2021

Vocabulary Learning Strategies Used by ESL Saudi Students in the United States

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ABSTRACT

VOCABULARY LEARNING STRATEGIES
USED BY ESL SAUDI STUDENTS IN
THE UNITED STATES

by

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Chair: Lori Imasiku

ABSTRACT OF GRADUATE STUDENT RESEARCH

Dissertation

Andrews University

College of Education and International Services

Title: VOCABULARY LEARNING STRATEGIES USED BY ESL SAUDI STUDENTS IN THE UNITED STATES

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Date completed: October 2021

Problem

The purpose of this study was to discover the preferred and used English vocabulary learning strategies of Saudi Arabic-speaking English as a Second Language (ESL) learners. In the light insufficient empirical and theoretical studies exploring the complex structure of vocabulary learning by Arabic-speaking ESL learners, this study investigated which strategies students viewed as significant in assisting them in learning new English vocabulary. Finally, the study sought to identify Saudi Arabic-speaking student attitudes toward and motivations for learning English as a second language; and whether these attitudes influenced which vocabulary learning strategies they preferred and used commonly.

Method

The research design was a nonexperimental quantitative descriptive research. The study used self-report questionnaires to know what were the most common vocabulary learning strategies used by Saudi Arabic-speaking ESL students in the United States as well as to learn what were their overall attitudes toward and motivations for learning English as a second language. Participants completed a three-section survey: (a) a demographic section, (b) the vocabulary learning strategies section, and (c) the section about attitudes toward and motivations for learning English as a second language. Schmitt's (1997) vocabulary taxonomy was used for the vocabulary survey section, while the attitude and motivation section (ATM) came from Abu-Snoubar's (2017) study, who adapted Gardner's (1985) AMTB.

Results

The findings indicated that Saudi Arabic-speaking ESL students preferred to use reinforcement strategies and linguistics analysis strategies to acquire new English words. The top 10 most common vocabulary learning strategies included guessing the meaning of the new word from the sentence, taking notes in class, translating to Arabic, and using new words in sentences. Furthermore, Saudi Arabic-speaking ESL student attitudes toward learning English were positive and their motivations for learning English were high.

Conclusions

This study asserted that Saudi Arabic-speaking ESL students preferred to use reinforcement strategies and linguistic analysis strategies to acquire and learn new English words. The study also demonstrated that Saudi Arabic-speaking ESL students

have high positive attitudes toward learning English, which was associated with their high motivation for learning. The findings indicated a weak correlation between VLS and the ATM, indicating that English language learners choice of VLS is influenced by their attitudes and motivations. Based on these results, further research is needed to investigate the relationship between VLS and the ATM with other international English language learner populations, use an experimental quantitative research design, and explore gender differences in VLS. Implications for practice include using these findings to develop instructional design in ESL curricula and improve teaching of VLS to English language learners.

Andrews University

College of Education and International Services

VOCABULARY LEARNING STRATEGIES USED BY ESL SAUDI STUDENTS IN THE UNITED STATES

A dissertation

presented in partial fulfillment of

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DEDICATION

To my family. You are my rock in the storm.

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

LIST OF ABBREVIATIONS

AMTB	Attitude/motivation test battery (Gardner, 1985, 2004)
ATM	Attitude and motivation survey
COG	Cognitive strategies for English vocabulary learning
DET	Determination strategies for English vocabulary learning
EFL	English as a foreign language
ELL	English language learner(s)
ESL	English as a second language
ETS	Educational Testing Service
IELTS	International English Language Testing System
L1	Native language: First language
L2	Foreign language: Second language
MEM	Memory strategies for English vocabulary learning
SACM	Saudi Arabian Cultural Mission
SLA	Second language acquisition
SOC	Social strategies for English vocabulary learning
SPSS	Statistical Package for the Social Sciences
TESOL	Teachers of English to Speakers of Other Languages
TOEFL	Test of English as a Foreign Language,
TOEFL iBT	Test of English as a Foreign Language, international
VLS	Vocabulary learning strategies

ACKNOWLEDGEMENTS

Prophet Mohammad, Peace and Blessings Upon Him, said: “He who does not give Thanks—Gratitude—to people, does not give Thanks—Gratitude—to Allah.” First and foremost, I thank my family for their unconditional love and support during this stage of my life. A heartwarming gratitude goes to my mother who pushed me to believe in myself and encouraged me to take the first steps to become the person I am today. I am thankful to my father, the man who constantly took my hand and put me back on my feet whenever I needed it. I am thankful to my siblings whose mere presence was the calm in my daily storm. Thank you to my extended family for always believing in me and always being close to me, regardless of the distance.

I am thankful to my colleagues and friends, in the United States and in Saudi Arabia, who never stopped praying for me and were always there to lend me a shoulder to lean on.

I am thankful to the TLC department faculty and staff who made me feel welcomed and accepted from the first day. Thank you for guiding me through this path with your compassion and empathy.

I am thankful to the DLiT faculty and staff for taking a chance on me and giving me a safe place to construct my identity as an educator and a curriculum facilitator.

Lastly, much gratitude and thanks go to my research committee members: Dr. Lori Imasiku, you have walked side by side with me since day one and always understood how stressful, yet exciting this stage would be. Dr. Jimmy Kijai, many

aspects of this research would not be possible without your cooperation and leadership. Dr. Julia Kim, your expertise and insight allowed this project to come to life and take its final shape. To you all, words cannot express enough how grateful and thankful I am to have you as a big part of my journey.

CHAPTER 1

INTRODUCTION

Background of the Problem

Literature in teaching and learning English as a second language has explored various language teaching and learning areas over the past two decades. For example, some researchers presented best practices for improving writing skills, analyzing errors in writing and spelling, or conducting studies in learning areas such as providing additional resources to help students develop their speaking skills and improve their pronunciation. The field has seen an increase in English vocabulary learning by native and non-native English speakers including studies conducted in different languages. Some scholars identified best practices for helping English language learners (ELL) overcome second language learning challenges. Others focused on recognition of learning preferences for vocabulary acquisition and the connection to word recognition and word knowledge (AbiSamra, 2003; Asgari & Mustapha, 2011; DePasquale, 2016; Flanigan & Greenwood, 2007; Ghazal, 2007; Graves et al., 2013; Hall, 2016; Nation, 2013; Wang & Chen, 2013). English vocabulary teaching and learning has been addressed from the bilingual education perspective. For instance, Lessard-Clouston (2013) explored the relationship between the first and second language (i.e., second language being English) in teaching and learning and expanded on the instructional practices which could optimize the bilingual learner biliterate development.

Nonetheless, research into vocabulary acquisition, learning, and teaching is in its infancy. Up to now, the literature has addressed the topic of teaching vocabulary, which is considered primarily under literacy education and not as second language education. Graves et al. (2013) indicated that the research about teaching vocabulary to native English speakers could be applied also to teaching ELLs. To be specific, there is a lack of research exploring teaching and learning English vocabulary to ELL Arabic speakers. Examination of the process of second language acquisition (SLA) for Arabic speakers has included improvement of writing skills and spelling, and attempts to understand the possible effects of first language (L1) transfer to second language (L2) (Khan 2011a/2011b; Mahmoud, 2005; Odlin, 1989; Santos & Suleiman, 1993; Suleiman, 1993). The findings suggest that for new vocabulary Arabic-speaking ELLs have particular techniques for word recognition and word knowledge, which then influence their choice of vocabulary learning strategies (VLS) for vocabulary acquisition. Conversely, vocabulary teaching and learning have been addressed within writing and spelling boundaries and not considered individually as a separate unit for second language teaching and learning.

Statement of the Problem

Most studies about teaching English vocabulary explored techniques for teaching vocabulary. Best practices were presented for optimizing learner English word knowledge, whether native or non-native English speakers. As the number of non-native English speakers increases, so does the need to consider differences between native and non-native English speakers in their process of English vocabulary acquisition. Even though the literature laid out suggestions for vocabulary teaching, the main focus was on

teaching of native English speakers; little research addressed teaching non-native English speakers. This includes a lack of research about teaching vocabulary to Arabic-speakers. Vocabulary learning and teaching are multidimensional; further research is needed to identify the preferred and used learning strategies, especially for Arabic-speakers. Additional research will help clarify whether there are correlations between student attitudes and their choice of learning strategies. Furthermore, studies of the factors related to teaching and learning vocabulary to Arabic-speaking English as a Second Language (ESL) students concluded that possible reasons for these struggles with mastering writing and speaking could be their lack of sufficient vocabulary, and their use of learning strategies which did not match the learning task (Graves et al., 2013; Khan 2011a, 2011b; Mahmoud, 2005; Odlin, 1989; Santos & Suleiman, 1993; Suleiman, 1993).

Purpose of the Study

Given the lack of empirical and theoretical studies exploring the complex structure of vocabulary learning by Arabic-speaking ESL learners, the purpose of this study was to discover the preferred and used English VLS of Saudi Arabic-speaking ESLs. This study investigated which strategies students viewed as significant in assisting them in learning new English vocabulary. Finally, the study sought to identify Saudi Arabic-speaking student attitudes toward and motivation for learning English as a second language; and whether this attitude influenced which VLS they preferred and used.

Research Questions

The study employed theoretical and applied research. The research questions were based on the hypothesis that attitudes toward and motivation for learning English as a second language were predictors of the preferred learning strategies of Saudi Arabian

Arabic-speaking ESL students who studied or were currently studying English as a second language in the United States.

1. What are the most commonly used VLS of Saudi Arabic-speaking ESL students in learning new English words?
2. Are there gender differences in VLS?
3. Are VLS related to the number of years spent learning English?
4. What are Saudi Arabic-speaking ESL student attitudes toward and motivations for learning ESL?
5. Are there gender differences in attitudes toward and motivations for learning ESL?
6. Are attitudes toward and motivations for learning ESL related to the years spent learning English?
7. Are VLS related to attitudes toward and motivations for learning English?

Rationale

This study addressed a gap in the literature about second language acquisition and contributed by focusing on vocabulary learning and teaching. This study intended to contribute to knowledge about the complexity of acquiring vocabulary and the construct of vocabulary knowledge, specifically for Arabic-speaking ELLs. First, exploration of the difficulties of SLA by Arabic-speaking students gave insight into the particulars of the Arabic language and correlations with English. The study also explored how the differences between the two languages help Arabic-speaking ELLs acquire the new language effectively and provided ESL teachers with information to be used to anticipate the difficulties faced by an Arabic-speaking ELL.

Moreover, identification of the common VLS used by Saudi Arabic-speaking students may help teachers align instructional design and course work to match students' preferred learning strategies. In return, this alignment, may enhance student learning and academic achievement. Ultimately, helping Saudi Arabic-speaking ESL students learn more about VLS and their effect on the vocabulary acquisition process may encourage them to take more control over their learning, by knowing which strategies work for them and which to avoid. Giving ELLs more control over their learning may improve their SLA as they develop a more positive attitude and motivation.

Theoretical Framework

SLA theorists recognize the value of identifying key components contributing to second language learning. The theoretical framework was designed to reflect the nature of the methodology of this study, which is both theoretical and applied research. The goal was to address a central question of SLA; that is, "How is language acquired?" and to ask specifically, "How is vocabulary acquired?" As theoretical research, this study tested a hypothesis about SLA, the Affective Filter Hypothesis, to establish how specific factors can explain the processes involved in vocabulary acquisition. By identifying these factors, the researcher can make assumptions regarding appropriate methods of vocabulary teaching and learning.

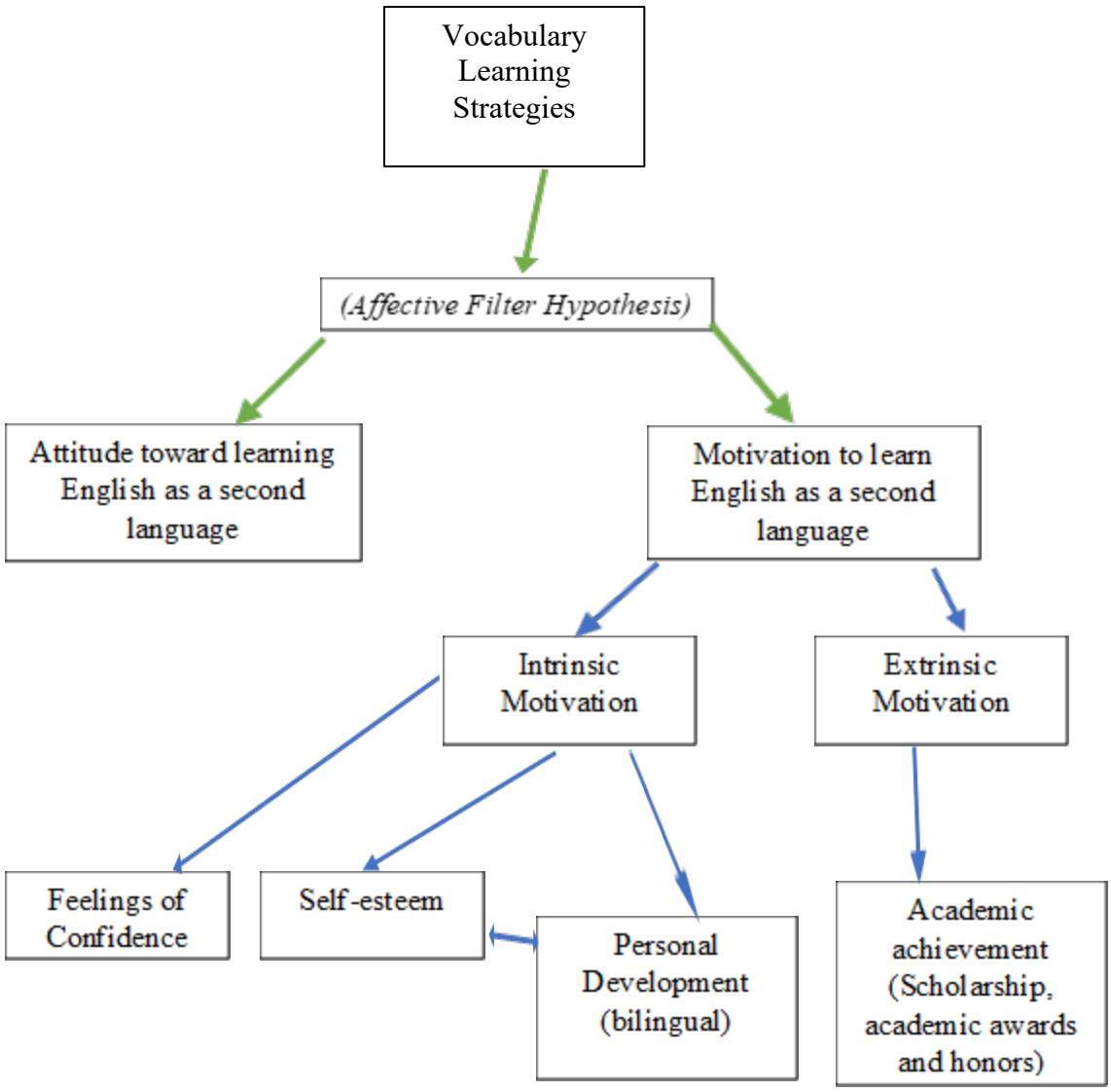
An expert in the field of linguistics, Stephen Krashen of the University of Southern California specialized in theories of language acquisition and development (1982, 1983a, 1983b). His theory of SLA has been known widely and well accepted since the 1980s, having a major impact on all areas of second language research and teaching. His recent research studied non-English and bilingual language acquisition" (Schütz,

2007). The Affective Filter Hypothesis claims that certain factors, identified as affective variables, might have a non-casual effect on SLA (Schütz, 2007). Xhaferi and Xhaferi (2008) identified several factors considered some of the affective variables noted by Krashen (1983b) as being relevant to vocabulary acquisition in particular; they included aptitude, personality characteristics, motivation, age (the critical period that is the age at which learning begins), personality, and learning strategies. The authors argued that these factors could hinder or support SLA in general and vocabulary learning specifically. As theoretical research, this study tested the effect student attitude and perception had on SLA and vocabulary learning.

Figure 1 illustrates the affective variables which could affect the process of vocabulary acquisition for Saudi Arabic-speaking ELLs. Graves et al. (2013) and Lessard-Clouston (2013) indicated that learning vocabulary is a process where students spend some time studying and reviewing words in their vocabulary notebooks, noting that several factors such as attitude and motivation could interfere with this process. The theoretical framework applies the affective filter hypothesis to explain the effects attitude could have on vocabulary acquisition. Using Krashen's argument about affective variables, this study argued that attitude and motivation, personal development, and academic achievement, including advancing in scholarship and receiving awards and honors, may affect vocabulary acquisition.

Figure 1

Theoretical Framework



Suppose the learner's perception of the second language was that it is harsh and complex, their attitude toward the learning process was complicated; this creates what Krashen (1983b) calls a "mental block that could prevent compressible input from being used in language acquisition" (Schütz, 2007, p. 3). In other words, the more negative the learner attitude toward the language and the learning process of that language are, the stronger the mental block becomes and the harder it will be for language to be acquired. Accordingly, this study argued that attitude as an affective variable needed to be explored alongside the input hypothesis. Furthermore, the desire to excel academically and the rise in self-esteem from learning a second language could motivate Arabic-speaking ELLs to learn English.

The study assumptions as applied research were built on the affective filter hypothesis claims regarding the leading second language theory of this study. Validity of the study as both applied and theoretical research consists of a balance and a relationship between the theory and practice in SLA.

