates to the duration of instruction. The current study lasted only six weeks, with the actual data collection taking an additional week due to the participants' military training commitments, which necessitated scheduling the testing events at times deemed convenient for minimizing the participants' distraction. The structure of the Arabic program at the research site and the nature of the students' occupations have imposed availability restrictions that made it barely possible to allow the students to dedicate enough time for participation beyond the seven weeks that the study took. Additionally, obtaining ethical and institutional approval was faster and less challenging than obtaining them for more extensive long-term research. Hence, the current study was a small short-term study with the apparent strength of enabling the researcher to address the research questions in a reasonably short time. Furthermore, it appeared prudent for the researcher to test the new hypothesis in a small number of participants. In other words, it simply made sense to avoid spending a long time and engaging too many participants when finding an association between the intervention and its potential effect on students' listening comprehension may or may not occur. Now that the current small study showed such an association, the researcher must



clarify that more extensive confirmatory research is needed. The researcher still believes that a research study that aims to examine the effect of an instructional intervention needs to expose the participants to such an intervention for a long time. Therefore, he assumes that the participating students in the current study would have probably been more likely to exhibit different performance in listening comprehension had they received the intervention throughout their Arabic course duration.

Third, to better understand the effect of the intervention at different stages of the research investigation, future research should consider mixed-method studies that employ tools for monitoring the improvement in students' listening comprehension performance. As the present study results indicated, although students who received the teaching intervention were at a similar proficiency level, different students performed at different rates in developing their listening comprehension skills and learning of vocabulary. Therefore, the researcher suggests using learner diaries and reflective journals as valuable tools for capturing individual students' experiences. Chen (2009) noted that students who used such were able to evaluate their approaches to oral input, their listening strategies, and how much of the listening passages they had understood following the completion of their listening tasks. Therefore, these tools can serve two purposes: allowing the teacher to monitor students' performance and encouraging them to reflect on their learning problems and their listening strategies during the listening tasks.

Fourth, future research should consider maintaining a setting where the same instructor teaches the control and experimental groups following the same class schedule, just as happened in the current study. In other words, one should not overlook the instructors' influence on students' listening skills throughout the duration of the study.

Maintaining the class schedules for the two groups can contribute to mitigating the effect on the outcome of the teaching intervention. Thus, future research should consider minimizing unnecessary variables in the lexical approach instruction intervention.

Fifth, one crucial step in the direction of contributing to and expanding on the existing body of knowledge in the area of teaching vocabulary in lexical chunks and phrases would be a study that examines L2 learners' beliefs about their perspectives on learning vocabulary in lexical chunks versus single words. Future research could yield accurate information about the different techniques of vocabulary acquisition and retention. Gauging the extent to which each of these techniques influences the development of the target language listening comprehension can guide the development of better models and applications for pragmatic language learning and teaching.

Sixth, future research could also benefit from exploring L2 teachers' awareness and understanding of the roles of teaching vocabulary in lexical chunks and phrases. Moudraia (2001) contends that creating essential methodological changes in the language classroom does not happen by simply implementing a lexical approach, but by a change in the teacher's mindset through adopting language activities aimed at naturally occurring language and at raising learners' awareness of the lexical nature of language.

Finally, there is a need to look beyond a single snapshot of multiple learners' listening comprehension of chunks and to consider instead individual differences in recalling and comprehending specific examples over time. This section thus ends by encouraging further investigation into the factors that underline differences among instructed adult learners in their ability to acquire lexical chunks and phrases and the prolonged study of those aspects of input that might assist in this process.

### **Implications for Practice**

As discussed in the literature review of the current study, early research had largely overlooked formulaic language in favor of models of language that focus on the rule-governed, systematic nature of language and its use. However, more recent research has shown growing evidence that multiword lexical chunks segmented from input and stored as wholes in long-term memory are integral to first- and second-language acquisition. Lexical chunks have accordingly appeared to be fundamental to fluent language production because they allow language production to occur while bypassing controlled processing and the constraints of short-term memory capacity.

This section highlights the implications of the lexical approach for classroom teaching, emphasizing attention to *input* and promoting *interaction* to facilitate the acquisition of a repertoire of lexical chunks.