Significance of the Study

Over the past two decades, the number of empirical studies and research data in SLA has increased; however, the research was limited in terms of vocabulary teaching and learning. The quantity of literature exploring Arabic-speaking ESL learners and SLA was minor. Consequently, Khan (2011b) pointed out the rapid academic research advances in second language learning strategies (O'Malley & Chamot, 1990; Oxford, 1990; Wenden & Rubin, 1987). This study investigated the limitations in this field by understanding how Arabic-speaking ESL students acquire English vocabulary, and built on current research about the effects of attitude and motivation on SLA. This additional

information will produce better results for second language teachers and students alike. In the long run, this study benefits curriculum designers and developers in Saudi Arabia as they design adequate classroom instructions and assessment tools to teach English as a second language. With these results, ESL teachers will have more data to work with when choosing vocabulary teaching strategies which match and align with student VLS.

Definition of Terms

Affective Domain in Learning*:* Affective objectives in learning concentrate more on attitudes, values, expressions, and motivation.

Affective Filter Hypothesis: One of the five main hypotheses of second language acquisition theory proposed by Stephen Krashen (1982). This hypothesis embodies Krashen's view that some affective variables play a facilitative but non-casual role in second language acquisition (Schütz, 2007). These variables include motivation, anxiety, self-confidence, and self-image.

Attitude Toward Learning English as a Second Language*:* A hypothesis that explains a particular linguistic behavior, whether it is integrative, instrumental, positive, or negative, toward any aspect of the target language (Al-Mamun et al., 2012; Dörnyei, 1994).

International English Language Testing System (IELTS): An alternative to the TOEFL, a test of English language skill.

Language Learning Strategies: Specific actions learners use to make learning more effective, faster, more enjoyable, more self-directed, and more transferable to new learning situations (Oxford, 2003).

Motivation in Second Language Learning: The attitude, feeling, and/or perception a second language learner has toward the target second language. The motivation here is viewed as "the concept of attitude as one of the major affective factors for success in learning" a second language (Abidin et al., 2012, p. 119).

Second Language Acquisition Theories (SLA): Theories of SLA explore how people who have already learned one language can learn a second language. Ideal SLA theories make predictions, unify generalizations made as part of their hypothesis, and account for observable phenomena.

TOEFL: Test of English as a Foreign Language;

TOEFL iBT: Test of English as a Foreign Language; measures academic English skills as they are used in the classroom, (ETS, 2021).

Vocabulary Learning Strategies (VLS): The specific learning strategies second language learners use to acquire new words in the second language.

Vocabulary Taxonomy: A list pointing out effective methods for teaching and learning vocabulary.

Limitations

After reviewing the literature for these topics, multiple approaches to this topic presented themselves. These approaches were excluded because of similar limitations in prior studies. One limitation lay in the specific target sample and the international student English fluency. Several factors could influence student motivation to learn; therefore, this study investigated these factors by exploring student attitudes toward learning English as a second language. Another limitation occurred in the lack of prior research combining the same factors and investigating similar areas. Most of the previous research

explored these factors separately. Also, in the instrument used, several questions were self-reported data from students. Whatever students report must be taken at face value because self-reported data can be independently verified only rarely. Finally, this study did not consider other factors which can affect student learning of new vocabulary.

Delimitations

The first delimitation of this study was the population sample: Saudi Arabian nationals whose first language was Arabic and who study in the United States. These student academic status was currently attending or previously completing a language program in the United States during the past five years. Targeting this population allowed the research to address specific educational factors relating to teaching and learning English as a second language by Arabic-speaking ELLs; however, this delimitation might affect the ability to generalize the findings to other Arabic-speaking countries. A third delimitation of the study was exclusion of other factors that might influence learning processes and an international student academic progress. These factors included previous learning experience, ESL class size, and the teaching and learning styles of the students' native countries. A final delimitation focused on student attitudes toward and motivation to learn English as a second language as variables which could affect acquisition of new vocabulary.

General Methodology

A nonexperimental quantitative descriptive research design was followed. This type of study allowed the researcher to summarize commonly used VLS based on participant years of learning the language, education experiences, and affective variables which could influence language acquisition.

The research sample was Arabic-speaking Saudi Arabian ESL students, 18 years or older, who had completed or were currently attending Intensive English language programs in the United States. The sample was collected via an online survey generated by SurveyMonkey.

The study used a self-reported questionnaire for data collection. Such a survey was the most appropriate data collection method, permitting easy access by the participants and met the research design characteristics. The questionnaire consisted of three sections: demographic questions, questions on VLS, and the attitude and motivation survey. The items used for the vocabulary learning strategy survey were based on Schmitt's (1997) taxonomy of VLS; the attitude and motivation survey was adapted from Abu-Snoubar (2017), which used the AMTB question bank developed by Gardner (1985).

Summary

This chapter outlined the essential elements of this study, providing a background of the problem. Critical components were presented for which further research in vocabulary teaching and learning was needed. Besides exploring how it will contribute to the field by investigating a different sample and population, this study aims to fill a gap in the literature of vocabulary teaching and learning to Arabic-speaking Saudi Arabian students. As the dissertation frame, this chapter presented the theoretical framework, research questions, and hypotheses used to build the investigation. Limitations and delimitation were identified.

Chapter 2 is a detailed literature review exploring studies and research conducted in vocabulary teaching and learning. It presents current second language theories relevant

to the topic and the significance of VLS. Furthermore, Chapter 2 demonstrates the challenges of SLA for Arabic-speaking ESL students, then explores the strategies used for teaching vocabulary, and addresses standard methodologies used to study these strategies.

Chapter 3 is the methodology chapter, where more detail about the research design and the research hypotheses were described. Chapter 3 focused on presenting the steps followed to collect and analyze the data.

Chapter 4 explains the significant findings and results of the study, providing a description of the sample and of the variables. Hypothesis testing and instrument reliability are discussed.

Chapter 5 summarizes the study, starting with the literature review and the general methodology. The significant findings were then discussed with explanations of the connections between the literature and the results. Finally, implications for practice and further research are presented.

CHAPTER 2

LITERATURE REVIEW

Introduction

Demonstrating increased global interest, multiple researchers in SLA investigated the issues, trends, and challenges of teaching and learning ESL to Arabic-speaking students (Santos & Suleiman, 1993; Suleiman, 1993). Several explored the underlying linguistic issues and challenges of language learning (Khan, 2011c; Richards & Sampson, 1974, as cited in AbiSamra, 2003), while others looked at the influence of geographical location on SLA (Corder, 1974; Mahmoud, 2005; Richards & Sampson, 1974; Selinker, 1972, as cited in Richards & Sampson, 1974).

Extensive investigation has taken place on several aspects of language learning challenges which Arabic-speaking ELLs experience when learning a second language. Yet, little of this research concentrated specifically on vocabulary teaching and learning challenges. Xhaferi and Xhaferi (2008) note that, regardless of advancements in research in the field of English language teaching and learning, the area of learning English vocabulary is limited; this calls for more research in the field. Asgari and Mustapha (2011) pointed out that ELLs most common challenges in second language learning originate from vocabulary learning, which has been "recognized as crucial to language use in which insufficient vocabulary knowledge of the learners led to difficulties in second language learning" (p. 84). Ghazal (2007) acknowledged that "vocabulary

learning is one of the major challenges foreign language learners face during the process of learning a language" (p. 84).

The literature suggested that Arabic-speaking students seem to struggle more than other ELLs in studying English in general, while specific struggles may involve writing skills or acquisition of new vocabulary (Khan, 2011a, 2011b; Saigh & Schmitt, 2012; Santos & Suleiman, 1993; Suleiman, 1993). Abdul Haq (1982) emphasized that "most Arab students usually fumble in their writing skills" and that "most English instructors and university officials complained about the continuous deterioration of the mastery of the English language among students" (as cited in Khan, 2011a, p. 1249).

Khan (2011a, 2011b, 2011c) cited multiple Arabic studies conducted in Arabic-speaking countries including Saudi Arabia, Sudan, and Egypt which identified two levels of learning problems for Arabic-speaking ELLs. The first level included learning difficulties with pronunciation, spelling, knowledge, and the use of syntax and morphology. The second level had difficulties in expressing themselves proficiently, whether in writing or speaking, academically or casually in everyday contexts. Khan concluded that "the deficiency in the English language curricula offered by some schools and universities; dreadful teaching methodology; problems with proper language environments; and lack of personal impetus on the part of the students" could be some of the reasons leading to Arabic-speaking student challenges in learning English (2011c, p. 1250).

Furthermore, Arabic-speaking ELLs in non-English countries, such as Saudi Arabia, were less likely to have daily language exposure opportunities than they might have had in English-speaking countries, e.g., the United States. The studies continued to

state that most Arabic-speaking ELLs studying English in their home countries lack efficient English proficiency which might prevent them from using English outside of the classroom, especially since English was not one of their country's official languages. In most Middle East countries, Arabic is the official language and the primary language of instruction in schools; therefore, students do not find a place to practice the English they learn (AbiSamra, 2003; Khan, 2011a, 2011c).

ELL ability to communicate effectively in English depends upon their vocabulary growth and their proficiency in using it. Vermeer (1992, p. 147) pointed out that "knowing words is the key to understanding and being understood. The bulk of learning a new language consists of learning new words. Grammatical knowledge does not make for great proficiency in a language" (as cited in Xhaferi & Xhaferi, 2008, p. 8). According to Bruzzano (2018), vocabulary is a fundamental factor which has a high probability of influencing ELL performance in learning English; the counterproductive belief that ELLs cannot use the language due to inadequate knowledge of its vocabulary could "strongly influence how [ELLs] regard and approach tasks in their learning" (p. 1).

In language acquisition, linguists believe that understanding of the target language's grammatical systems affects learning the language (Goodluck & Tavakolian, 1986). Several studies explored concerns related to that struggle, including language learning difficulties, the impact of language proficiency level on learning English, and the students' attitude toward and motivation for learning English (Al-Bustan & Al-Bustan, 2009; Al-Othman & Shuqair, 2013; Dweik & Abu Al Hommos, 2007). Al Asmari (2013) described learning a foreign language for Arabic-speaking ELLs as a complex and complicated process because of the difference in the word orders and language

proprieties of both Arabic, which is a verb-subject-object language and English, a subject-verb-object language. He stated that international students struggle to go beyond the confines of the L1 into the L2 into its culture and way of thinking, making the learning process more than just classroom teaching.

Al-Bustan and Al-Bustan (2009) and Daoud (1998) agreed that the tasks of writing and speaking are likely to be more challenging for Arabic-speaking ELLs because their perception of the tasks as requiring talent rather than learning or acquiring information. Al-Bustan and Al-Bustan reported that their study participants were concerned about making mistakes in class, which hindered their classroom participation.

Purpose of the Literature Review

The literature explored Arabic-speaking student problems in learning ESL and the writing and speaking errors made during their learning process. Yet, the research exploring the challenges, issues, and mistakes these students face and make in acquiring ESL vocabulary was limited. This reviewe of research about English language teaching presented only partial evidence of the importance of vocabulary acquisition as a critical aspect in the ESL general learning process. Besides, even though most second language learners encounter many challenges when learning vocabulary in the second language (Schmitt, 2008), there has been limited research on this subject. Thus, this review of the literature helped introduce beneficial and compatible strategies for learning English vocabulary words among Arabic-speaking ESL learners; it aimed to build on prior research and explore Arabic-speaking ESL students difficulties in learning English vocabulary. The goal was to provide innovative instructional design constructs for teaching and learning vocabulary and help Arabic-speaking students become aware of the

many VLS available to them. Student attitudes toward learning a second language were explored to provide a deeper analysis of affective variables which could influence English vocabulary learning. The results would help teachers design effective vocabulary teaching approaches and enhance vocabulary acquisition in their courses.

Theoretical Framework

As discussed in Chapter 1, SLA theorists recognize the importance of identifying key components contributing to second language learning. The theoretical framework was designed to reflect this study's methodology of using theoretical and applied research (See Figure 1 in Chapter 1). This study addressed the central question in SLA: "How is language acquired?," but goes beyond it to ask "how is vocabulary acquired?" The study tested one hypotheses of SLA, the Affective Filter Hypothesis, to establish how specific factors explained the processes involved in vocabulary acquisition. By identifying these factors, assumptions could be made regarding methods of vocabulary teaching and learning.

Stephen Krashen (1982) described the Affective Filter Hypothesis and claimed that certain factors, known as affective variables, had a non-causal effect on SLA (Schütz, 2007). Xhaferi and Xhaferi (2008) identified affective variables relevant to vocabulary acquisition including aptitude, personality characteristics, motivation, age (the critical period that is the age at which learning begins), personality, and learning strategies. They argued that these factors could hinder or support SLA in general and vocabulary in particular. As theoretical research, this study tested the effect of student attitude and perception about their SLA and vocabulary learning.

Figure 1 illustrated affective variables which could affect the process of vocabulary acquisition for Saudi Arabic-speaking ELLs. Using Krashen's 1983b argument about affective variables, this study argued that attitude, motivation, personal development, and academic achievement (which includes advancing in scholarship and receiving awards and honors) can be considered factors affecting vocabulary acquisition.

As applied research, this study attempts to address the practical problems of vocabulary teaching and learning faced by ESL teachers instructing Saudi Arabic-speaking ESL students. The study's assumptions as applied research are built on the input of hypothesis claims and the affective filter hypothesis as the primary second language theories. The study's validity as both an applied and theoretical research consists of a balance and relationship between the theory and practice in SLA.

Conceptual Framework

The theoretical framework presented the variables this study attempted to explore, informing the subscales used to discover the answers it seeks. The conceptual framework builds on the hypothesis suggested by the theoretical framework; but also explains and aligns the variables with measurable aspects. The conceptual framework described the two primary variables and their connections to vocabulary acquisition by Saudi Arabic-speaking ELLs. The first variable was VLS which are affected by the attitude toward and motivation for learning English as a second language.

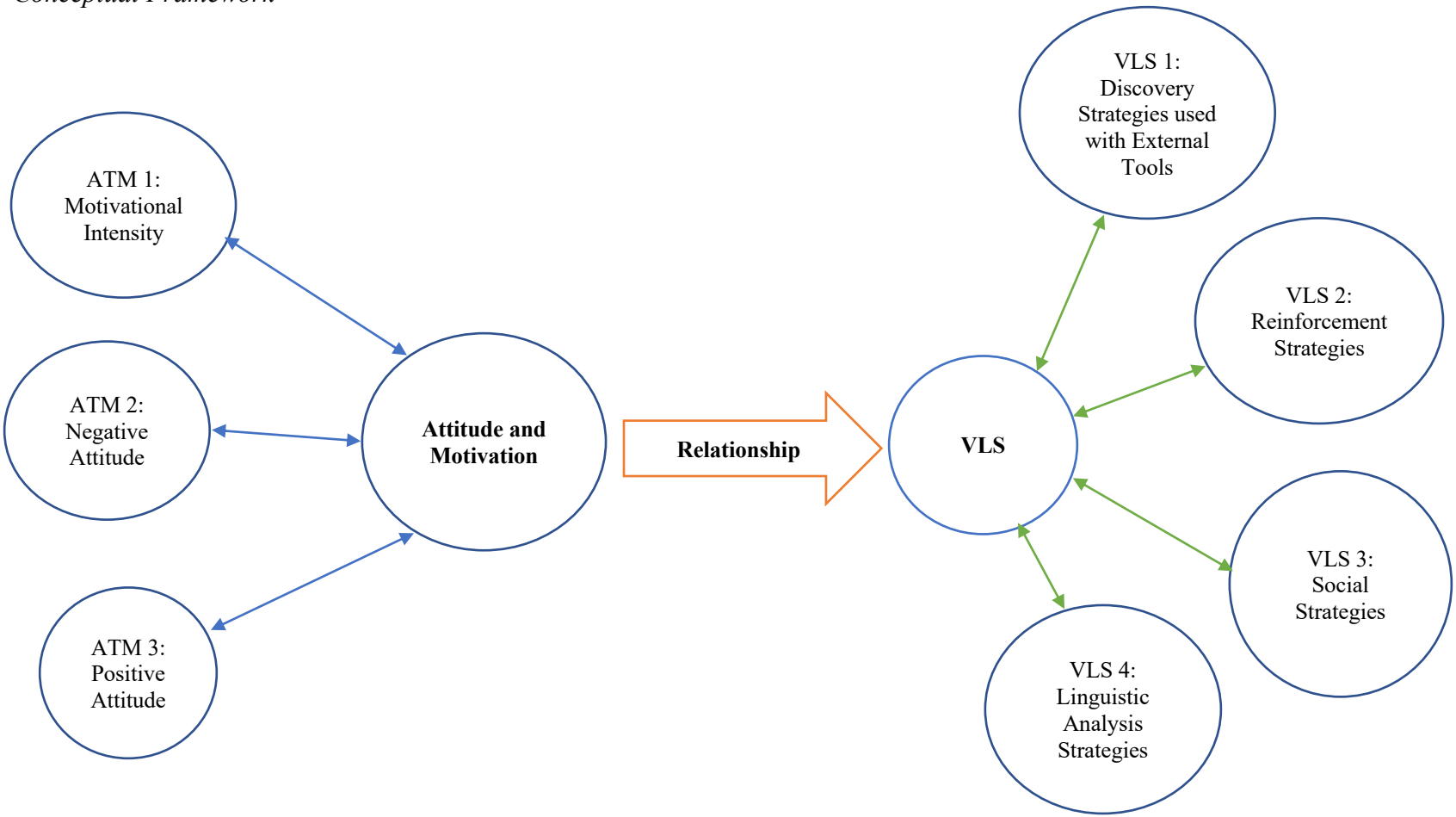
Saad et al. (2016) identified several scholars in SLA (Afrizal, 2005; El-Saleh, 2002; Embi, 1996, 2000; Izawati, 2008; Mahamod, 2004) who investigated "learners' choice or use of language learning strategies" (p. 455), and employed the SLA Model to identify dimensions explaining the process of second language learning. According to

Saad et al., the SLA model pinpointed three sets of dimensions: "individual learner differences, learner strategies, and outcome." In the first dimension, they identified "seven different categories: age, aptitude, motivation, learning styles, beliefs, affective states and personality" (p. 462). Gardner (2001) classified the motivation category as "integrative motivation" in relation to second language learning. According to Gardner, "integrative motivation is a complex of attitudinal, goal-directed, and motivational variables" (p. 1), which "involved the development of bilingual skill in the language, and that this requires considerable time, effort, and persistence" (p. 4).

Other scholars including Zughoul and Taminian (1984), Salih (1980), and Harrison et al. (1975) conducted attitudinal studies on Arab students; they agreed that motivation and attitude were essential variables in "improving and developing the learner's communicative ability" (Khan, 2011c, p. 3450). Consequently, the conceptual framework builds on the importance of attitude and motivation on SLA in Arabic-speaking ELLs and predicts possible connections between this variable and the VLS variable. The first connection would be between the process of SLA and the affective variables (i.e., attitude and motivation) as stated by various scholars. Figure 2 demonstrated that a connection between VLS and attitude/motivation was expected and laid out possible interconnections between the subscales from both variables.

Figure 2

Conceptual Framework



Organization of the Literature Review

The literature review began by discussing the importance of understanding student attitudes toward learning English as a second language along with their motivation and self-perception as they acquire new vocabulary words. Then language learning areas are covered and explored in relation to some of the learning challenges Arabic-speaking students encounter when learning ESL, which are similar to other international students, followed by an overview of research about vocabulary acquisition. The literature review presented the common difficulties many Arabic-speaking ELLs experience; the importance of learning vocabulary and its strategies will be discussed to facilitate understanding of how some language learning difficulties can be avoided or solved. Some of the instructional strategies used in teaching Arabic vocabulary will be introduced with their possible influence on how Saudi ESL students learn English vocabulary, followed by a description of the methodologies discussed in research into learning strategies used in teaching English as a second language (TESOL).

The Affective Domain and Learning a Second Language

Educators and advanced developmental psychologists have explored and identified three learning domains: (a) the cognitive domain, (b) the psychomotor domain, and (c) the affective or psychological domain. Each domain shows how people learn depending on their reaction to what they are learning (Al Mamun et al., 2012; Daoud, 1998; Holt & Hannon, 2013; W. C. Hunt, 1987; Snowman & McCown, 2011; Wen, 2005). For example, the cognitive domain stresses knowledge and intellectual skills. Most learning taxonomies are based on this domain; an example is Bloom's Taxonomy, first developed in 1995, then revised in 2000 (Danielson, 2007). The psychomotor

domain focuses mainly on development of psychological abilities and skills, regardless of the grade level and includes development of motor skills such as riding a bike or playing a musical instrument. A taxonomy of the psychomotor domain appeared in Snowman and McCown. Learning within the affective domain concentrates on feelings and emotions such as attitudes, values, motivations, and behaviors.

In a second language classroom, the cognitive domain involves remembering how a word is spelled or applying new information to new situations. On the other hand, learning in the affective domain is concerned with students participating positively in the classroom or expressing a belief or attitude about the value of learning a second language. According to Holt and Hannon (2013), when designing their learning outcomes and teaching objectives, many educators would be more likely to focus on the cognitive and the psychomotor domains than to consider the affective domain. The affective domain is "often perceived as difficult to observe and measure" (p. 2). Out of the many feelings and emotions related to learning, this study focused on attitudes, motivations, and perceptions of self while learning ESL, especially when learning vocabulary.

Attitude Toward Learning English as a Second Language

Fakeye (2010) stated that the learner's attitude toward the language or its learning process was one of the most critical factors impacting learning a language (as cited in Abidin et al., 2012). Several researchers have attempted to define and explain an individual's attitude toward learning a foreign language. For example, Al-Mamun et al, (2012) described the term attitude from a psychological perspective "as a construct that identifies a particular behavior, while H. D. Brown (2001) largely defined it as an emotional involvement such as self-confidence, feelings toward others, and relationships

in the community" (as cited in Suliman, 2019, p. 346). These researchers and others agree that attitude has a crucial function in the process of learning a foreign language.

Al-Mamun et al. (2012) stated that in the context of language learning, attitude "is a hypothesis that explains a particular linguistic behavior . . . that might be positive or negative, as well as integrative or instrumental" (as cited in Suliman, 2019, p. 347). Hohenthal (2003) continued to claim that people have different variations, personal experiences, and perceptions toward a particular language such as easy/difficult, local/international, or sweet/harsh; these variations comprise part of their attitude toward learning that language (as cited in Al Mamun et al., 2012). Due to the importance of attitudes on the learning process, Dehbozorgi (2012) investigated the effects of attitude toward language learning and risk-taking on EFL student proficiency at the Islamic Azad University, Shiraz Branch, Iran, concluding that students with a positive attitude could enter a new language learning environment with more ease. EFL teachers have a more challenging task with students who have a negative attitude toward language learning.

Arabic-Speaking Learner Attitudes

Considering Arabic-speaking ELLs, several studies concluded that attitude and motivation could contribute to the level of challenge learners might experience with language acquisition (AbiSamra, 2003; Khan, 2011a, 2011b, 2011c; Mahmoud, 2005; Saigh & Schmitt, 2012). For instance, Zughoul (1987) conducted an attitudinal study on Arab ELLs and found that Arab learners are "instrumentally motivated to learn English and that they are well aware of the utility of knowing English" (as cited in Khan 2011c, p. 3450). In other words, Arab learner attitude toward learning English was positive when there was a stimulus motivating that learning, such as a career or higher education. This

belief aligns with Krashen's reasoning on the effects certain factors might have on the process of SLA, especially the effect of motivation.

Motivations for Learning a Second Language

The term motivation has shifted since the 1990s from the traditional view as a goal or an emotion to take on a more detailed and specific understanding. In the late 1990s, several psychologists (e.g., Ajzen & Fishbein, 1980; Eagly & Chaiken, 1993; Pintrich & Schunk, 1996) expanded their research on the concept of motivation to explain precisely ways to separate the concept from its traditional view as "a reflection of certain inner forces such as instincts, volition, will, and psychical energy" (Dörnyei, 1998, p. 3). For example, Pintrich and Schunk (1996) viewed motivation as a mental process and defined it as "the process whereby goal-directed activity is instigated and sustained" (as cited in Dörnyei, p. 3). Dörnyei (1998) indicated that, traditionally, motivation is used and understood as "a fairly static mental or emotional state . . . or as a goal . . . but not as a process" (p. 3). Even though this definition did not stray far from the traditional definition, it considered and incorporated cognitive variables and concepts. Dörnyei (1998) explained that because there is no "absolute, straightforward, and unequivocal concept of motivation," researchers tend to take the traditional view of motivation as an overarching concept without "specifying in what sense they use the term" (p. 3). Therefore, advances in understanding were occurring within the mainstream of the psychological construct of motivation.

Besides, many well-known psychologists and researchers developed theories and assumptions which could explain certain behaviors and actions in learning, such as the theory of reasoned action by Ajzen and Fishbein (1980) and its extension, the theory of

planned behavior by Ajzen (1988). These theories investigated individual responses to a target learning task based on principles including individual expectancy of success, self-efficacy, and self-worth. For the current study, motivation for learning English as a second language was defined as the attitude, feeling, and/or perception of second language learner toward the target second language. Here, the term motivation was viewed as a concept of attitude that explains linguistic behavior in learning English as a second language (Abidin et al., 2012).

There are several reasons why motivation for learning a second language is essential. For instance, according to Dörnyei et al. (2014), "motivation has been widely accepted by both teachers and researchers as one of the key factors that influence the rate and success of second/foreign language (L2) learning" (p. 2). Several factors accept motivation, to some extent, to be a critical influencer for learning. For instance, even the most capable individuals cannot achieve long-term goals without sufficient motivation. Holt and McCown (2013) added that "neither are appropriate curricula and good teaching enough on their own to ensure student achievement" (p. 11). The second language learners motivation includes perceptions about the target language and personal goals for learning consisting of their self-esteem and self-worth.

For the case of Saudi Arabic-speaking ELLs, the researcher argued that their motivation could be influenced by personal goals such as academic excellence, high scores on the language proficiency test, and/or enrollment in a top-ranked university. One factor playing a vital part in the motivation of these students has been being accepted and excelling in the King Abdullah Scholarship program sponsored by the Saudi Arabian Ministry of Education. There was a lack of research addressing motivation and how these

factors concern Saudi Arabic-speaking ELLs; therefore, this study intended to evaluate how these factors related to student learning of English as a second language, in particular, to learning vocabulary.

The Motivation for Learning Vocabulary

Research in SLA indicated that motivation is an essential factor influencing learner abilities to acquire vocabulary successfully. Motivation or attitude toward a specific word type (i.e., high-frequency, mid-frequency words, low-frequency words) was expected to prevent the learner from advancing in learning new vocabulary. For example, Schachter (1974, as cited in Al-Qadi, 1991) stated that "If a student finds a particular construction in the target language difficult to comprehend, it is very likely that he will try to avoid producing it" (p. 31). A similar argument is made about vocabulary acquisition. When Arabic-speaking ELLs find it challenging to comprehend, spell, or even pronounce a new word, they are more likely to avoid putting in the effort to acquire it. Blum (1978, as cited in Al-Qadi, 1991,) pointed out that "the motivation for avoidance at this stage can be morphological (preferring a regular verb to an irregular one), phonological (preferring the word that's easier to pronounce), graphological (preferring in writing the word one knows how to spell) or void avoidance (preferring a word that has a clear translation-equivalent in the mother tongue to one that does not)" (p. 31).

Language Learning Difficulties Faced by Arabic-Speaking ESL Learners

Arabic speakers from different Arabic-speaking countries encounter several challenges while learning English as a second language. For example, Allen and Corder (1974) believed that for Arabic-speaking ELLs, writing in a second language was

intricate and complex; being the most difficult language ability to acquire. However, Saigh and Schmitt (2012) investigated Arab learner speaking and writing problems more deeply. This section presented several areas of challenges for Arabic-speaking ELLs when learning English as a second language. Several groups of ELLs experience these challenges; however, this argument focused on how these challenges affect English vocabulary learning.

Lexical Differences between English and Arabic Languages

Suliman (2019) provided a brief review of the literature covering the challenges Arabic-speaking ELLs encountered due to the structural differences between the two languages. One of the first challenges Suliman identified was the lexical differences between English and Arabic. For example, Saigh and Schmitt (2012) noted that Arab ESL learners "have difficulties with the spelling of English vowels in general," which they identified as "vowel blindness" (as cited in Suliman, 2019, p. 335). Saigh and Schmitt stated that a possible reason behind this might be

> that Arabs tend to perceive the many different vowel graphemes as equal in written English. In other words, the term "vowel blindness" proposed by Ryan and Meara in 1991 may mean the inability to distinguish between different vowel letters due to the many variations of their spellings and the complexity of their orthography relative to the high consistency of their L1 Arabic orthography of vowels (as cited in Suliman, 2019, pp. 335-336).

Suliman (2019) and Saigh and Schmitt (2012) agreed that a possible first challenge for Arabic-speaking ELLs originated from fundamental lexical differences between English and Arabic. Furthermore, Odlin (1989) explained that vocabulary acquisition were affected by these lexical differences. Arabic is distinguished from English in terms of grammar, linguistics, phonology, orthography, and syntax. Abu

Shaikh (2012) expected that Arabic-speaking ELLs would face difficulties mastering skills like native-like pronunciation and academic level writing.

Challenges with Writing Skills

Several academic researchers recognized writing as one of the most complicated tasks to master for most Arabic-speaking ELLs (AbiSamra, 2003; Daoud,1998, as cited in Suliman, 2019, p. 336; Khan, 2011a, 2011b, 2011c; Mahmoud, 2005; Santos & Suleiman, 1993; Suleiman, 1993). These scholars noticed that Arabic-speaking ELLs might attempt to transfer the information they learned during their reading and speaking to their writing tasks, which would be expected; however, this heightened attention to rules may make learners more prone to commit writing mistakes. Daoud (1998) noted that most Arabic-speaking learners and their ESL teachers have a perception of writing as a complicated task, which could be related to the "students' lack of proficiency and insufficient motivation to write" (p. 391). As a result, many Arabic-speaking ELLs view writing as a skill requiring talent rather than learning (Al-Bustan & Al-Bustan, 2009; Daoud, 1998). This belief indicates that if students develop in their writing early during the language acquisition process, their motivation to try harder will be greater.

AbiSamra (2003) noted that most Arabic-speaking students attending ESL classes currently had been taught writing in their ESL courses all through their K-12 education. Yet, their level of writing skill and proficiency was at the intermediate level. Suliman (2019) explained that "the rationale behind the argument is that even though the main language of instruction in the class was English, Arabic was the main language of the country and the home" (p. 336). AbiSamra asserted that no matter how immersed in English these students might be in school, their proficiency level remained limited

because of their lack of continuous practice and language application outside the learning environment. Accordingly, if students do not have the opportunity to practice the language through speaking or listening, they are less likely to have the chance to do so with reading and writing.

Competent writers depend on their use of diverse and complex word knowledge to express their ideas and, in return, produce a rich writing piece. On the other hand, a writer who lacks sufficient vocabulary would produce weak writing. Moreover, Suliman (2019) noted that "a proficient amount of vocabulary leads to proficient comprehension of reading. Students would need to understand the words they are reading and use in their writing for students to construct meaning. Therefore, it becomes essential to understand the difficulties Arabic-speaking students may face to understand and acquire new vocabulary words" (p. 337).

Linguistic Differences

As illustrated earlier, some of the learning challenges Arabic-speaking ELLs face lie in the structural differences between Arabic and English. Santos and Suleiman (1993) pointed out some of these structural differences as essential to keep in mind when teaching Arabic-speaking ELLs. This distinction between the two languages could create various difficulties for language learners of both languages.

The first difference lies in the Arabic language's writing system; it moves from right to left, unlike English, which moves from left to right. The second difference is word organization and grammar structure. English is a subject-verb-object language, while Arabic is a verb-subject-object language. This difference might confuse Arabic-speaking ELLs, especially when learning to write and form sentences. For example,

creating a simple sentence such as “Ali eats an apple” would be understood by an Arabic-speaking ELL as “Eat Ali an apple.”

Additionally, there are orthography, pronunciation, and spelling differences. For example, there are no silent letters in the Arabic language as in the English language, creating greater layers of difficulty, especially with writing, for Arabic-speaking students when compared to other foreign ESL students. Arabic has 28 alphabet letters, and all of them are pronounced and sounded while speaking. Common English words such as “psychology” and “listen” produce difficulties because of the silent “p” in *psychology* and the silent “t” in *listen* and *often*. Khan (2011b) added that in the case of the Arabic language, there are rare occurrences of interdental sounds such as /θ/ and /∂/, which are the sounds pronounced with words written with “th” (e.g., thing, this, thin . . .). However, Arabic uses two similar sounds for two separate letters. One sound is for the letter (Thā - ث), which is a voiceless interdental fricative sound like “th” in “think”; while the other sound is for the letter (Dhāl – ذ), which is a voiced interdental fricative sound for words like “th” in “there.”

Finally, in explaining the orthographic differences between the languages, Suliman (2019) wrote that:

> The orthographies of both languages are different and tend to pose difficulty in pronunciation and spelling. Some sounds in English do not exist in Arabic: an example is the substitution of the /b/ for a /p/ ("beople ≠ people) and /v/ for /f/ (fideo ≠ video). Arabic does not have two distinctive bilabial plosives, only the voiced /b/ anti-hyper corrected spelling that represents both "b" and /p/ as /p/ and similar for the /v/ and /f/. There are no written vowels; rather, diacritics are used to indicate vowels (Santos & Suleiman, 1993). Here lies what Saigh and Schmitt (2012) identified as “vowel blindness.” Arabic has three short vowels as three long vowels and three short vowels (damma, fatha, kasra), which are not part of the Arabic alphabet/characters. Nunation (Tanween) is also used for duplicate short vowels of the last consonant, which adds a different meaning to the word used (p. 337).

In conclusion, common challenges identified in the literature include (a) structure differences between the languages in directionality and grammatical organization and (b) the linguistic, orthographic structure, and Arabic phonetics. As a result, writing as a fundamental skill for SLA becomes a complicated task, difficult to master, which could hinder learners as they try to acquire new vocabulary. In other words, Arabic-speaking ESL students will focus more on mastering the skill of writing and less on acquiring new words, even though increasing the level of their vocabulary is an essential aspect of advancing as a writer.

Vocabulary Teaching and Learning

Increased academic research in second language teaching and learning showed that vocabulary holds a central place in teaching and learning any language because effective communication requires sufficient vocabulary. Wilkins (1972) and Lessard-Clouston, (2013) agreed that "while without grammar very little can be conveyed, without vocabulary *nothing* can be conveyed" (Suliman, 2019, p. 338). As Schmitt (2008) noted, ELLs have come to understand the value of learning vocabulary because of its significance to help them communicate with others and express their ideas; therefore, students carry dictionaries and not grammar books. Xhaferi and Xhaferi (2008) conceded language teachers and linguistic researchers have become increasingly aware of the growing importance of vocabulary as an imperative learning aspect for ELLs and ESL teachers.

The Importance of Learning and Teaching Vocabulary

Numerous academic researchers investigated the concept of learning and its components; others investigated its importance in terms of vocabulary acquisition.