The literature establishes that the lexical approach in teaching vocabulary stipulates important changes to the language-learning pedagogical practice in such a way that the role of grammar in language teaching is no longer the central interest. These changes challenge the traditional view of word boundaries and emphasize the language learners' need to recognize and utilize patterns of lexis and collocation. Thus, the retrieval of larger phrasal chunks from memory should govern the process of producing language instead of the syntactic rules. Research on the lexical approach in language acquisition and production has rapidly grown in the recent decades. Several researchers have discussed the issue of how to incorporate lexical chunks into classroom pedagogy. For example, Nattinger and DeCarrico (1992) dedicate a substantial portion of their book to classroom employment of knowledge of the formulaic language, while Lewis (1997)

and Willis (1990) promote lexis-based syllabuses and methodologies, with emphasis on lexical chunks (phrases, collocations, and other types of formulaic sequences). However, the real pedagogical challenge lies in integrating knowledge about lexical chunks with effective language teaching methodology.

Therefore, the first step would be paying attention to formulaic language when dealing with *input* in the classroom. If lexical chunks are a crucial element of natural language production, it would seem sensible that increased exposure to natural, native-like oral input would be an essential component of a pedagogy intended to stimulate their acquisition. Extended classroom and second-language acquisition research (e.g., Chaudron, 2004) has shown the value of input and interaction for the development of L2 competence. The evidence that lexical chunks are of great importance for developing L2 fluency leads to recognizing that exposure to authentic native-like input is crucial to acquisition of these chunks. Because it is necessary to retain lexical chunks in long-term memory as single units, learners must observe and extensively practice them in use in real-time, natural communication. The link between the use of lexical chunks and practical competence supports the notion that extensive exposure to natural input is important. Hence, frequent exposure to such input over time would help learners achieve an increased level of comfort with L2 natural expression. Suitably, L2 teacher may ask the learners to analyze how the use of formulas achieves coherence of the constituents within a sentence (Nattinger and DeCarrico, 1992). Accordingly, in a classroom activity that consists of exposure to large amounts of input, with attention paid to used lexical chunks, learners can note how speakers produce speech through phonetic coherence in lexical chunks. The teacher can also make the learners aware of how particular chunks

help express and achieve pragmatic ends. To facilitate awareness of the nature and role of lexical chunks, the teacher can use two types of helpful classroom activities known as *Shadowing* and *Dictogloss*. Shadowing is a teaching learning technique introduced (but not invented) by Alexander Argüelles (Sabatini, 2000). It is an activity that involves learners in mimicking how a native speaker performs by requiring them to read lexical chunks and phrases aloud from a transcript while listening to these chunks in natural native fluency. The students repeat the shadowing activity until they become sure that they have mastered the phrases with keen attention to word juncture and intonation contours and hesitation patterns and shifts in speed. Later, the students can perform their own reading aloud and record it for teacher feedback. By designing shadowing activities that include texts rich in lexical chunks and phrases relevant to learner needs, the teacher could help raise awareness of lexical chunks and phrases in real-time speech. On the other hand, dictogloss, originally introduced by Ruth Wajuryb (1990), is another valuable classroom activity for spoken (or written) language. In this classroom dictation activity, learners listen to a short oral input twice at natural speed, pausing several seconds between sentences or phrases. Teachers then encourage students to jot down content words and whatever other parts of the input they can retain. After that, students work in teams using their grammatical and lexical knowledge to reconstruct the entire oral input with the teacher's assistance. The teacher then gives the student the original text of the input to compare it with their reconstruction. Thus, this type of activity can allow the learners to recognize lexical chunks. In addition, the teacher can also help the students retain these chunks by focusing on their constituent parts and seeing how they fit into the flow of discourse.

Moreover, interaction seems to be crucial for facilitating the acquisition of lexical chunks. In this respect, classroom activities should be structured so that an ample amount of negotiation is required. Interactions in which lexical chunks play a significant part in enabling the participants to accomplish communicative goals together allows students to help each other navigate their way through some intricate and unfamiliar linguistic and practical grounds.

Interactions also allow students to assist each other in finding the suitable sequences that match their needs. Pica (1994) shows a benefit of information gap in student-to-student interaction for fine tuning of output, which is perhaps relevant to the acquisition and appropriate use of lexical chunks and formulaic sequences. Other relevant research (e.g., Bygate, 1988) encourages classroom small-group interactive tasks to facilitate learners' usage of lexical chunks and formulaic sequences. Bygate noticed that the learners worked together and implicitly helped each other use chunks to efficiently move the conversations ahead by analyzing learner language production in small-group communication. He found a substantial production and monitoring of language at the level of lexical fragments and that one can manage conversation through their use. Additionally, he found that student-to-student interaction encourages flexibility in choosing efficient syntactic units and creates communication means. He also concluded that the use of lexical chunks and subclausal units facilitates the smooth progression of discourse to answer the needs imposed during the actual natural production of speech. Consequently, it seems feasible that small-group and pair student-to-student interaction can facilitate ease and flexibility in using formulas in natural speech. Information-gap classroom activities in which learners master information in