Ambrose et al. (2010) wrote about the conditions promoting student learning, suggesting seven learning principles and offering guidelines for learning strategies students can use to enhance the quality of their learning. Some principles addressed (a) the influence of prior knowledge, (b) the importance of goal-directed practice coupled with targeted and timely feedback, and (c) the effect of student attitude and motivation on their learning. According to Ambrose et al. (2010) and P. C. Brown et al (2014), students come to class with more than knowledge and abilities. They also bring their personal and emotional experience, "how they perceive themselves and others, and how they will engage in the learning process" (Ambrose et al., p. 4). Ambrose et al. noted that students might be unaware of the factors influencing their learning process, such as L1 transfer to L2. These factors could "impede learning when the new language operates according to fundamentally different grammatical rules, such as a subject-object-verb configuration as opposed to a subject-verb-object structure" (Ambrose et al., p. 21). Consequently, teachers need to know what types of prior knowledge might influence student learning processes. Expanding on the importance of learning and teaching vocabulary, Suliman (2019) wrote

> It is more likely that once teachers understand the concept of learning, it becomes unproblematic to distinguish the meaning of the vocabulary, followed by vocabulary learning principles. Vocabulary is more than just single words. It also includes lexical chunks, phrases of two or more words, such as "Good morning" and "nice to meet you," suggesting that children and adults learn as single lexical units. Therefore, Lessard-Clouston (2013) defined vocabulary as "the words of a language, including single items and phrases or chunks of several words which convey a particular meaning, the way individual words do" (p. 1-2). Consequently, vocabulary is receptive (i.e., words we understand when others use them) or productive (i.e., words we use ourselves) and oral or written. Thus, each of us has four vocabularies: words we understand when we hear them (receptive/oral), words we know when we read them (receptive/written), words we use in our speech (productive/oral), words we use in our writing (productive/written). (p. 339).

These four vocabularies are the same for native English speakers and ELLs; however, the differences among them lies in vocabulary size and learning. In teaching vocabulary to ELLs, it is essential to decide what a word is. For example, in the sentence "the student is eating an apple," each element is identified as a separate word. In teaching the verb "eating," for example, students learn the infinitive verb "to eat," then its word family, which refers to the basic word and all of its inflected forms; so, they count "eat," "eats," "eating," and "ate" as a single word. Nation (1990) wrote that knowing a word includes learning its pronunciation, spelling, appropriateness, and collocations (i.e., words it co-occurs with).

Graves et al. (2013) pointed out that a vocabulary gap exists between native English speakers and ELLs. They noted that native English speakers acquire something between 3,000 to 4,000 new words every school year. As new words are acquired, students develop a more robust understanding of how words work together and increase their sensitivity to context and communicative intent. A significant portion of this vocabulary growth comes from their language usage and the continuous exposure to text and comprehension, which leads them to acquire more words. However, ELL research on vocabulary instruction and vocabulary found that vocabulary size for ELLs is half that of native English speakers (Suliman, 2019).

Vocabulary Learning Strategies

Studies in second language learning and teaching found that ELLs could achieve vocabulary growth successfully through long-term systematic vocabulary instruction (e.g., Asgari & Mustapha, 2011; Carlo et al., 2005; Graves et al., 2013; Schmitt, 2008). For this, advances in academic research are increasing (e.g., O'Malley & Chamot, 1990;

Oxford, 1990; Wenden & Rubin, 1987 as cited in Xhaferi & Xhaferi, 2008). Various factors have been identified which could affect vocabulary growth, including learner language awareness, their needs, their learning strategies, and the learning environment. ESL teachers can help their students by analyzing these factors and their teaching approaches (Bruzzano, 2018).

Language learning strategies are defined differently among scholars. In general, learning strategies are ways and techniques learners use to acquire new information. Oxford (2003) defined language learning strategies as "specific actions taken by the learners to make learning easier, faster, more enjoyable, more self-directed, more effective, and more transferable to new situations" (Suliman, 2019, p. 340). In contrast, Gu (1994) identified VLS "as the particular strategies second language learners use to acquire new words in the second language" (as cited in Asgari & Mustapha, 2011, p. 84), explaining VLS as sub-categories of language learning strategies (Nation, 2001, as cited in Asgari & Mustapha).

Taxonomies of Vocabulary Learning Strategies

Linguistic scholars and researchers in English teaching and learning developed different vocabulary learning taxonomies which point out effective teaching and learning methods (Gu & Johnson, 1996; Nation, 2001; Oxford, 1990; Schmitt, 1997). Schmitt was the first to attempt to understand adequate vocabulary comprehension and learning practices, categorizing strategies into three groups: metacognitive strategies, cognitive strategies, and social strategies, with slight differences in the practices.

Schmitt (1997) Vocabulary Taxonomy

Schmitt's taxonomy consisted of 55 strategies for learning English words based on Oxford's (1990) taxonomy, Schmitt's 1990 research conducted with Japanese learners, and teacher recommendations. This taxonomy is considered the most appropriate one so far because researchers can adapt it based on participant needs. The present study adopted several of these strategies.

Schmitt (1997) divided the strategies into five groups:

1. Determination Strategies are used to discover a new word's meaning (DET).
2. Social Strategies are used to consolidate a word once it has been encountered (SOC).
3. Memory Strategies are used to relate the word to previously learned words (MEM).
4. Cognitive Strategies use repetition and mechanical means to study vocabulary (COG).
5. Metacognitive Strategies are used to control and evaluate their learning (MET).

Oxford (1990) Vocabulary Taxonomy

Oxford (1990) provided many strategies in her taxonomy, describing them as "actions taken by second and foreign language learners to control and improve their learning and are keys to greater autonomy and more meaningful learning" (as cited in Xhaferi & Xhaferi, 2008, p. 34). Oxford (1990) categorized learning strategies into two main groups: direct and indirect (See Figure 3). Xhaferi and Xhaferi explained these direct learning strategies as follows:

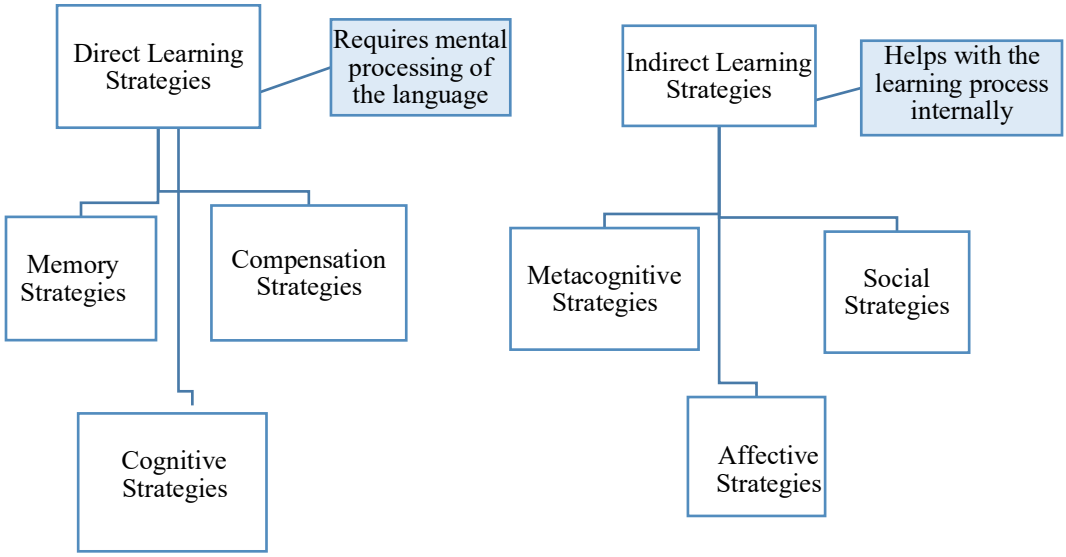
> Direct learning strategies, which are more directly associated with the learning and the use of the target language in making a sound judgment, require the mental

> processing of the language. These strategies include a) Memory Strategies which involve storing and retrieving new information, b) Cognitive Strategies that help learners to understand and produce new language by many different means, ranging from repeating to analyzing expressions to summarizing; and c) Compensation Strategies which allow learners to use the language despite their often-large gaps in knowledge. (p. 34).

On the other hand, indirect learning strategies helped the learning process internally (i.e., supporting and managing language learning without directly involving the target language). These strategies included a) Metacognitive Strategies allowing learners to control their cognition, b) Affective Strategies helping to regulate emotions, motivations, and attitudes; and c) Social Strategies helping students learn through interaction with others.

Figure 3:

Oxford (1990) Learning Strategies (Xhaferi and Xhaferi, 2008)



Vocabulary Teaching Strategies

Schmitt (2008) indicated how ESL teachers could help students advance in their vocabulary growth; “instructions must include both intentional learning components and a component based on maximizing exposure and incidental learning” (p. 329). Teachers must be aware that direct instructions include more than teaching the word and its meaning; rather, there needs to be an intentional learning task on the student’s part. Schmitt commended the integrated international and incidental vocabulary learning structure developed by Nation (2001). Suliman (2019) agreed with Xhaferi and Xhaferi (2008) “that English learners vary in their use of the different learning strategies and their willingness to experiment with new strategies will enhance their learning outcomes” (p. 342).

This structure for vocabulary learning includes four strands. Two focus on meaningful learning and vocabulary teaching, acknowledging the benefits of using lexical item knowledge (i.e., (a) meaning-focused input and (b) language-focused learning). The other two strands: (c) meaning-focused output, and (d) fluency development, deal with communication and activities, including on-task methodologies to improve vocabulary learning and teaching.

Several ESL educators agreed on how these learning strategies were categorized. As researchers explained, ESL teachers can apply these strategies to teach native English speakers and ELLs (Schmitt, 2008). Thus, Suliman (2019) recommended teachers “train their students in different learning strategies” (p. 342). A. Hunt and Beglar (2002) summarized a principled approach to the vocabulary learning processes developed by Schmitt (2008) as a method which could lead to successful vocabulary growth.

According to Schmitt, the more time students are exposed to different words and how to manipulate lexical items, the more likely they will experience better vocabulary learning. A. Hunt and Beglar summarized Schmitt's 1997 approach as follows:

Principle 1: Provide opportunities for the incidental learning of vocabulary.

Principle 2: Diagnose which of the 3,000 most common words learners need to study.

Principle 3: Provide opportunities for the intentional learning of vocabulary.

Principle 4: Provide opportunities for elaborating word knowledge.

Principle 5: Provide opportunities for developing fluency with known vocabulary.

Principle 6: Experiment with guessing from context.

Principle 7: Examine different types of dictionaries and teach students how to use them.

The Vocabulary Tiers of Vocabulary Development

Beck et al. (2002) organized and categorized vocabulary into three teaching tiers. Flanigan and Greenwood (2007) asserted that this system was currently one of the most effective approaches for teaching vocabulary. Hall (2016) added that even though this system is used often to teach native English speakers, it has advantages for ELLs. Suliman (2019) explained the three vocabulary tiers and noted that students would encounter such words throughout their stages of learning. Suliman used the example that tier one words are "the most basic words that most likely will not require instructions (e.g., teacher, baby, brother)" (p. 334), while tier two words are "high-frequency, high-utility academic vocabulary that students might have acquired from other classes or

through incidental learning (e.g., virtual, perspective, analyze)" (p. 334). Students encounter tier two words more during their academic learning than during daily conversations; therefore, direct instruction would be required. Finally, tier three words are subject-specific and low-frequency words (e.g., photosynthesis). Similar to tier two words, tier three words need direct instruction. Within the three tiers of vocabulary, ESL teachers were encouraged to consider the nature of the word, student prior knowledge of the word itself, and student language proficiency. With those considerations, teachers can tailor their approach to meet student levels of learning.

Common Vocabulary Teaching Strategies

As explained thus far, the different tiers of vocabulary indicate that words are not equal; therefore, Flanigan and Greenwood (2007) and DePasquale (2016) noted that instruction for each tier should use same techniques when teaching ELLs. Teachers can use direct and deliberate vocabulary instructions effectively to help students develop vocabulary depth (quality) and breath (quantity) and improve both productive and receptive vocabulary. Consequently, when teaching English vocabulary, ESL teachers should be flexible when selecting appropriate teaching strategies depending on the word category and student vocabulary learning needs.

In addition to developing student vocabulary levels, direct and explicit instructions make it easier for ELLs to retain new words. Smith (2004) explained that "direct instruction with target words leads to 90% better retention in terms of receptive meaning knowledge compared to 59% of production word form" (as referenced in, Schmitt, 2008, p. 343). According to Suliman (2019), Laufer (2005) used explicit vocabulary activities in her study, resulting in "70% of the words were being learned

compared to 41% being learned through incidental learning" (as cited in Schmitt 2008, p. 341). Regardless of the recognition the effectiveness of direct and explicit instruction, Schmitt (2008) saw that "not all teachers incorporate it as a significant element of their classroom instruction" (p. 343).

The following four vocabulary teaching strategies are popular with teachers of English native learners but are used also to teach ELLs:

Frayer Model

Many vocabulary instruction systems include this type of strategy to build student vocabulary knowledge. This strategy is used as a graphic organizer to generate meaning and provide examples and non-examples of the target word.

The Conceptual Map

This strategy asks students to identify the word in terms of what type it is, what it is like, and what examples to use to represent it. Teachers use this strategy as a visual activity to assist students in their understanding of the word meaning.

Personal Glossary

A third strategy would be the personal glossary or the vocabulary notebook strategy used commonly among beginner-level students. Individual levels of word knowledge learning varies; therefore, this strategy allows them to identify what vocabulary they want to learn by adding it to their notebook or glossary. Teachers can work with students individually and support them to develop their word knowledge.

Memory Cards

Teachers can use memory cards as an activity for learning reinforcement. ELLs use memory cards to ensure successful learning of the meaning of the word by creating

two cards: one for the word and the second for its meaning. As students match the words with their definitions successfully, teachers can test student learning achievement.

Teachers can practice various cross-level instructional approaches in their direct and incidental instruction. For instance, Graves et al. (2013) described a multifaced approach to vocabulary acquisition, using multiple teaching strategies (e.g., reading comprehension to teach the three tiers of vocabulary or reading aloud to increase oral vocabulary). This multifaced approach involved "providing rich and varied language experiences, teaching individual words, teaching word-learning strategies, and fostering word consciousness" (p. 18). Thus far, the research reviewed showed there was no single method for teaching vocabulary. Schmitt (2010) noted that several factors affect which strategy is used, including the word type, the curriculum, the student, and the school system. Therefore, several researchers in the field of second language learning and teaching recommend that teachers be conscious in their approach to direct and incidental instruction design and vocabulary learning (DePasquale, 2016; Flanigan & Greenwood, 2007; Graves et al., 2013; Lessard-Clouston, 2013; Nation, 2013; Wang & Chen, 2013).

Beyond the principled approach proposed by Schmitt (2020), additional factors need to be considered in vocabulary instruction design for Arabic-speaking ELLs. For example, Khan (2011b) argued that two reasons could explain Saudi Arabic-speaking ESL students' poor English performance levels. First, Khan noted that most English teachers in K-12 Saudi schools apply a traditional teaching approach, which probably did not concentrate on direct vocabulary instruction. Furthermore, little emphasis was placed on the need and importance of teaching English at the general education and higher education English curriculum levels.

Methodologies Used for Studying Learning Strategies

Understanding the methodology used for research in SLA is critical, since studies differed in nature and purpose. To that point, Gass and Mackey (2013) commented that "To adequately understand conclusions drawn from SLA research, one must understand the methodology to elicit data for that research" (p. ix). They continued,

> It is only through a deeper understanding of the strengths and weaknesses, and the advantages and disadvantages of particular research tools, that the field of second language acquisition can progress beyond issues of methodology and begin to work together as a collective whole. (p. ix).

Existing research in this field used different methods to investigate and study the learning strategies used in teaching English as a second language. Most scholars used mixed-methods research designs, which were weighted heavily on qualitative research methods. The literature review indicated that the majority of second language research used mixed-methods research designs to increase the validity and reliability of their findings (e.g., Saigh & Schmitt, 2012). Quantitative research designs such as pre- and post-testing were used in studies investigating specific areas of language acquisition such as errors in writing and spelling. This study's research design aimed to use quantitative research design to focus on vocabulary acquisition and teaching.

Conclusion

In conclusion, learning and teaching vocabulary is an essential aspect of learning English as a second language. The literature review explored learning areas, and how vocabulary is taught in general, then provided additional information concerning vocabulary acquisition by Arabic-speaking ESL students. VLS used by the second language learner to acquire new words were identified (Gu, 1994; Oxford, 2003). Furthermore, the literature review explored commonly used vocabulary teaching

strategies to teach Arabic-speaking ESL students effectively and considered the differences between the two languages. Language learning challenges ranging from phonological to morphological and structural difficulties that face Arabic-speaking students while learning English have been well-documented (Ibrahim, 1977, 1983; Zughoul, 1979). Well-known researchers have provided VLS which can be used as models to design vocabulary taxonomies for second language learners.

CHAPTER 3

METHODOLOGY

Introduction

This study followed a nonexperimental descriptive research design. This type of descriptive research allowed the researcher to summarize commonly used VLS. Using the descriptive element, the study investigated correlations between high language proficiency test scores (i.e., TOEFL and IELTS) and VLS. The possible effects of attitude and motivation toward learning English as a second language on learning English vocabulary were presented. By exploring correlations among the variables, additional data will be provided on the most effective VLS for Arabic-speaking ESL students.

Research Design

As part of the nonexperimental quantitative descriptive research design, the study used a self-report survey for data collection. Permitting easy access to the participants through emails or social media, an online survey was the most appropriate method for data collection and met the requirements of the research design. The questionnaire consisted of three sections: (a) demographic questions, (b) a VLS section, and (c) an attitudes and motivations survey. The items used for the VLS survey were based on Schmitt's (1997) taxonomy of VLS. The survey of student attitudes toward and motivations for learning ESL used selected items from the AMTB survey developed by Gardner (1985) and later adopted by Abu-Snoubar (2017).

Population and Sample

The research sample included Arabic-speaking Saudi Arabian ESL students who had completed or were currently attending English language schools in the United States. The target sample included Saudi Arabic-speaking students who were 18 years or older and included former Saudi Arabic-speaking students who graduated from a U.S. university within the past five years. The sample was collected via an online survey platform, SurveyMonkey, which facilitated survey design and distribution to participants. The sampling procedure for this study was systematic random sampling; this procedure is more manageable than simple random sampling because numbering of every subject or name was not required.

Research Questions

The study employed theoretical and applied research strategies. The research questions below were based on the hypothesis that attitudes toward and motivations for learning ESL were significant predictors for choices of VLS by Saudi Arabic-speaking ESL students who have studied or are currently studying ESL in the United States.

1. What are the most commonly used VLS of Saudi Arabic-speaking ESL students in learning new English words?
2. Are there gender differences in VLS?
3. Are VLS related to the years spent learning English?
4. What are Saudi Arabic-speaking ESL student attitudes toward and motivations for learning ESL?
5. Are there gender differences in attitudes toward and motivations for learning ESL?

6. Are attitudes toward and motivations for learning ESL related to the years spent learning English?
7. Are VLS related to attitudes toward and motivations for learning English?

Instrumentation

The study used a self-report survey for data collection which participants accessed via email, text messages or online chats (See Appendix A for the survey). The estimated time to answer it was 25 minutes. A survey was deemed the most appropriate method of data collection, permitting easy access for the participants and meeting the research design characteristics. The questionnaire consisted of three sections: (a) demographic and academic background questions, (b) the vocabulary learning strategies survey, and (c) the attitude and motivation survey. The complete survey included 82 items: nine items for demographic and language background, 28 items for VLS, and 30 items in the attitude and motivation section.

Academic Background Questions

The first section asked general demographic questions including gender and years of studying English. Academic background questions asked for participant TOEFL, TOEFL iBT, or IELTS academic overall test scores. Participants reported the most recent language proficiency test score received, which is the total score obtained from all four sections: Reading, Listening, Speaking, and Writing. The reliability estimation for the Listening and Reading sections, which contain selected-response questions, uses a method based on Item Response Theory. The reported reliability indices for Reading and Listening were acceptably high at 0.85, based on operational data from 2007 (Enright & Tyson, 2011; ETS, 2011). For the Writing and Speaking sections which contain

constructed-response tasks, generalizability theory (G-theory) was used. The G-theory-based reliability for Speaking was 0.88, yet weaker for Writing (0.74). Score reliability estimates and the standard error of measurement (SEM) were based on operational data from 2007; Reading = 3.35, Listening = 3.20, Speaking = 1.62, Writing = 2.76.

Vocabulary Learning Strategies Survey

The items used in the VLS Survey were based on Schmitt's (1997) taxonomy of VLS. Restricted items, including restricted number of answer options, were used because they do not give participants the choice of responding in their own words. Response options are restricted to a finite number of options, e.g., "never" or "always." The survey used 24 items of the original 55 provided by Schmitt (1997) in only four categories: (a) strategies for the discovery of a new word's meaning (DET); (b) strategies for consolidation of a word once it has been encountered (SOC); (c) memory strategies for relating the word to previously learned words (MEM); and (d) cognitive strategies of repeating or using mechanical means to study vocabulary (COG).

According to Xhaferi and Xhaferi (2008), Schmitt's (1997) taxonomy has been become popular, used and adopted by educators and scholars in SLA to develop taxonomies for teaching and learning vocabulary. Several of the items could be used by teachers in classroom activities. Nonetheless, for the purposes of this research, using such items would not be appropriate; thus, the researcher decided to exclude such items and focus on items which would be used by ELLs, such as *I write the new word several times*. The researcher made slight changes to the wording and organization of the strategies to avoid confusion for the participants. Response options used a five-point frequency scale from 1 (*Never)* to 5 (*Always)*. (See Table 1 for the complete list of categories and items.).

Table 1

Taxonomy of Vocabulary Learning Strategies

Strategies for the discovery of a new word's meaning (DET)	Strategies for consolidation a word once it has been encountered (SOC)	Memory strategies for relating the word with some previously learned words (MEM)	Cognitive strategies to repeat and use mechanical means to study vocabulary (COG)
I analyze part of speech	I create word lists	I connect a word to a personal experience	I say the word out loud more than once
I analyze affixes and roots	I use word maps to connect meaning with the word	I test myself with word tests	I study the spelling of a word
I check for Arabic translation	I use flash cards	I organize words in groups to study them (verbs with verbs, nouns with nouns, etc.)	I underline first letter of the word
I use pictures to learn the meaning of the word	I use new words in sentences	I say new word aloud when studying it	I write the new word several times
I guess the meaning of the word from the sentence or the passage	I use English language media (social media, TV, radio) to reinforce my knowledge of the word.	I use physical action when learning a word	I take notes in class
I use a dictionary (Bilingual or Monolingual)			I highlight/underline/circle new words in my textbook and write their meaning
I study and practice meaning in a group			I put English labels on physical objects
I ask classmates for meaning			I keep a vocabulary notebook
I ask the teacher for paraphrase or synonyms of new word			
I discover new meaning through group work activity			

**(Adopted from Schmitt 1997:207) (as cited in Xhaferi & Xhaferi, 2008, p. 35).*

Attitudes Toward and Motivations for Learning English as a Second Language Survey (AMT Survey)

The third section included questions about student attitudes toward and motivation for learning English as a second language. Several items were adopted from Abu-Snoubar's "An evaluation of EFL students' attitudes toward English language learning in terms of several variables" (2017). The survey she used was based on the Attitude Motivation Test Battery (AMTB), developed initially by Gardner (1985, 2004). This study used 24 items from Abu-Snoubar's survey. A five-point Likert scale was used (1 = *strongly disagree* to 5 = *strongly agree*). Abu-Snoubar stated the survey demonstrated satisfactory reliability and construct validity; a total of 24 items from that questionnaire were used in this study. Some items were modified; an additional six items were added to accommodate the purpose and sample in this study.

Cortes (2002) identified five scales from Gardner's (1985) original survey for the AMTB variable: Integrative Orientation, Instrumental Orientation, Attitudes Toward Learning English, Motivational Intensity, and Desire to Learn English. The first three scales assess the attitude and behavior aspects, which is represented as the learners' "attitude toward any aspect of the situation in which the language is learned" (Gardner, 2001, p. 4). This scale includes a complex of attitudes, emotions, and directed goals which would push learners toward learning the targeted language. The latter two scales assess the motivation aspect of SLA, which could involve "the genuine interest in learning the second language in order to come closer to the other language community" (Gardner, 2001, p. 5). The subscales under each category speak of the learners' personal opinion about learning the language and various interconnected aspects involved in the second language learning process.

Variable Definitions

Detailed tables of definitions of variables, instrumentation, and evidence of their validity and reliability are available in Appendix B.

Language Proficiency Level

Language proficiency levels were measured using two English language tests, the IELTS academic test and the TOEFL. According to the Educational Testing Service (ETS) (2021), the TOEFL iBT identifies English language proficiency as student ability to use and understand English at the university level. The test evaluates how well students combine listening, reading, speaking, and writing skills to perform academic tasks. Participants reported their overall TOEFL iBT score, which ranges from 0 to 120.

The IELTS test also measures language proficiency of people who want to study, work, or migrate to places English is the language of communication" (IELTS, 2021c). Unlike the TOEFL exam, the IELTS Academic test uses a nine-band scale to identify levels of proficiency, from 1 (*non-user*) to 9 (*expert*) (IELTS, 2021c). For both tests, vocabulary is a core skill; vocabulary expansion becomes significant for language development in all skills (Hashemi & Daneshfar, 2018). In the past two years, scores reports show that Arabic-speaking test-takers scores range was (5 to 6); 22% of Saudi Arabian test takers had a mean score of 5.5 (IELTS, 2021a).

Vocabulary Learning Strategies

The items in the VLS Survey were based on Schmitt's (1997) taxonomy of VLS. The survey used 27 items from the original 55 items developed by Schmitt in four categories: DET, SOC, MEM, and COG. Participants scored each item on a scale from 1 (*Never)* to 5 (*Always*), yielding a total possible score of 135.

Student Attitudes Toward and Motivations for Learning English as a Second Language

The term learning attitude included emotional constructs such as feelings, self-esteem, and relationships to the community (Abidin et al., 2012). A positive attitude encourages successful learning of a foreign language; in contrast, a negative attitude can hinder learning and study of the language. As referenced earlier, several items were adapted from Tamador Abu-Snoubar's (2017) study, who adapted Gardner's (1985) AMTB. Here, 24 items were adapted from Abu-Snoubar, and six items were added to accommodate the participant criteria and the research questions to result in the Attitudes and Motivations Survey (ATM). The 30 statements appeared in a five-point Likert scale (1 = *strongly disagree* to 5 = *strongly agree*), yielding a total possible score of 150.

Data Collection Procedure

Prior to initiating data collection, the Application for Approval of Human Subjects Research was submitted to the Andrews University IRB and the approval letter was received (see Appendix C).

The online survey was created and designed using the platform SurveyMonkey and sent to participants via online resources such as text messages, WhatsApp, LinkedIn, Facebook, Twitter, and email. The data collection process used a systematic random sampling procedure, to select a sample of 140 Saudi Arabic-speaking ESL students. A brief introduction about the research, purpose, participation criteria, and researcher's contact information were included with the online consent form. Participants accessed the online survey link and signed the online consent, indicating they had read, understood, and agreed to participate. After clicking the "I Agree" button, participants received access to the online survey. The target sample size was 140; the survey link was sent to 350

individuals to ensure an adequate sample size. Data collection was concluded when the target sample size was achieved.

At the beginning of the survey, participants were asked brief demographic questions that included gender, educational background, years spent learning English as a second language in Saudi Arabia, then years as ESL students in the U.S., language proficiency level, and language proficiency test scores. Because the target population for this survey was Saudi Arabic-speaking ESL students over 18 years old, the researcher did not include demographic questions on race, ethnicity, or age.

Treatment of the Data

All collected data were secured and saved in a password-protected folder on the researcher's personal computer. No hard copies were printed; the researcher created backup electronic copies of the survey answers in another password-protected folder on the researcher's personal computer. The anonymous response option was used, which ensures that results do not include IP addresses; SurveyMonkey created random ID numbers for the participants with completion dates and times for each participant. SurveyMonkey saves and keeps a record of the answers. The researcher downloaded the responses, deleted the ID numbers and dates of completion, then saved the data in SPSS. Only the researcher and the methodologist have access to the raw data. SPSS created identification codes for each participant.

Based on IRB policy, the researcher will store the data for at least three years, after which and after completing the publication process, it will be deleted securely.

Data Analysis

Data were analyzed using the statistical program SPSS. Descriptive analyses were used to determine frequencies of the most commonly used strategies and participant attitudes and motivations toward learning English as a second language. No consistent number of participants answered all three sections of the survey; therefore, the data were divided into three sets for accurate analysis. Dataset 1 was the demographic section; dataset 2 was the VLS section; and dataset 3 was the ATM survey.

To examine the constructs underlying the data and to examine the validity of the strategies and attitudes in the Saudi Arabic-speaking ESL student context, exploratory factor analysis using principal component analysis was performed. According to Mertler and Reinhart (2017), principal component analysis is advantageous when the shared assumption in the instrument(s) is that the independent variables are highly correlated; with this analysis, I reduced the number of independent variables.

To analyze and interpret the results for the VLS and the ATM factor analyses, I used the Kaiser criterion, then examined the scree plots, and retained components accounting for at least 70% of total variability.

For the VLS items, seven components were extracted. Upon examination of the scree plot, the first three or four components were noted to have higher eigenvalues. Therefore, I ran the factor analysis again, restricting the number of factors to 3, then ran it again, restricting for 4 factors. For the ATM items, I used the Kaiser criterion and the scree plot to identify components and then restrict the analysis to three factors.

Reliability estimates for each of the VLS and the ATM instruments were measured using Cronbach's alpha which indicated the instruments were reliable with

high validity. Selected items in the ATM survey were stated negatively; however, the researcher decided not to reverse score these items when analyzing because the scores represent the attitude and motivation as they are negative. Also, the name of the category is negative attitude, so it makes sense to leave it as negative statement and analyze the how the respondents feel about the statements. If the items were reverse scored, they will become positive attitude and that contradicts with the purpose of the category as negative attitude.

Summary

A nonexperimental descriptive quantitative research design was used to describe commonly used VLS used by Saudi Arabic-speaking ESL students. This research design illustrated connections among IELTS and TOEFL scores and use of specific types of VLS. The target population was Saudi Arabic-speaking ESL students who are currently in or have completed English language programs in the U.S. The intent was to benefit ESL teachers, helping them understand the most appropriate vocabulary teaching strategies to help Arabic-speaking students learn new vocabulary and provide insight into these ELLs attitude toward and motivation for learning English as a second language.

CHAPTER 4

RESULTS

Introduction

The purpose of this study was to discover the common preferred and used English VLS of Saudi Arabic-speaking ESL students. An investigation of strategies students viewed as most helpful to assist them in learning new English vocabulary was conducted. In addition, the study sought to identify Saudi Arabic-speaking ESL student attitudes toward and motivations for learning English as a second language and whether these attitudes influenced which VLS they preferred and used most often. This chapter presented the results of the study and described the major findings.

Description of the Sample

A total of 340 participants took the online survey via SurveyMonkey. Some responses were excluded from data analysis because participants either skipped several key questions or chose to discontinue participation. All 340 participants signed the online consent form. The final number was 233 participants, 93 more than the target sample size of 140 participants. These participants answered all three sections of the survey completely.

Discounted Responses

For the language proficiency level items, participants reported their TOEFL iBT or/and IELTS test scores. Upon examination of the scores, the TOEFL iBT test scores

were omitted from the analyses because several participants reported the TOEFL-paper test scores instead of their TOEFL iBT test scores; these have different scoring systems and scales. According to ETS TOEFL (2021), there was no conversion chart to compare scores officially and accurately between the revised TOEFL paper-delivered test and the TOEFL iBT test; research-based information to support the conversion is lacking. Even though several universities and academic institutions have their own conversion system for interpreting both scores, I was unable to adapt them. Because I used the language proficiency tests issued by the ETS, to ensure the validity of interpretation of those results, I would need to use the same system they use to analyze the test results. Therefore, it was not possible to adapt a different conversion chart; thus, there was no way to reconcile the scores. As a result, the TOEFL iBT test score item was unusable. However, The IELTS scores were included in the data analyses.

Demographic Characteristics of the Participants

Table 2 reports the gender and education characteristics of the participants. There were about the same number of female (49.7%) and male (48.7%) participants; most were pursuing Bachelors (41.7%) or Masters (36.9%) degrees. Of the 233 participants, 153 reported their IELTS test results; participant English proficiency levels ranged between 5 and 7.

Table 2

Demographic Characteristics of Respondents (Gender and Education)

Demographic Category		*N*	%
Gender	Male	93	49.7
	Female	91	48.7
	Total	184	
	Missing	3	
Education	High school degree/equivalent	20	10.7
	Associate degree	8	4.3
	Bachelor degree	78	41.7
	Master degree	69	36.9
	Doctoral degree	12	6.4
	Total	187	
	Missing	0	

Table 3

Difficulty in Learning English, Descriptive Statistics

How difficult is the following aspect of learning English?				
	N	*M*	*SD*	%a
Speaking	231	3.50	1.04	15.9
Listening	231	3.49	1.04	18.6
Vocabulary	232	3.30	0.86	15.5
Reading	230	3.29	1.04	19.8
Writing	231	2.84	0.97	38.6

Note: [a]Percentage of participants answering "Difficult" and "Very Difficult."

Table 3 shows the results for the question: "How difficult are the following aspects in learning English: vocabulary, writing, reading, listening, or speaking?" Participants reported that writing was the most difficult aspect at 39.6% ($M = 2.84$, $SD = 0.97$), followed by reading at 19.8% ($M = 3.29$, $SD = 1.04$), then listening with 18.6% ($M = 3.49$, $SD = 1.04$). Speaking at 15.9% ($M = 3.30$, $SD = 0.86$), and vocabulary with 15.5% ($M = 3.30$, $SD = 0.86$) were similar, making vocabulary the least difficult aspect. The literature review agreed that writing was one of the most challenging aspects of ESL.

A well-established fact is that writing is challenging for everyone, including native English speakers, but there are factors that exacerbate these challenges in the case of Saudi Arabic-speaking ELLs. Because of the other language differences and language learning difficulties Saudi Arabic-speaking ESL students encounter while learning English including linguistic structure, learning writing in English becomes more challenging than for other English native speakers and ELLs. For instance, according to

Suliman (2019), Daoud (1998), and AbiSamra (2003), in addition to mastering the linguistic structure of the English language and acquiring the ability to differentiate between the grammatical organization of the Arabic and English languages, these ELLs need to work consistently on developing their vocabulary knowledge. As a student's level of second language learning develops, the expectation to increase vocabulary develops. As a result, academic writing becomes more complicated.

Furthermore, later we will observe that almost half of the participants believed learning vocabulary was a critical aspect of learning ESL; about 95% of participants asserted that vocabulary was extremely important to a moderately important aspect of learning English.

Preliminary Analyses

The items for VLS and attitudes toward and motivations for learning English as a second language were adapted from several instruments. The items in the VLS survey were based on Schmitt's (1997) taxonomy of VLS, while several items for the ATM survey were adapted from Abu-Snoubar's (2017) study, who adapted Gardner's (1985) AMTB. To examine the underlying constructs of the data and to examine the validity of these strategies and attitudes in the Saudi Arabic-speaking ESL student context, I performed exploratory factor analysis using principal component analysis. Mertler and Reinhart (2016) stated that principal component analysis is advantageous when the shared assumptions of the instrument(s) are that the independent variables are correlated highly; using this analysis, I reduced the number of independent variables (i.e., both instruments had 20+ items). By performing this analysis on both instruments, I could explore and test the research questions based on how the items were grouped.

I utilized orthogonal rotation (Varimax rotation) on the assumption that the subcategories of the variables were uncorrelated. In the case of VLS, the literature indicated that a correlation existed between VLS and SLA or language proficiency; however, this assumption, even in theory, did not explore the intercorrelations among the subcategories of VLS. Thus, the hypothesis used was that these subcategories were uncorrelated. (See Komol & Sripetpun, 2014). Nonetheless, the evidence showed that these subcategories are correlated.