small groups and then regroup to share it with members of other groups are valuable means to encourage interaction in which learners can help each other use appropriate formulaic sequences. Moreover, repetition of lexical chunks in a spectrum of appropriate contexts is vital for ensuring their acquisition. Interaction is one of the best ways for learners to experience the repetition required for the lexical chunks to become accepted in the vocabulary of the language and accessible through intuitive ways without the need for formulation or construction. One distinct type of classroom task that can include such repetition is the mingle jigsaw. In this task, the teacher assigns the students pieces of text that include lexical chunks related to other tasks on which they are working, such as reading or listening, or in preparation for speaking. Then the teacher asks each learner to recall their piece of text as a whole and walk in the class to share it with other students, one by one, while remembering the other students' pieces. In principle, the students should start the activity without writing down notes until the pieces have become clear in the listener's mind. For example, when student A has committed a text to memory and approaches student B, who has committed a different text to memory, each student repeats his or her text to the other until each can easily recall the other's text. Then they return to their seats and record what they remember, then move on to repeat the process with each other in the class. Toward the end of the task, students can piece the entire text together in written form. This type of task consolidates the repetition needed for automatization and inspires students to chunk words together in order to communicate and retain the pieces of text. Texts with numerous lexical chunks can be handled in this manner to allow the students to exercise chunking and to experience how the interaction helps effective communication.

Another important method to assist learners in attaining knowledge of lexical chunks is interaction with native speakers because it allows learners to encounter and examine how chunks are assembled in discourse and provide them with the opportunity to test the chunks and phrases they choose and to receive feedback from the native speakers as to their efficacy and suitability.

It is also worth mentioning that the nature of specific classroom tasks affects the students' use of cohesive devices and types of word choices. Therefore, students' performance may differ considerably, depending on the functions, topics, and contexts involved. Thus, it is plausible that this difference is at least partially attributable to the need to use different types of lexical chunks. Hence, it seems that teachers must be aware of the lexical chunks relevant to specific genres, topics, and task types. If this is true, then guidance in choosing appropriate lexical chunks should be a fundamental step in L2 teaching to enable the learners to express ideas and nuances.

To sum up, because the lexical approach focuses on the integration of words in chunks to help in facilitating L2 learners to comprehend listening materials integrally, L2 pedagogy should move away from traditional pedagogy that focuses primarily on grammatical rules and lists of single vocabulary words. The lessons drawn from relevant literature indicate that L2 learners can better understand how specific occurrence of words in lexical combinations reveals their meanings in spoken input as well as written input. However, the adoption of a lexical approach in language teaching classrooms requires more than changes in basic methodologies, as it entails a mindset change on behalf of the language learners and their teachers. To harvest the advantages of the lexical approach, teachers and learners need to become aware of the pervasiveness of



lexical chunks and their potential in promoting fluency. Granger & Meunier (2008) point out that teachers need to develop the ability to help learners gain such an awareness (p. 248). In addition to the implications indicated in the above paragraphs, recent related studies (e.g., Dellar & Walkley, 2016; Lindstromberg & Boers, 2008; Selivan, 2018) offer practical ideas that can help teachers develop this ability. To put these new ideas into practice, second language educators must develop a design and foundation for lexically based language teaching and adopt lexical syllabi along with matching instructional methodologies that focus on language usage. Moreover, the designed syllabi need to identify the lexical items and their meanings and to place them in common phrases suitable for their usage while demonstrating the natural environment and situations in which they can be used. In other words, the new syllabi should not only focus on structures but also illustrates how the structures are used in real and natural language. Should the right mindset occur, techniques for the language teaching activities will be geared towards naturally occurring language and towards raising the learners' awareness of, and interest in the lexical versus the syntactic nature of the language. Furthermore, language teachers need to be more systematic and more rigorous at reviewing the teaching materials, selecting and sequencing chunks, considering the chunks' frequency, use, stability, generalizability, and—above all—teachability.

Finally, although lexical chunks are vital in improving learners' comprehension, their role in language learning is yet to be fully substantiated (Granger & Meunier, 2008, p. 255). Therefore, L2 teachers need to balance their focus between lexical chunks and other components of the L2 curriculum; they have to perform a delicate balancing act in which they expose learners to a wide spectrum of lexical chunks while simultaneously

ensuring that they do not overload the learners with these chunks or overlook key concepts and valuable rules of grammar.

### **Conclusions**

As a result of the current study, the following conclusions can be drawn regarding the effects of teaching vocabulary in lexical chunks on the listening comprehension of adult learners of Arabic:

First, this study concludes that teaching vocabulary in lexical chunks could help improve listening comprehension performance of the Arabic Basic Course learners. The quantitative analysis of data collected from the quasi-experimental portion of this study showed that the main effect of group was statistically significant, ( $F(1,36)=6.80, p=.013$ ), with the covariate-adjusted post-hoc test showing that post-intervention listening comprehension was higher in the experimental group than the control group. Thus, the findings from the experimental portion of the study suggested that teaching vocabulary in lexical chunks had a positive effect on the listening comprehension performance of the Arabic Basic Course learners on average.

Second, the results also showed that the correlation was significant and high between students' single-word auditory knowledge score and their listening comprehension score at both pre- ( $r=.79, p<.001$ ) and post-intervention ( $r=.80, p<.001$ ). The correlation between the single-word auditory knowledge score and listening comprehension score was very high at both pre- ( $r = .79, p < .001$ ) and post-intervention ( $r = .80, p < .001$ ). The post-intervention multi-word score and listening comprehension score also correlated very highly ( $r = .84, p < .001$ ). Generally, the results of the analyses

indicated that both students' auditory knowledge of single words and that of multiword phrases had a positive relationship to listening comprehension.

Third, the regression analysis showed that the students' multi-word auditory knowledge scores positively predicted listening comprehension ( $\beta=.640, p=.002$ ), but that their single-word auditory knowledge score was not a significant predictor. However, it should be noted that the two predictor variables were highly correlated ( $r = .891$ ) and as such displayed some multicollinearity ( $VIF = 4.86$ ). Therefore, it is possible that single-word score may also be predictive of listening comprehension, albeit not in a model that also has multi-word score as a predictor as well. As to the predicting power of listening comprehension, auditory knowledge of phrases was slightly more significant than auditory knowledge of words, as measured by the listening recall test.

The present study shows that teaching vocabulary in chunks significantly influences students' success in listening comprehension. The current study's findings contribute to testing the assumption that Arabic learners with knowledge of larger Arabic vocabulary units (i.e., multiword lexical phrases) would be better at listening comprehension than those with knowledge of smaller vocabulary units (i.e., words). To this end, this study revealed information about the lexical approach in vocabulary acquisition that could be crucial for developing and revising curriculums. Therefore, L2, and perhaps L1, students and educators could benefit from the current study's findings to improve their understanding of the relationship between vocabulary acquisition methods and listening comprehension. Improving the understanding of such a relationship could, in turn, inform student and teacher decisions about what approaches they should use to achieve more successful language learning.

Moreover, students could benefit from the newly learned concepts in increasing their ability in L2 listening comprehension. Lastly, the researcher hopes that findings from this study afford researchers with information that they can use as a foundation for further research inquiries into vocabulary acquisition and the development of listening comprehension competence. The researcher further hopes that this study contributes to alleviating listening comprehension difficulties and that it makes a genuine contribution to the existing body of relevant research. Given that listening-comprehension research does not thrive in the literature compared to reading comprehension (Osada, 2004), the researcher hopes that this study provides some direction for teaching and facilitates future inquiry by identifying productive research questions.

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**APPENDICES**

## APPENDIX A

## IRB APPROVAL LETTER FROM THE DEFENSE LANGUAGE INSTITUTE



DEPARTMENT OF THE ARMY  
 DEFENSE LANGUAGE INSTITUTE FOREIGN LANGUAGE CENTER  
 PRESIDIO OF MONTEREY  
 MONTEREY, CALIFORNIA 93944-5000

January 12, 2021

Office of the Commandant

Institutional Review Board (IRB)  
 University of San Francisco  
 2130 Fulton Street  
 San Francisco, CA 94117

To Whom it May Concern:

This letter is to express our willingness to grant permission to Mr. Bassam Al-Maqtari, a doctoral student at University of San Francisco, to conduct his dissertation research titled, "*The Effect of Teaching and Learning Vocabulary in Lexical Chunks on the Listening Comprehension of Adult Learners of Arabic.*" Mr. Al-Maqtari's research was reviewed by our Scientific and Ethics Review Board (SRB) and acquired Board's support.

The site permission is contingent upon the University of San Francisco's Institutional Review Board (IRB) review and approval of this research and Defense Language Institute Foreign Language Center's (DLIFLC) administrative review. It is our understanding that the University of San Francisco's IRB will conduct the institutional review and will maintain oversight over this research. Following the IRB approval at University of San Francisco, DLIFLC's Office of Human Research Protections Program (HRPP) will conduct an administrative review in accordance with the requirements for DoD-supported research regardless of its exempt status. The administrative review ensures compliance with DoD 3216.02, "Protection of Human Subjects and Adherence to Ethical Standards in DoD-Supported Research," in addition to "the Common Rule" (32 CFR 219).