For both cases (i.e., the VLS and the ATM) the extraction method was principal component analysis with an oblique (Varimax with Kaiser normalization) rotation. In analyzing and interpreting the results for the VLS and the ATM analyses, I used three methods to determine which components to retain. First, I used the Kaiser criterion for items with eigenvalues greater than 1. Then, I examined the scree plots to see which components were within a sharp descent before the eigenvalues leveled off. According to Mertler and Reinhart (2016), examining the scree plot is "fairly reliable when the number of individuals is > 250, and communalities are > .30" (p. 257). Finally, I retained the components which accounted for at least 70% of the total variability. I ran the factor analysis using the Kaiser Meyer Olkin Measure of Sampling Adequacy and Bartlett's test of sphericity because of the small sample size and to test the null hypothesis that the variables in the population correlation matrix were uncorrelated. This test showed that we should reject the null hypothesis because of the high correlations existing among the variables, which in turn meant we could conduct principal component analysis.

Results for the VLS

For the VLS items, the Kaiser criterion was used for items with eigenvalues greater than +1; seven components were extracted. Upon examination of the Scree Plot (see Figure 4), the first two components were larger in eigenvalue magnitude than other components. Upon further examination, the first three or four components had higher eigenvalues than the remaining three or four. The line began to level off at the fourth component. Therefore, I ran factor analysis again, restricting the number of factors to three; then ran it again, restricting for four factors. Factor loadings above .30 are shown in bold on Table 4. I consulted with a university English professor with experience in second language learning and teaching, to identify the best groupings of the items for the VLS components. After examining the criteria and consulting with the professor, the four components for VLS appeared to be the most logical explanation for the groupings, providing better chances to analyze the items. Even though this grouping of items organized them in their possible categories, some of the items seem to fit better in other categories. For example, it would be more logical to place VLS 15 ‘I use English language media (social media, TV, radio) to reinforce my knowledge of the word’ in VLS II: Reinforcement Strategies because it allows the ELL to use media to strengthen the meaning of the word. Similarly, with VLS 16 ‘I connect the word to a personal experience’ which could be place under VLS III: Social strategies and VLS 23 ‘I underline the first letter of the word’ in VLS IV: Linguistic Analysis Strategies. Nonetheless, to ensure validity construct and minimize errors in analysis, the items were placed in the categories resulted from the factor analysis.

Figure 4

Scree Plot for Principal Component Analysis of VLS

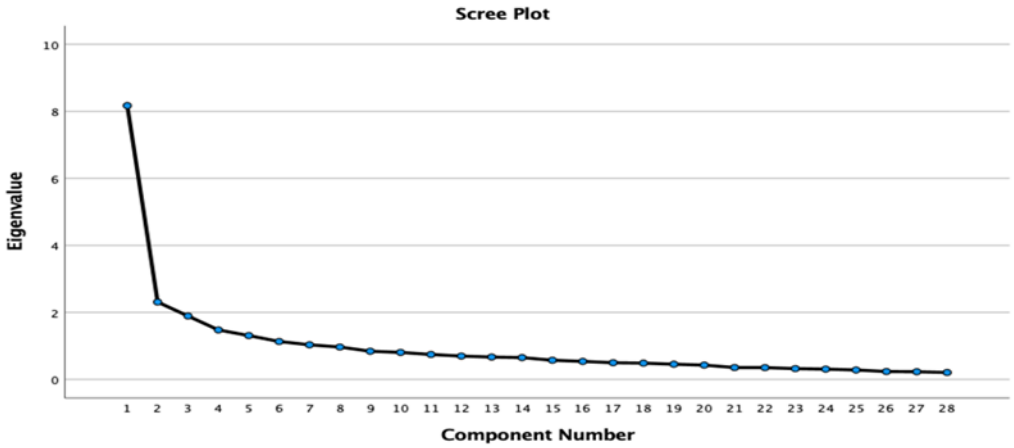


Table 4

Results from Factor Analysis of the Vocabulary Learning Strategies Survey (Schmitt, (1997) Vocabulary Learning Taxonomy)

VLS Item	Factor Loading			
	1	2	3	4
Factor 1: Discovery strategies used with external tools				
VLS 13. I use flash cards.	**.77**			
VLS 11. I create word lists.	**.73**			
VLS 28. I keep a vocabulary notebook.	**.72**			
VLS 27. I put English labels on physical objects.	**.66**			
VLS 18. I organize words in groups to study them (verbs with verbs, nouns with nouns, etc.).	**.65**		**.34**	
VLS 26. I highlight/underline/circle new words in my textbook and write their meaning / I use the vocabulary section in my textbook to write new words and their meanings.	**.59**	**.45**		
VLS 23. I underline first letter of the word.	**.58**		**.36**	
VLS 17. I test myself with word tests.	**.57**			
VLS 12. I use word maps to connect meaning with the word.	**.53**			
VLS 4. I use pictures to learn the meaning of the word.	**.34**		**.48**	**.35**
VLS 6. I use a dictionary (Bilingual or Monolingual).	**.34**			
Factor II: Reinforcement Strategies				
VLS 24. I write the new word several times.		**.75**		
VLS 21. I say the word out loud more than once.		**.75**		
VLS 19. I say new word aloud when studying it.		**.72**		
VLS 25. I take notes in class.		**.64**		
VLS 22. I study the spelling of a word.		**.58**		
VLS 14. I use new words in sentences.		**.53**		**.40**

Table 4, continued

Factor III: Social Strategies			
VLS 8. I ask classmates for meaning		**.76**	
VLS 7. I study and practice meaning in a group.		**.71**	
VLS 10. I discover new meaning through group work activity.		**.60**	
VLS 20. I use physical action when learning a word.		**.51**	
VLS 9. I ask the teacher for paraphrase or synonyms of new word.	**.33**	**.50**	
Factor IV: Linguistic Analysis Strategies			
VLS 1. I analyze part of speech to discover meaning of new words			**.67**
VLS 5. I guess the meaning of the word from the sentence or the passage.			**.65**
VLS 2. I analyze affixes and roots.			**.57**
VLS 16. I connect a word to a personal experience.			**.50**
VLS 15. I use English language media (social media, TV, radio) to reinforce my knowledge of the word.			**.44**
VLS 3. I check for Arabic translation.			

Notes: Extraction Method: Principal Component Analysis; Rotation Method: Varimax with Kaiser Normalization.
[a]Rotation converged in 9 iterations.

Table 4 shows the results of the factor loadings for the VLS principal component analysis. The groupings represent logical classification categories. For example, Factor I was Discovery Strategies which are used with external tools. These items address the strategies students used to discover the meaning of new words, including tools, objects such as dictionaries, or physical activities (e.g., “I use flash cards.” “I use a dictionary.”). Factor II was Reinforcement Strategies, understood to be internal learning processes and strategies to strengthen the meaning of a new word (e.g., “I say the word out loud more than once.” “I use new words in sentences.”). Factor III was Social Strategies, involving participation with other learners or group activities and related to external learning processes and strategies to strengthen meaning (e.g., “I ask the teacher for paraphrase or synonyms of new word.” “I study and practice meaning in a group.”). Factor IV was Linguistic Analysis Strategies; students used grammatical analysis and the linguistic structure of the word itself to learn the meaning of new words or to strengthen retention of a word previously learned.

The strategy “I check for Arabic translation.” did not load under any of the four factors because no variance was observed in how often this strategy was used; almost 80% of the participants used it; thus, it did not belong to any factor loading. Nonetheless, analysis showed that the strategy would fit into Linguistics Analysis Strategies; which is understandable considering that ELLs would use the linguistic structure of both languages to discover meaning. I kept this item and included it in the analyses because of the specificity to the Arabic language and because it addressed what I believe is an important aspect of learning English as a second language.

Factor Analysis for ATM Items

For the attitude and motivation items, I used the Kaiser criterion along with the scree plot to identify the factors with eigenvalues > 1. Eight components were extracted. After examining the scree plot (Figure 5), two factors appeared to be larger than subsequent components in eigenvalue magnitude; the third component seemed to be where the line leveled off. Therefore, I restricted the items to three factor loadings and ran the analysis again. Table 5 shows the results for the analysis after restricting the factors. Factor loadings above .30 are in bold. The items in the ATM were divided into two categories. Factor I represents Motivational Intensity or items involving intrinsic/extrinsic, social/personal/individual, and professional/academic motivations. These items refer to the drive and the why behind learning ESL. Items in factors II and III represent attitude items, or feelings and opinions about the English language and the learning process. Factor II was Negative Attitudes and Factor III was Positive Attitudes.

Figure 5

Scree Plot for Principal Component Analysis of ATM

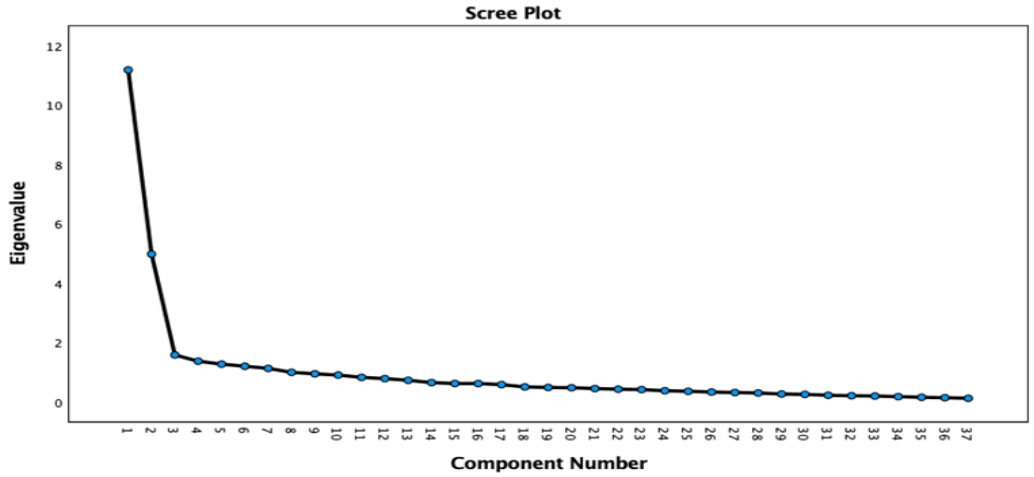


Table 5

Results From Factor Analysis of Attitudes Toward and Motivations for Learning English as a Second Language

ATM Item	Factor Loading		
	1	2	3
Factor I: Motivational Intensity			
ATM 7. I am interested in studying English because learning English is a great experience.	**.69**		
ATM 12. I feel happy when I write notes and instructions in English.	**.67**		
ATM 13. My aptitude toward learning English is high.	**.65**		
ATM 11. Studying foreign languages like English is enjoyable.	**.64**		
ATM 10. I enjoy listening to English.	**.63**		
ATM 1. Studying English is important because it allows me to be more at ease with people who speak English.	**.62**		
ATM 8. Speaking English increases my self-confidence.	**.61**		**.38**
ATM 9. Studying English makes me have more confidence in expressing myself.	**.58**		
ATM 5. I look forward to the time I spend studying English in the language program.	**.57**		
ATM 6. I am satisfied with my performance in learning English.	**.54**		**.39**
ATM 2. In my opinion, studying English is important for me because it will make me a more knowledgeable person.	**.51**		**.36**
ATM 37. I like to master English to help me resume my education. (scholarship program/SACM).	**.52**		**.36**
ATM 3. In my opinion, people who speak more than one language are very knowledgeable.	**.52**		
ATM 36. Studying English is important because I think it will someday be useful in getting a good job when I return to Saudi Arabia.	**.51**		**.46**
ATM 4. Studying English allows me to expand my knowledge and learning.	**.49**		**.41**
ATM 33. Studying English is important because other people will respect me more if I know English.	**.45**		
ATM 35. I can use the vocabulary I learned from the English classes in everyday conversation in real life.	**.41**		

Table 5, continued

ATM Item	Factor Loading		
	1	2	3
Factor II: Negative Attitude			
ATM 16. I feel bored when I listen to others while they speak English.		**.79**	
ATM 19. In my opinion, the English language is difficult and complicated to learn.		**.78**	
ATM 15. Watching English programs is not enjoyable for me.		**.77**	
ATM 20. Frankly speaking, I really have little interest in learning English.		**.74**	
ATM 14. I think that learning English is dull and boring.		**.74**	
ATM 22. I hate English.		**.71**	**-.34**
ATM 21. I would rather spend my time on subjects other than English.		**.65**	
ATM 17. I put off studying English at home as much as possible.		**.64**	
ATM 34. To tell the truth, I study English just to pass the exams (TOEFL/IELTS)		**.57**	**-.35**
ATM 23. I think writing in English is not important.		**.39**	
Factor III: Positive Attitude			
ATM 30. Knowing English is an important personal goal in my life.			**.67**
ATM 31. Being good in English helps me communicate in English effectively.	**.43**		**.65**
ATM 25. I want to learn as much English as I can.			**.65**
ATM 29. I study English because it will help me study other courses at university.			**.65**
ATM 32. I like to learn English because it helps me travel abroad.	**.38**		**.64**
ATM 28. Being good at English language will help me do better in the other subjects that I study.			**.62**
ATM 24. Studying English is important because it will allow me to meet and establish friendships with people from different cultures.			**.60**
ATM 26. English is an important part of my educational program to get into a top rank university.			**.52**
ATM 27. Studying English helps me to improve my personality.	**.42**		**.50**

Notes: Extraction Method: Principal Component Analysis., Rotation Method: Varimax with Kaiser Normalization;
[a]Rotation converged in 6 iterations

Reliability Estimates

Reliability estimates for the VLS and the ATM instruments were measured using Cronbach's alpha, to "estimate the proportion of variance that is systematic or consistent in a set of test scores. It can range from 00.0 (if no variance is consistent) to 1.00 (if all variance is consistent)" (J. D. Brown, 2002, para. 5). Table 6 demonstrates Cronbach's alpha statistics for the scales and subscales. The alpha coefficient for the two scales was .70 or higher, suggesting the items have acceptable levels of internal consistency, indicating the instruments were reliable (See J. D. Brown, 2002; Taber, 2018). Selected items on the ATM survey were stated negatively to represent the negative attitude category and with this there is no need to reverse score when analyzing them because the purpose is to know the participants attitude toward learning English, whether it is positive or negative. The EFA (factor analysis) provided evidence of validity.

Table 6

Results for Instrument Reliability

Variable	*M*	*SD*	*N*[a]	Cronbach's Alpha
Vocabulary Learning Strategies (Total Scale)	3.03	0.53	28	.905
VLS Category I: Discovery Strategies used with external tools	2.60	0.79	11	.863
VLS Category II: Reinforcement Strategies	3.59	0.81	6	.821
VLS Category III: Social Strategies	2.85	0.79	5	.750
VLS Category IV: Linguistics Strategies	3.44	0.67	5	.650
Attitudes and Motivations (Total Scale)	3.60	0.94	37	.852
ATM Category I: Motivational Intensity	4.06	0.53	17	.900

ATM Category II: Negative Attitude	2.27	0.79	10	.882
ATM Category III: Positive Attitude	4.32	0.55	9	.878

Note: [a] Number of items in each scale

Results

In this section, the results of the study are presented and organized according to the research questions:

1. What were the most commonly used VLS of Saudi Arabic-speaking ESL students in learning new English words?
2. Were there gender differences in VLS?
3. Were VLS related to the number of years spent learning English?
4. What were Saudi Arabic-speaking ESL student attitudes toward and motivations for learning ESL?
5. Were there gender differences in attitudes toward and motivations for learning ESL?
6. Were attitudes toward and motivations for learning ESL related to the years spent learning English?
7. Were VLS related to attitudes toward and motivations for learning English?

Q1: What Were the Most Commonly Used VLS of Saudi Arabic-Speaking ESL Students in Learning New English Words?

Based on the strategies used by participants, some categories of VLS were used more often than others. Table 7 shows that the most commonly used strategies were in Category II Reinforcement Strategies (M = 3.58, SD = 0.81), followed by those in Category IV Linguistic Analysis Strategies (M = 3.45, SD = 0.67). Table 8 lists the top

10 most commonly used VLS; more than half were from Category II; the other half were from Category IV.

Table 7

Vocabulary Learning Strategies Based on Category

Vocabulary Learning Strategies	*N*	*M*	*SD*
Category II: Reinforcement Strategies	209	3.58	0.81
Category IV: Linguistic Analysis Strategies	210	3.45	0.67
Category III: Social Strategies	210	2.84	0.80
Category I: Discovery Strategies Used with External Tools	210	2.60	0.79

Note: Likert Scale: 1=never, 2=rarely, 3=sometimes, 4=usually, 5=always

Table 8

Top 10 Most Commonly Used Vocabulary Learning Strategies

	Descriptive Statistics	*N*	*M*	*SD*	%[a]
1	VLS 5. I guess the meaning of the word from the sentence or the passage.	209	3.75	1.00	63.3
2	VLS 19. I say new word aloud when studying it.	208	3.73	1.12	57.2
3	VLS 21. I say the word out loud more than once.	207	3.71	1.13	59.5
4	VLS 15. I use English language media (social media, TV, radio) to reinforce my knowledge of the word.	207	3.71	1.11	26.2
5	VLS 25. I take notes in class.	207	3.70	1.11	54.3
6	VLS 14. I use new words in sentences.	209	3.57	0.99	51.0
7	VLS 1. I analyze part of speech to discover meaning of new words	210	3.54	1.00	51.4
8	VLS 3. I check for Arabic translation.	210	3.52	1.04	51.9
9	VLS 22. I study the spelling of a word.	208	3.44	1.18	45.7
10	VLS 24. I write the new word several times.	207	3.37	1.20	41.9

Notes: [a] Percentage for "Usually" and "Always" combined.
Likert Scale: 1 = never, 2 = rarely, 3 = sometimes, 4 = usually, 5 = always

Of the 233 participants who took the survey, about 91% completed the second section of the survey covering the VLS questions (n = 210). Table 9 shows the descriptive analyses for VLS by category with the standard deviations. The percentages in Table 9 show responses for the options 4 (*usually*) and 5 (*always*).

Divided into four categories; about half of the strategies were grouped into Category I Discovery Strategies used with External Tools. The remaining strategies were spread among the other categories: Category II Reinforcement Strategies; Category III Social Strategies; and Category IV Linguistic Analysis Strategies.

In the first category, the most used strategy was "I highlight/underline/circle new words in my textbook and write their meaning." Next was "I use the vocabulary section in my textbook to write new words and their meanings," (M = 3.25, SD = 1.26), followed by "I test myself with word tests." (M = 3.10, SD = 1.14), then "I use a dictionary (Bilingual or Monolingual)" (M = 2.91, SD = 1.22), and the fourth most common used strategy in this category is "I keep a vocabulary notebook." (M = 2.90, SD = 1.22).

In the second category, four strategies stood out with high values. The first strategy, "I say new word aloud when studying it." (M = 3.37, SD = 1.12), then "I say the word out loud more than once." (M = 3.71, SD = 1.13), followed by "I take notes in class." (M = 3.70, SD = 1.11), and "I use new words in sentences." (M = 3.57, SD = 0.99). In the third category, the most common was "I ask the teacher for paraphrase or synonyms of new word" (M = 2.99, SD = 1.11); the second most-used strategy was "I discover new meaning through group work activity" (M = 2.97, SD = 1.03); the third was "I ask classmates for meaning." (M = 2.90, SD = 0.99); the final one was "I use physical action when learning a word." (M = 2.70, SD = 1.31).

Table 9

Descriptive Statistics for Vocabulary Learning Strategies

VLS Item	N	M	SD	%[a]
Category I: Discovery strategies used with external tools				
VLS 26. I highlight/underline/circle new words in my textbook and write their meaning / I use the vocabulary section in my textbook to write new words and their meanings.	207	3.25	1.26	41.0
VLS 17. I test myself with word tests.	207	3.10	1.14	31.9
VLS 6. I use a dictionary (Bilingual or Monolingual).	208	2.91	1.22	28.6
VLS 28. I keep a vocabulary notebook.	207	2.90	1.22	31.4
VLS 4. I use pictures to learn the meaning of the word.	209	2.65	1.07	20.5
VLS 11. I create word lists.	209	2.54	1.21	22.4
VLS 27. I put English labels on physical objects.	207	2.43	1.11	12.9
VLS 18. I organize words in groups to study them (verbs with verbs, nouns with nouns, etc.).	209	2.41	1.21	17.2
VLS 12. I use word maps to connect meaning with the word.	210	2.32	1.21	15.2
VLS 13. I use flash cards.	210	2.05	1.19	13.3
VLS 23. I underline first letter of the word.	209	2.01	1.23	12.4
Category II: Reinforcement Strategies				
VLS 19. I say new word aloud when studying it.	208	3.73	1.12	57.2
VLS 21. I say the word out loud more than once.	207	3.71	1.13	59.5
VLS 25. I take notes in class.	207	3.70	1.11	54.3
VLS 14. I use new words in sentences.	209	3.57	0.99	51.0
VLS 22. I study the spelling of a word.	208	3.44	1.18	45.7
VLS 24. I write the new word several times.	207	3.37	1.20	41.9

Table 9, continued

VLS Item	*N*	*M*	*SD*	*%*[a]
Category III: Social Strategies				
VLS 10. I discover new meaning through group work activity.	209	2.97	1.03	32.4
VLS 8. I ask classmates for meaning.	210	2.90	0.99	21.4
VLS 20. I use physical action when learning a word.	208	2.70	1.31	25.2
VLS 7. I study and practice meaning in a group.	210	2.67	1.12	21.5
Category IV: Linguistic Analysis Strategies				
VLS 5. I guess the meaning of the word from the sentence or the passage.	209	3.75	1.00	63.3
VLS 15. I use English language media (social media, TV, radio) to reinforce my knowledge of the word.	207	3.71	1.11	26.2
VLS 3. I check for Arabic translation.	210	3.54	1.00	51.9
VLS 1. I analyze part of speech to discover meaning of new words.	210	3.54	1.00	51.4
VLS 16. I connect a word to a personal experience.	209	3.30	1.02	40.0
VLS 2. I analyze affixes and roots.	210	2.93	1.00	23.8

Notes: [a]Percentage for "Usually" and "Always" combined.
Likert Scale: 1 = never, 2 = rarely, 3 = sometimes, 4 = usually, 5 = always

In the fourth category, the first three strategies were the highest starting with "I guess the meaning of the word from the sentence or the passage." (M = 3.75, SD = 1.00), then "I use English language media (social media, TV, radio) to reinforce my knowledge of the word." (M = 3.71, SD = 1.11), followed by "I check for Arabic translation" (M = 3.54, SD = 1.00). The latter strategy is the only one of all the strategies which is specific to speakers of the Arabic language.

Q2: Were There Gender Differences in VLS?

Table 10 shows the results for the independent sample t-test applied to discover whether there were gender differences in VLS. The results show p values larger than alpha ($p > \alpha = 0.05$), indicating there were no significant differences between males and females in use of VLS except for one category, Reinforcement Strategies. The table shows a difference in mean values in VLS Category II Reinforcement Strategies (Female M = 3.72, SD = 0.78; Male M = 3.45, SD = 0.84), indicating that female participants use these strategies more than male participants.

Table 10

Results of Independent Sample t-tests and Descriptive Statistics for Vocabulary Learning Strategies and Gender

Variable	Group	*N*	*M*	*SD*	*t*	*df*	*p*	ES(d)
VLS Category I: Discovery Strategies Used with External Tools	Male	102	2.62	0.71				
	Female	105	2.59	0.87	0.30	205	.765	.79527
VLS Category II: Reinforcement Strategies	Male	102	3.45	0.84				
	Female	104	3.72	0.78	-2.40	204	.017*	.86773
VLS Category III: Social Strategies	Male	102	2.82	0.82				
	Female	105	2.85	0.78	-0.22	205	.827	.79930
VLS Category IV: Linguistic Analysis Strategies	Male	102	3.45	0.77				
	Female	105	3.44	0.76	0.15	205	.881	.67415

*Note: *p < .05*

Q3: Were VLS Related to the Number of Years Spent Learning English?

The demographic section of the survey asked two questions related to years of learning English: (a) How many years have you studied English in Saudi Arabia? and (b) How many years have you studied English in the United States? The answers for the former question ranged between 6 years (i.e., 7th grade to 12th grade) and 12 years (i.e., 1st grade to 12th grade). In Saudi Arabia, public prekindergarten to 12th grade schools formally begin teaching English as a subject starting in the 7th grade thru the 12th grade, while most of the privately owned prekindergarten to 12th grade schools and international[1] schools either use English as the main language of instruction or formally begin teaching it in 1st grade. These responses excluded incidental learning of English and focused on academic learning. Possibly, some participants started using English at home; however, these questions focused on learning English in academic context at schools or universities.

Answers to the second question ranged from 3 months to over 12 years. Almost all Saudi Arabic-speaking students who aim to pursue higher education in the US or wish to receive a scholarship from the Saudi Arabian Cultural Mission to the US should complete an English language program in the United States. Based on the results, participants' study periods ranged from 3 months to over 12 years. This included the language program period and the years spent in higher education.

To learn whether there was a correlation between VLS and the number of years spent learning ESL, the data were analyzed using the bivariate technique. Table 11

[1] International schools are prekindergarten to 12th grade schools that offer international curriculum such as the American, Canadian or the British curriculum.

presents descriptive statistics and correlation results for this analysis. As shown, Pearson *r* values were close to zero indicating there was no relationship between VLS and years of learning ESL in Saudi Arabia or in the US. In other words, the number of years ELLs spend learning English does not affect their use of VLS. Nonetheless, intercorrelations existed among the VLS categories, ranging between strong and medium, as shown by Pearson *r* values between +.05 and +1. This means that there is a relationship between the categories themselves. For example, strategies in the reinforcement categories have a relationship with strategies in the linguistic analysis categories. This is to be expected because these strategies are meant to be used together and not independently.

Table 11

Descriptive Statistics and Correlations for Vocabulary Learning Strategies and Years of Learning English

Variable	*N*	*M*	*SD*	1	2	3	4	5	6
1. Years studied English in Saudi Arabia?	188	6.62	4.35		.077	-.085	.019	-.141	-.035
2. Years studying English in the United States?	185	2.24	1.91			.135	.010	.059	.013
3. VLS Cat I: Discovery Strategies Used with External Tools	210	2.60	0.79				.510**	.601**	.385**
4. VLS Cat II: Reinforcement Strategies	210	3.58	0.81				-	.495**	.478**
5. VLS Cat III: Social Strategies	209	2.84	0.80					-	.377**
6. VLS Cat IV: Linguistics Analysis Strategies	209	3.44	0.67						-

Note: $^{*}p < .05$. $^{**}p < .01$.

Q4: What were Saudi Arabic-speaking ESL Student Attitudes Toward and Motivations for Learning English as a Second Language?

Saudi Arabic-speaking ESL student motivational intensity and attitude seemed to be high and positive for learning English as a second language. The categories of attitudes toward and motivations for learning ESL items were grouped into three classes. Table 12 shows that Category III Positive Attitude was the highest category of the three, followed by Category I Motivation Intensity. Table 13 lists the top 10 statements representing the two categories, reflecting a combination of intrinsic personal motivation to become a more knowledgeable person, intrinsic social motivation to communicate with people who speak English effectively, as well as to meet people from other cultures. They demonstrate extrinsic educational motivation to excel at university and extrinsic professional motivation to have a good career. These statements reflected the overall positive attitude of Saudi Arabic-speaking ESL students to learn English.

Table 12

Attitudes and Motivations Based on Category

Attitudes Toward and Motivations for Learning English as a Second Language	*N*	*M*	*SD*
ATM Category III: Positive Attitude	187	4.32	0.55
ATM Category I: Motivational Intensity	187	4.06	0.53
ATM Category II: Negative Attitude	187	2.27	0.79

Table 13

Top 10 Attitudes and Motivations for Learning English as a Second Language

Descriptive Statistics	*N*	*M*	*SD*
ATM 31. Being good in English helps me communication in English effectively.	185	4.44	0.68
ATM 25. I want to learn as much English as I can.	187	4.43	0.76
ATM 26. English is an important part of my educational program to get into a top rank university.	186	4.42	0.79
ATM 1. Studying English is important because it allows me to be more at ease with people who speak English.	187	4.39	0.80
ATM 4. Studying English allows me to expand my knowledge and learning.	186	4.38	0.66
ATM 28. Being good at English language will help me do better in the other subjects that I study.	184	4.37	0.70
ATM 36. Studying English is important because I think it will someday be useful in getting a good job when I return to Saudi Arabia.	186	4.35	0.81
ATM 29. I study English because it will help me study other courses at university.	184	4.35	0.76
ATM 24. Studying English is important because it will allow me to meet and establish friendships with people from different cultures.	187	4.31	0.76
ATM 30. Knowing English is an important personal goal in my life.	185	4.31	0.79

Table 14 shows descriptive statistics by category for all attitudes toward and motivations for learning English. Items in Category I represent motivational intensity which includes intrinsic/extrinsic, personal/social, and education/professional motivations. Around 92% of participants believed that studying English was important because it allowed them to be more at ease with people who speak English (M = 4.39, SD = 0.80). A similar percentage of participants thought that studying English allowed them to expand their knowledge and learning (M = 4.38, SD = 0.66); which was probably why 86.6% of participants reasoned that studying English would help them become more knowledgeable individuals (M = 4.27, SD = 0.81). Expanding knowledge was not the only reason participant motivation was high; 88% saw that studying English was important because it would help them find a good job when they returned to Saudi Arabia (M = 4.34, SD = 0.81). These high motivations for learning English can be explained by the positive perception of learning English as enjoyable (M = 4.44, SD = 0.79) and a great experience (M = 4.23, SD = 0.79). Another dramatic result was that 77% of the participants believed mastering English would help them excel in their education.

Items in Category II included negative attitudes toward learning English. For instance, 43.3% of participants stated that writing in English was not important (M = 2.92, SD = 1.20); half of those stated they would rather spend time on other subjects than English at 23% (M = 2.51, SD = 1.12). Also, 17% of participants would put off studying English at home as much as possible (M = 2.60, SD = 1.04), followed by 39% of participants who think that learning English is dull and boring. Despite these negative attitudes, positive attitudes toward learning English were higher and seemed to be associated with high motivation (M = 2.27, SD = 1.12).

Table 14

Descriptive Statistics for Attitudes Toward and Motivations for Learning English as a Second Language

ATM Item	*N*	*M*	*SD*	%[a]
Category I: Motivational Intensity				
ATM 1. Studying English is important because it allows me to be more at ease with people who speak English.	187	4.39	0.80	92.0
ATM 4. Studying English allows me to expand my knowledge and learning.	186	4.38	0.66	92.0
ATM 36. Studying English is important because I think it will someday be useful in getting a good job when I return to Saudi Arabia.	186	4.35	0.81	88.8
ATM 2. In my opinion, studying English is important for me because it will make me a more knowledgeable person.	187	4.27	0.81	86.6
ATM 7. I am interested in studying English because learning English is a great experience.	187	4.23	0.79	87.7
ATM 10. I enjoy listening to English.	187	4.22	0.81	85.5
ATM 11. Studying foreign languages like English is enjoyable.	187	4.21	0.79	84.5
ATM 8. Speaking English increases my self-confidence.	186	4.16	0.92	79.7
ATM 37. I like to master English to help me resume my education. (scholarship program/SACM).	185	4.14	0.91	77.6
ATM 9. Studying English makes me have more confidence in expressing myself.	187	4.06	0.90	79.2
ATM 3. In my opinion, people who speak more than one language are very knowledgeable.	187	4.06	0.88	74.3
ATM 12. I feel happy when I write notes and instructions in English.	186	4.02	0.91	74.9
ATM 5. I look forward to the time I spend studying English in the language program.	185	3.94	0.77	70.6
ATM 13. My aptitude toward learning English is high.	186	3.89	0.81	71.7
ATM 35. I can use the vocabulary I learned from the English classes in everyday conversation in real life.	184	3.78	0.85	67.4
ATM 6. I am satisfied with my performance in learning English.	185	3.75	0.98	64.1
ATM 33. Studying English is important because other people will respect me more if I know English.	184	3.21	0.19	42.2

Note: [a]Percentages for "Strongly Agree" and "Agree"

Table 14, continued

ATM Item	*N*	*M*	*SD*	%[a]
Category II: Negative Attitude				
ATM 23. I think writing in English is not important.	186	2.97	1.20	43.3
ATM 17. I put off studying English at home as much as possible.	186	2.60	1.04	17.6
ATM 21. I would rather spend my time on subjects other than English.	185	2.51	1.17	23.0
ATM 14. I think that learning English is dull and boring.	187	2.27	1.12	39.6
ATM 20. Frankly speaking, I really have little interest in learning English.	186	2.26	1.18	17.1
ATM 15. Watching English programs is not enjoyable for me.	186	2.16	1.18	48.1
ATM 19. In my opinion, the English language is difficult and complicated to learn.	186	2.15	1.07	14.1
ATM 34. To tell the truth, I study English just to pass the exams (TOEFL/IELTS)	184	2.11	1.14	16.0
ATM 16. I feel bored when I listen to others while they speak English.	187	2.01	1.09	15.0
ATM 22. I hate English.	186	1.69	1.07	10.2
Category III: Positive Attitude				
ATM 31. Being good in English helps me communicate in English effectively.	185	4.44	0.68	72.4
ATM 25. I want to learn as much English as I can.	187	4.43	0.96	92.0
ATM 26. English is an important part of my educational program to get into a top rank university.	186	4.42	0.79	86.6
ATM 28. Being good at English language will help me do better in the other subjects that I study.	184	4.37	0.70	87.1
ATM 29. I study English because it will help me study other courses at university.	184	4.35	0.76	86.7
ATM 30. Knowing English is an important personal goal in my life.	185	4.31	0.79	84.5
ATM 24. Studying English is important because it will allow me to meet and establish friendships with people from different cultures.	187	4.31	0.77	87.7
ATM 32. I like to learn English because it helps me travel abroad.	186	4.30	0.84	84.5
ATM 27. Studying English helps me to improve my personality.	186	4.02	0.94	75.4

Notes: [a]Percentage for "Strongly Agree" and "Agree."

In Category III, more than 80% of the participants reported having high positive attitudes toward learning English. For example, 92% of participants wanted to learn as much English as possible (M = 4.43, SD = 0.96), followed by 87.7% of participants who believed that studying English was important because it would allow them to meet and establish friendships with people from different cultures (M = 4.31, SD = 0.77). This high positive attitude was associated with a high motivation to excel academically. Further literature supports this finding. That is, 87.1% believed that being good in English would help them do better in their other subjects (M = 4.37, SD = 0.70); we also see around 86% of participants who thought English was an important part of their educational program to get into a top-ranked university (M = 4.42, SD = 0.79) and would help them study other courses at university (M = 4.35, SD = 0.76). These results indicate that Saudi Arabic-speaking ESL have a high positive attitude toward and motivation for learning English.

Q5: Were There Gender Differences in Attitudes Toward and Motivations for Learning English?

Table 15 shows the results for the independent sample t-test determining whether there were gender differences in ATM. The p values are larger than alpha ($p > \alpha = 0.05$), illustrating no gender difference in attitudes and motivations.