Once the University of San Francisco's IRB has completed the review of this study or determined its exempt status, please advise the principle investigator to send a copy of the IRB decision documents and the approved research protocol packet to Ms. Marzenna Krol, Human Protections Administrator (HPA) at [marzenna.krol@dliflc.edu](mailto:marzenna.krol@dliflc.edu) for the administrative review. Data collection cannot begin before DLIFLC completes the administrative review.

If you have any questions, please contact Ms. Krol, HPA, at [marzenna.krol@dliflc.edu](mailto:marzenna.krol@dliflc.edu) or Dr. Branka Sarac, Scientific and Ethics Review Board (SRB) Chair, at [branka.sarac@dliflc.edu](mailto:branka.sarac@dliflc.edu).

Sincerely,

A handwritten signature in black ink, appearing to read "Gary M. Hausman".

Gary M. Hausman  
 Colonel, U.S. Army  
 Commandant

## APPENDIX B

## IRB APPROVAL LETTER FROM THE UNIVERSITY OF SAN FRANCISCO

To: Bassam Al-Maqtari  
 From: Richard Gregory Johnson III, IRB Chair  
 Subject: Protocol #1271  
 Date: 07/02/2020

Dear Bassam Al-Maqtari:

Your Amendment for research (IRB Protocol #1271) with the project title **THE EFFECT OF TEACHING AND LEARNING VOCABULARY IN LEXICAL CHUNKS ON THE LISTENING COMPREHENSION OF ADULT LEARNERS OF ARABIC** has been approved by the IRB Chair on **07/02/2020**.

Any modifications, adverse reactions or complications must be reported using a modification application to the IRBPHS within ten (10) working days.

If you have any questions, please contact the IRBPHS via email at [IRBPHS@usfca.edu](mailto:IRBPHS@usfca.edu). Please include the Protocol number assigned to your application in your correspondence.

On behalf of the IRBPHS committee, I wish you much success in your research.

Sincerely,

Dr. Richard Gregory Johnson III  
 Professor & Chair, Institutional Review Board for the Protection of Human Subjects  
 University of San Francisco  
[irbphs@usfca.edu](mailto:irbphs@usfca.edu)  
[IRBPHS Website](#)

To: Bassam Al-Maqtari  
 From: Richard Gregory Johnson III, IRB Chair  
 Subject: Protocol #1271  
 Date: 08/27/2019

The Institutional Review Board for the Protection of Human Subjects (IRBPHS) at the University of San Francisco (USF) has reviewed your request for human subjects approval regarding your study.

Your project (IRB Protocol #1271) with the title **THE EFFECT OF TEACHING AND LEARNING VOCABULARY IN LEXICAL CHUNKS ON THE LISTENING COMPREHENSION OF ADULT LEARNERS OF ARABIC** has been approved by the University of San Francisco IRBPHS as **Exempt** according to 45CFR46.101(b). Your application for exemption has been verified because your project involves minimal risk to subjects as reviewed by the IRB on 08/27/2019.

Please note that changes to your protocol may affect its exempt status. Please submit a modification application within ten working days, indicating any changes to your research. Please include the Protocol number assigned to your application in your correspondence.

On behalf of the IRBPHS committee, I wish you much success in your endeavors.

Sincerely,

Dr. Richard Gregory Johnson III  
 Professor & Chair, Institutional Review Board for the Protection of Human Subjects  
 University of San Francisco  
[irbphs@usfca.edu](mailto:irbphs@usfca.edu)  
[IRBPHS Website](#)

## APPENDIX C

## RECRUITMENT LETTER/E-MAIL

Dear prospective participant,

My name is Bassam Al-Maqtari and I am a doctoral student in the Department of Education at the University of San Francisco. I am writing to invite you to participate in my research study about how teaching and learning Arabic vocabulary affects learners' ability to comprehend Arabic listening passages. You're eligible to be in this study because you are a student in Semester II in the Arabic Basic Course at DLIFLC, who has not failed any graded event on your course syllabus. I obtained your contact information from DLIFLC.

If you decide to participate in this study, you will

1. Attend 16 Zero-Hour Arabic listening-comprehension online sessions (via Microsoft Teams platform) over a period of eight weeks, with each session focusing on one 40-second-long Arabic textbook listening passage.
2. The researcher will be the teacher of the Arabic listening-comprehension sessions mentioned above.
3. In each session, you will be introduced to the new vocabulary, which will be printed as well as voice-recorded for you to study and to prepare for a quiz during the subsequent session.
4. Upon completing the first eight listening passages, you will take a vocabulary test and a listening comprehension test covering the content of those passages. Testing will take place again upon completing the last eight listening passages.

Your participation in my study is completely voluntary. You can choose to be in the study or not. If you'd like to participate or have any questions about the study, please contact me at (831) 242-4721 or via e-mail at: [sam.almaqtari@dliflc.edu](mailto:sam.almaqtari@dliflc.edu). Thank you very much.

Sincerely,

Sam Al-Maqtari

APPENDIX D  
INFORMED CONSENT FORM



**Consent Form**

**CONSENT TO PARTICIPATE IN A RESEARCH STUDY**

Below is a description of the research procedures and an explanation of your rights as a research participant. You should read this information carefully. If you agree to participate, you will sign in the space provided to indicate that you have read and understand the information on this consent form. You are entitled to and will receive a copy of this form.

You have been asked to participate in a research study conducted by Bassam Al-Maqtari, a doctoral student in the Department of Education at the University of San Francisco. You are being asked to participate because you meet the following criteria:

- a. You are a student in Semester II in the Arabic Basic Course at DLIFLC during this study.
- b. You are in good academic standing, meaning: your current grade point average (GPA) is 3.0 or higher.

**WHAT THE STUDY IS ABOUT:**

This study aims to investigate how teaching and learning Arabic vocabulary affects learners' ability to comprehend Arabic listening passages. It also examines the relationship between students' auditory knowledge of words, and that of phrases and their listening comprehension. Additionally, it explores the relative contribution of (a) the learners' auditory knowledge of words and (b) their auditory knowledge of phrases to overall listening comprehension.

**WHAT WE WILL ASK YOU TO DO:**

If you agree to participate in this study, the following will happen:

1. You will attend 16 Arabic listening-comprehension sessions, with each session focusing on one 40-second-long Arabic textbook listening passage.
2. The researcher will be the teacher of the Arabic listening-comprehension sessions mentioned above.
3. In each session, you will be introduced to the new vocabulary, which will be printed as well as voice-recorded for you to study and to prepare for a quiz during the subsequent session.

4. Upon completing the first eight listening passages, you will take a vocabulary test and a listening comprehension test covering the content of those passages. Three more testing events will take place again upon completing the last eight textbook listening passages.

**DURATION AND LOCATION OF THE STUDY:**

Your participation in this study will involve attending one listening-comprehension instructional sessions at a time, over a period of four to 16 business days (totaling 16 instructional sessions), with a testing-event after the completion of each eight sessions (two testing sessions in total). Each instructional session will start at 07:00 am, unless otherwise rescheduled. The study will take place in a Microsoft Teams channel designated for your group.

**POTENTIAL RISKS AND DISCOMFORTS:**

The instructional sessions required for this study will be scheduled on business days during the zero hour instructional block starting at 07:00 am daily.

**BENEFITS:**

The direct benefit to you is having the opportunity to practice Arabic listening and improve your listening-comprehension skill through well prepared lessons. The anticipated benefit of this study is informing our institution (DLIFLC) and the field of foreign language teaching with the findings of this study. Many adult learners of Arabic and other foreign languages will benefit from your participation in this study.

**PRIVACY/CONFIDENTIALITY:**

Any data you provide in this study will be kept confidential unless disclosure is required by law. In any report the researcher publishes, he will not include information that will make it possible to identify you or any individual participant. Specifically, the researcher will assign you a borrowed Arabic name as an alias to keep you anonymous. Only the researcher will have access to the study documents and records. All study documents and records will be stored in digital files on a computer secured by a complex password. Each document will also be protected by a complex password, without which it cannot be accessed. No one will have the ability to link your data to your identifying information.

**COMPENSATION/PAYMENT FOR PARTICIPATION:**

There is no payment or other form of compensation for your participation in this study.

**VOLUNTARY NATURE OF THE STUDY:**

Your participation is voluntary, and you may refuse to participate without penalty. Furthermore, you may skip any questions or tasks that make you uncomfortable and may discontinue your participation at any time without penalty or loss of benefits. In addition, the researcher has the right to withdraw you from participation in the study at any time.

**OFFER TO ANSWER QUESTIONS:**

Please ask any questions you have now. If you have questions later, you should contact the principal investigator: Bassam Al-Maqtari at (831) 242-4721 or via e-mail at: sam.almaqtari@dliflc.edu. If you have questions or concerns about your rights as a participant in this study, you may contact the University of San Francisco Institutional Review Board at IRBPHS@usfca.edu.

**I HAVE READ THE ABOVE INFORMATION. ANY QUESTIONS I HAVE ASKED HAVE BEEN ANSWERED. I AGREE TO PARTICIPATE IN THIS RESEARCH PROJECT AND I WILL RECEIVE A COPY OF THIS CONSENT FORM.**

---

*RESEARCH PARTICIPANT'S  
SIGNATURE*

---

*DATE*



## APPENDIX E

## SPSS STATISTICAL ANALYSIS OUTPUT

**Table A1***Descriptive Statistics of the Overall Scores for Both Groups at Both Testing Times*

	N	Minimum	Maximum	Mean	Std. Deviation
Listening Comprehension score	78	30	100	61.94	18.958
Single-Word Auditory test score	78	23	89	50.94	16.388
Multi-Word Auditory test score	39	15.0	96.8	50.441	22.1073
Valid N (listwise)	39				

**Table A2***Descriptive Statistics of the Overall Scores Split by Time of Test Administration*

Time		N	Minimum	Maximum	Mean	Std. Deviation
First	Listening Comprehension score	39	31	93	60.08	18.208
	Single-Word Auditory test score	39	23	89	48.85	15.462
	Multi-Word Auditory test score	0				
	Valid N (listwise)	0				
Second	Listening Comprehension score	39	30	100	63.81	19.739
	Single-Word Auditory test score	39	28	88	53.04	17.208
	Multi-Word Auditory test score	39	15.0	96.8	50.441	22.1073
	Valid N (listwise)	39				

**Table A3***Descriptive Statistics of the Overall Scores Split by Group*

Group		N	Minimum	Maximum	Mean	Std. Deviation
Experimental	Listening Comprehension score	40	31	100	63.65	19.040
	Single-Word Auditory test score	40	23	84	52.66	17.540
	Multi-Word Auditory test score	20	24.9	90.0	54.545	21.2217
	Valid N (listwise)	20				
Control	Listening Comprehension score	38	30	95	60.16	18.959
	Single-Word Auditory test score	38	29	89	49.14	15.103
	Multi-Word Auditory test score	19	15.0	96.8	46.121	22.7592
	Valid N (listwise)	19				

**Table A4***Descriptive Statistics of the Overall Scores Split by Group and Test Time*

Group	Time		N	Minimum	Maximum	Mean	Std. Deviation
Experimental	First	Listening Comprehension score	20	31	92	59.93	18.847
		Single-Word Auditory test score	20	23	81	48.85	16.940
		Multi-Word Auditory test score	0				
		Valid N (listwise)	0				
	Second	Listening Comprehension score	20	39	100	67.37	18.969
		Single-Word Auditory test score	20	28	84	56.47	17.719
		Multi-Word Auditory test score	20	24.9	90.0	54.545	21.2217
		Valid N (listwise)	20				
Control	First	Listening Comprehension score	19	32	93	60.25	18.026
		Single-Word Auditory test score	19	29	89	48.86	14.207

	Multi-Word Auditory test score	0				
	Valid N (listwise)	0				
Second	Listening Comprehension score	19	30	95	60.06	20.344
	Single-Word Auditory test score	19	29	88	49.43	16.336
	Multi-Word Auditory test score	19	15.0	96.8	46.121	22.7592
	Valid N (listwise)	19				

**Table A5**

*ANCOVA Between-Subjects Factors*

		Value Label	N
Group	1	Experimental	20
	2	Control	19

**Table A6**

*ANCOVA Descriptive Statistics of Dependent Variable (Listening Comprehension Posttest Score)*

Group	Mean	Std. Deviation	N
Experimental	67.37	18.969	20
Control	60.06	20.344	19
Total	63.81	19.739	39

**Table A7**

*ANCOVA Leven's Test of Equality of Error Variance (Dependent Variable: Listening Comprehension Posttest Score)*

F	df1	df2	Sig.
1.564	1	37	.219

**Table A8**

*Test of Between-Subjects Effect (Dependent Variable: Listening Comprehension Posttest Score)*

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared	Noncent. Parameter	Observed Power(a)
Corrected Model	11819.650(b)	2	5909.825	71.259	.000	.798	142.517	1.000
Intercept	148.375	1	148.375	1.789	.189	.047	1.789	.256
LC	11300.152	1	11300.152	136.253	.000	.791	136.253	1.000
Group	563.805	1	563.805	6.798	.013	.159	6.798	.718
Error	2985.657	36	82.935					
Total	173590.750	39						
Corrected Total	14805.308	38						

a Computed using alpha = .05

b R Squared = .798 (Adjusted R Squared = .787)

**Table A9**

*Correlations*

		Listening Comprehension (pretest) score	Single-Word Auditory (pretest) score	Multi-Word Auditory test score	Listening Comprehension (posttest) score	Single-Word Auditory (posttest) score	Listening Comprehension gain score	Group
Listening Comprehension (pretest) score	Pearson Correlation	1	.799(**)	.843(**)	.872(**)	.597(**)	-.103	-.093
	Sig. (2-tailed)		.000	.000	.000	.000	.534	.420
	N	78	78	39	39	39	39	78
Single-Word Auditory (pretest) score	Pearson Correlation	.799(**)	1	.891(**)	.717(**)	.649(**)	-.032	-.108
	Sig. (2-tailed)	.000		.000	.000	.000	.849	.347
	N	78	78	39	39	39	39	78
Multi-Word Auditory test score	Pearson Correlation	.843(**)	.891(**)	1	<u>.a</u>	<u>.a</u>	<u>.a</u>	-.193
	Sig. (2-tailed)	.000	.000		.	.	.	.239
	N	39	39	39	0	0	0	39
Listening Comprehension (posttest) score	Pearson Correlation	.872(**)	.717(**)	<u>.a</u>	1	.799(**)	.398(*)	-.187
	Sig. (2-tailed)	.000	.000	.		.000	.012	.253
	N	39	39	0	39	39	39	39
Single-Word Auditory (posttest) score	Pearson Correlation	.597(**)	.649(**)	<u>.a</u>	.799(**)	1	.504(**)	-.207
	Sig. (2-tailed)	.000	.000	.	.000		.001	.206
	N	39	39	0	39	39	39	39
Listening Comprehension gain score	Pearson Correlation	-.103	-.032	<u>.a</u>	.398(*)	.504(**)	1	-.397(*)
	Sig. (2-tailed)	.534	.849	.	.012	.001		.012
	N	39	39	0	39	39	39	39
Group	Pearson Correlation	-.093	-.108	-.193	-.187	-.207	-.397(*)	1
	Sig. (2-tailed)	.420	.347	.239	.253	.206	.012	
	N	78	78	39	39	39	39	78

\*\* Correlation is significant at the 0.01 level (2-tailed).

\* Correlation is significant at the 0.05 level (2-tailed).

a Cannot be computed because at least one of the variables is constant.

**Table A10***Descriptive Statistics of Regression*

	Mean	Std. Deviation	N
Listening Comprehension (posttest) score	63.81	19.739	39
Multi-Word Auditory test score	50.441	22.1073	39
Single-Word Auditory (posttest) score	53.04	17.208	39

**Table A11***Variables Entered/Removed (b)*

Model	Variables Entered	Variables Removed	Method
1	Single-Word Auditory (posttest) score, Multi-Word Auditory test score(a)		. Enter

a All requested variables entered.

b Dependent Variable: Listening Comprehension (posttest) score

**Table A12***Model Summary*

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	Change Statistics			Sig. F Change
						F Change	df1	df2	
1	.850(a)	.722	.706	10.694	.722	46.735	2	36	.000

**Table A13***ANOVA (b)*

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	10688.575	2	5344.287	46.735	.000(a)
	Residual	4116.733	36	114.354		
	Total	14805.308	38			

a Predictors: (Constant), Single-Word Auditory (posttest) score, Multi-Word Auditory test score

b Dependent Variable: Listening Comprehension (posttest) score

**Table A14***Coefficients (a)*

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	21.102	5.889		3.583	.001
	Multi-Word Auditory test score	.571	.173	.640	3.304	.002
	Single-Word Auditory (posttest) score	.262	.222	.228	1.178	.247

a Dependent Variable: Listening Comprehension (posttest) score

**Table A15***t-Test Paired Samples Statistics*

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	Listening Comprehension (pretest) score	60.08	39	18.208	2.916
	Listening Comprehension (posttest) score	63.81	39	19.739	3.161

**Table A16***t-Test Paired Samples Correlations*

		N	Correlation	Sig.
Pair 1	Listening Comprehension (pretest) score & Listening Comprehension (posttest) score	39	.872	.000

**Table A17***t-Test Paired Samples Test*

		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
Pair					Lower	Upper			
1	Listening Comprehension (pretest) score - Listening Comprehension (posttest) score	-3.726	9.716	1.556	-6.875	-.576	-2.395	38	.022