Table 15

Results of Independent-Sample t-tests and Descriptive Statistics for Attitudes and Motivations

Variable	Group	*N*	*M*	*SD*	*t*	*df*	*p*	*ES(d)*
ATM Category I: Motivational Intensity	Male	93	4.03	0.47	-.802	182	0.42	0.534
	Female	91	4.09	0.59				
ATM Category II: Negative Attitude	Male	93	2.35	0.79	1.394	182	0.17	0.794
	Female	91	2.19	0.80				
ATM Category III: Positive Attitude	Male	93	4.26	0.52	-1.463	182	0.15	0.550
	Female	91	4.38	0.58				

*Note: *p < .05*

Q6: Were Attitudes Toward and Motivations for Learning English Related to the Years Spent Learning English?

To know whether attitudes toward and motivations for learning ESL were related to years of learning ESL in Saudi Arabia or the U.S., the bivariate correlation (Pearson *r*) was utilized. The correlations shown in Table 16 are close to zero, showing no correlation between years of learning and attitudes and motivations.

Intercorrelations existed also among the ATM categories. Thus, the ATM categories have relationships between them. A strong correlation appears between motivational intensity and positive attitude ($r = 0.74$), a weak negative correlation exists between motivational intensity and negative attitude ($r = -.24$), and a slightly moderate negative relationship appeared between positive and negative attitudes ($r = -0.30$). These relationships indicate that the categories are connected and work together.

Table 16

Correlation Statistics for Attitudes and Motivations and Years of Learning English

Descriptive Statistics	*N*	*M*	*SD*	1	2	3	4	5
1. Years learning English in Saudi Arabia?	168	6.68	4.38	-	0.087	-0.132	0.03	-0.066
2. Years learning English in the United States?	164	2.23	1.93		-	0.085	0.08	0.055
3. ATM Cat I: Motivational Intensity	187	4.06	0.53			-	-0.246**	0.741**
4. ATM Cat II: Negative Attitude	187	2.27	0.79				-	-0.308
5. ATM Cat III: Positive Attitude	187	4.32	0.55					-

*Note: *Correlation is significant at the 0.05 level (2-tailed); **Correlation is significant at the 0.01 level (2-tailed).*

Q7: Were VLS Related to Attitudes Toward and Motivations for Learning English?

The final research question was whether correlations existed between VLS and attitudes toward and motivations for learning ESL. The null hypothesis assumed there was no relationship between VLS and ATM. To test this, I performed bivariate correlation analysis. A weak correlation existed between VLS and ATM. First, the ATM Category I Motivational Intensity had a weak correlation with VLS Category I Discovery Strategies (using external tools), and with Category III Social Strategies with Pearson *r* for both falling under + 0.29. Second, ATM Category II Negative Attitude had a small correlation with all VLS categories. Finally, ATM Category III Positive Attitude had small correlations with VLS Categories I, II, III (i.e., Pearson $r > 0.29$) and a moderate

correlation with VLS Category IV Linguistic Analysis Strategies (r = .323). Descriptive statistics and correlation results appear in Table 17.

Second, I conducted canonical correlation to test the relationships among the items, performing it between the sets of variables for the VLS Categories Discovery Strategies (External Tools), Reinforcement Strategies, Social Strategies, and Linguistic Analysis Strategies, and the ATM Categories Motivational Intensity, Negative Attitude, and Positive Attitude. Table 18 (p. 88) presents the zero order results, which indicate that the categories of VLS are correlated positively to the categories of attitudes and motivations at values ranging from 0.17 to 0.61 ($p < .01, .05$).

Three canonical correlations resulted, .552, .330, and .138. Only two canonical variates accounted for significant relationships between the two sets of variables (F = 8.24 and F= 4.18) with values of ($p < \alpha = 0.01$); therefore, the null hypothesis was rejected.

The canonical correlation shows two sets: Set 1 (Predictor) represented by the ATM categories and Set 2 (Dependent) represented by the VLS categories. With each of these sets, there were two types of correlation functions that explain the types of correlation among these items, the structure coefficient and the standardized coefficient The difference between these is the order of importance of the predictor differ "when comparing between the two." (Mertler & Reinhart, 2016, p. 282). Any items that are 0.4 or larger were seen as having correlation functions.

Table 17

Means, Standard Deviations, and Correlation Coefficients for Vocabulary Learning Strategies and Attitudes and Motivations (n = 187)

Variables	*M*	*SD*	Correlation Coefficients					
			2	3	4	5	6	7
1. Discovery strategies	2.59	0.77	0.49**	0.61**	0.34**	0.10	0.28**	0.03
2. Reinforcement strategies	3.59	0.82		0.50**	0.48**	0.35**	-0.18*	0.26**
3. Social strategies	2.85	0.79			0.35**	0.20**	0.18*	0.17*
4. Linguistic analysis strategies	3.44	0.68				0.33**	-0.23**	0.32**
5. Motivational intensity	4.06	0.53					-0.25*	0.74**
6. Negative attitude	2.27	0.79						0.31**
7. Positive attitude	4.32	0.55						-

*Note: *p<.05, **p<.01*

In the first correlation function, the structure coefficient, the first correlating variable from the ATM set in the first canonical loadings was Motivational Intensity (.58) The VLS variables correlated with this ATM variable were Linguistic Analysis Strategies (.58) and Reinforcement Strategies (.51). This indicated that ELLs who use reinforcement strategies and linguistic analysis strategies might be moderately motivated to learn English.

Table 18

Canonical Correlation Analysis Between Vocabulary Learning Strategies and Attitudes and Motivations Categories

	Structure Coefficients		Standardized Coefficients	
Variable	1	2	1	2
Set 1 (Predictor)				
Motivational intensity	.58	-.79	.32	-.73
Negative attitude	-.93	-.36	-.83	-.64
Positive attitude	.57	-.64	.08	-.29
Set 2 (Dependent)				
Discovery Strategies	-.36	-.79	-.76	-.28
Reinforcement Strategies	.51	-.66	.72	-.11
Social Strategies	-.13	-.93	-.23	-.63
Linguistic Analysis Strategies	.58	-.58	.58	-.21
Canonical Correlation	.55	.33		
Wilks's	.61	.87		
F	8.42	4.18		
df	12.476.53	6,362		
p	<.001	<.001		

The second ATM variable correlated with the second set of canonical variates in the first canonical loadings of the first correlation function was Negative Attitudes (-.91). The variables in the VLS set were Linguistic Analysis Strategies (.58) and Reinforcement Strategies (.51). This showed that ELLs using reinforcement strategies and linguistic strategies were less likely to have high negative attitudes toward learning English. This could be a result of the additional effort required when using these strategies, unlike the discovery strategies used when ELLs are first introduced to a word or the social strategies where ELLs are engaging in group activities. In other words, the more work ELLs put into using these strategies, the less negatively they felt about learning English.

The third ATM variable correlated with the second set of canonical variates in the first loadings in the first correlation function was Positive Attitude (.57). The correlated variables in the VLS set were Linguistic Analysis Strategies (.58) and Reinforcement Strategies (.51). This correlation implied that ELLs using reinforcement strategies and linguistic strategies might have moderate positive attitudes toward learning English. This canonical correlation function is dominated by motivational intensity at 0.58, followed by positive attitudes at 0.57, then by the negative attitudes variable by -0.91.

The second canonical loadings in the first correlation function showed two correlating variables from the ATM set. The first ATM variable correlated with the first canonical variates in these loadings was Motivational Intensity (-.79). The variables in the VLS set were Discovery Strategies (-.79), Reinforcement Strategies (-.66), Social Strategies (-.93), and Linguistic Analysis Strategies (-.58). This illustrates that ELLs who did not use any of the four VLS strategies had very low motivational intensity (-.97) or were more likely to experience low motivation toward learning English.

The second variable in the ATM set correlated with the second canonical variates in the second canonical loadings in the first correlation function was Positive Attitude (-.64). The VLS variables were Discovery Strategies (-.79), Reinforcement Strategies (-.66), Social Strategies (-.93), and Linguistic Analysis Strategies (-.58). This shows that ELLs who do not use any of the four VLS strategies, individually or in combination, have low positive attitudes toward learning English. In other words, if ELLs use any or all of the VLS strategies, they were likely to have high motivational intensity and high positive attitudes.

In the second canonical loadings, Social Strategies seemed to be the dominate variable (-.93) followed by Discovery Strategies (-.79). Of the four strategies, social strategies were the most important strategies. For attitudes and motivations, motivational intensity was the most important predictor followed by positive attitude. This second correlation function with a canonical correlation (.33) was easier to understand as it is not as strong as the first correlation function at a canonical correlation (.55). Nonetheless, while looking at these two functions together, it is reasonable to deduce that there are relationships between VLS and ATM.

Furthermore, in the standardized canonical coefficient, the variable in the ATM set correlated with the first canonical variates was Negative Attitude (-.82). The VLS set of variables were Discovery Strategies (-.76), Reinforcement Strategies (.72), and Linguistic Analysis Strategies (.58). From this, one can predict that ELLs were less likely to have a negative attitude toward learning English if they used fewer discovery strategies (-.76), and used more reinforcement strategies (.72) and linguistic analysis strategies (.58). The dominate predictor in this function was the negative attitude variable.

The variables in the ATM set correlated with the second canonical variates in the second standardized canonical coefficient were Motivational Intensity (-.73) and Negative Attitude (-.64). The VLS set of variables was Social Strategies (-.63). This correlation revealed that if ELLs do not use or tend to use fewer social strategies, they were less motivated to learn and more likely to have low negative attitudes.

Conclusion

Chapter 4 presented the results of this study. First, the data characteristics were reported, then the screening of the sample and the preliminary analysis were addressed. Reliability and validity of the instruments was discussed. The results for each research question were described and included additional analyses to explore correlations among the variables. Chapter 5 discusses these findings and will provide recommendations for research and implications for practice and students.

CHAPTER 5

DISCUSSION, RECOMMENDATIONS, AND CONCLUSIONS

Introduction

Chapter 5 summarizes the statement of the problem and the purpose of the study. The chapter describes the methodology and highlights the essential arguments discussed in the literature review. Further analysis and discussion of the results are presented. The results presented in Chapter 4 are linked with key findings from the literature review of Chapter 2. With each result discussed, recommendations for further research and implications for practice and students will be presented.

Statement of the Problem

Most studies about teaching English vocabulary explored techniques to teach vocabulary and presented best practices to optimize learner English word knowledge, whether those learners were native or non-native English speakers. As the number of non-English speakers increases, so does the need to consider differences in the process of English vocabulary acquisition between native and non-native English speakers. Even though the literature makes suggestions for vocabulary teaching, most techniques are geared toward teaching native English speakers; little research addresses teaching vocabulary to non-native English speakers. Specifically, research is lacking about the process of teaching vocabulary to Arabic speakers. Vocabulary learning and teaching are multidimensional; thus, further research into vocabulary teaching and learning strategies

for Arabic-speaking students was needed to identify the most commonly preferred and used learning strategies and clarify whether there were correlations between student attitudes toward learning the language and their choices of learning strategies. Research about the factors involved in teaching and learning vocabulary to Arabic-speaking ESL students concluded that these students struggle with mastering writing and speaking in part because of their lack of vocabulary which is complicated by their use of learning strategies which do not match the learning task.

Purpose of the Study

Because the literature lacked sufficient empirical and theoretical studies exploring the complex structure of vocabulary learning by Arabic-speaking ESL learners, the purpose of this study was to discover the commonly preferred and used English VLS by Saudi Arabic-speaking ESL. This study investigated which of these strategies students viewed as most useful as they learned new English vocabulary. Finally, the study sought to identify Saudi Arabic-speaking student attitudes toward and motivations for learning English as a second language, including whether these affected which VLS they preferred and used most commonly.

Summary of the Literature Review

Previous research noted that the most common challenges Arabic-speaking ESLs encounter in second language learning were related to vocabulary acquisition. According to Asgari and Mustapha (2011), vocabulary learning, and acquisition causes recognizable challenges in second language learning, especially in writing. In several studies Khan (2011a, 2011b, 2011c) noted that the difficulties Arab ELLs have in expressing themselves effectively in everyday conversation or in the academic context could be due

to insufficient vocabulary and inappropriate application of vocabulary acquisition techniques. Suliman (2019) cited that "while without grammar very little can be conveyed, without vocabulary *nothing* can be conveyed" (p. 338). Lacking an appropriate level of vocabulary knowledge can hinder Arabic-speaking ELL second language learning. Several linguists and researchers deduced that learning English becomes problematic and a complex task to complete due to fundamental differences between the Arabic and English languages.

Linguists and scholars emphasized the importance of vocabulary learning and teaching; hence, there was a large volume of academic research investigating vocabulary learning and its strategies. The literature review explored the previous studies and publications on vocabulary learning, teaching, and the most commonly used learning strategies. For this study, VLS are the particular strategies second language learners use to acquire new words in the second language. According to Oxford (2003), these strategies make learning more enjoyable, more self-directed, transferable, easier, and more effective. Furthermore, several second-language scholars developed vocabulary learning taxonomies which pointed out effective methods of teaching and learning vocabulary (Gu & Johnson, 1996; Nation, 2001; Oxford, 1990; Schmitt, 1997). As the basis for the VLS survey used here, this study used Schmitt's (1997) Vocabulary Taxonomy, which is based on Oxford's (1990) taxonomy. Based on the studies which used it, this taxonomy was considered the most appropriate one to use because researchers could adapt it based on the needs of their participants.

In addition to identifying adequate VLS, scholars have identified adequate vocabulary teaching strategies. Beck et al. (2002) organized and categorized vocabulary

into a three-tier system which can be used for effective teaching of native English learners as well as non-native English learners. The system divided words into three groups depending on their usage, difficulty, and level in academic contexts. For example, words from tier one are essential words such as “teacher” or “door.” In contrast, tier two words are more advanced, requiring direct learning in the classroom rather than accidental learning (e.g., “perspective,” analyze”). Finally, tier three words are specific and subject-oriented and would require direct instruction (e.g., “photosynthesis”). With this distinction of different tiers, teachers can use and suggest different learning strategies such as a conceptual map or personal glossary.

The literature review looked at factors influencing the process of vocabulary acquisition; factors were identified which influence vocabulary growth for ELLs including learner language awareness and learning needs, learning strategies used by the learners, the learning environment, and ESL teacher approaches to vocabulary teaching (Bruzzano, 2018).

This study explored the effects of attitudes and motivations on SLA. In the late 1990s, several psychologists expanded their research on the concept of motivation (e.g., Ajzen & Fishbein, 1980; Eagly & Chaiken, 1993; Pintrich & Schunck, 1996), exploring ways to explain it as a concept separate from the traditional view of “a reflection of certain inner forces such as instincts, volition, will, and psychical energy” (Dörnyei, 1998, p. 3). Motivation for learning a second language is important for several reasons. According to Dörnyei et al. (2014), “motivation has been widely accepted by both teachers and researchers as one of the key factors that influence the rate and success of second/foreign language (L2) learning” (p. 2). Several factors affect motivation as a key

influencer of learning. For instance, in the absence of sufficient motivation, even the most capable individuals cannot achieve long-term goals. It seems that appropriate curricula and good teaching are not enough to ensure student achievement. Second language learner motivation includes the perception of the target language and the personal goals for learning, including their self-esteem and self-worth.

The research on SLA made it clear that motivation is an essential factor which could influence learner abilities to acquire vocabulary successfully. Poor motivations or attitudes toward a specific word type (e.g., high-frequency, mid-frequency, or low-frequency words) would be expected to prevent the learner from advancing in learning new vocabulary. For example, Schachter (1974) stated that "If a student finds a particular construction in the target language difficult to comprehend, it is very likely that he will try to avoid producing it" (as cited in Al-Qadi, 1991, p. 31). A similar argument can be made in terms of vocabulary acquisition. When Arabic-speaking ELLs find it challenging to comprehend, spell, or even pronounce a new word, they are more likely to avoid putting in the effort to produce it in writing or speaking. Blum (1978, as cited in Al-Qadi, 1991) continued that:

> the motivation for avoidance at this stage can be morphological (preferring a regular verb to an irregular one), phonological (preferring the word that's [sic] easier to pronounce), graphological (preferring in writing the word one knows how to spell) or void avoidance (preferring a word that has a clear translation-equivalent in the mother tongue to one that does not) (p. 31).

Methodology

This study used a nonexperimental quantitative descriptive research design, allowing the researcher to summarize the commonly used VLS based on participant years of learning the language, education experiences, and affective variables, all of which could influence language acquisition. In addition to the descriptive data, relationships

among the variables were investigated. When exploring the correlations among the variables, the most effective and preferred learning strategies for Saudi Arabic-speaking ESL students were revealed. The population sample focused on Saudi Arabic-speaking ESL students, 18 years or older, who had completed or were attending intensive English language programs in the United States. The data were collected via an online survey using the administrative service SurveyMonkey.

A self-report questionnaire was used, being the most appropriate method of data collection, permitting easy access to participants, and meeting the requirements of the research design. The questionnaire consisted of three sections: demographic questions, questions on VLS, and the attitude and motivation survey (ATM). Items used for the VLS survey were based on Schmitt's (1997) taxonomy of VLS; the ATM was adapted from Abu-Snoubar (2017) who used the AMTB question bank developed by Gardner (1985).

Discussion of Major Findings

In this section the major findings are discussed within the context of the literature, providing an interpretation of the results organized by the following themes:

1. Most common VLS used by Saudi Arabic-speaking ESL students in learning new English words.
2. Gender differences.
3. Attitudes toward and motivations for learning English as a second language.
4. Correlations between VLS, ATM, and years of learning English.
5. Correlations between VLS and ATM.

Based on Table 8, the top 10 most used VLS are reinforcement strategies and linguistic analysis strategies. These two categories were highly correlated, which is not unexpected; the literature indicated that better and more effective learning results from combining compatible strategies and that those who do so are more likely to advance in their learning. The most-used strategies are presented in descending order by means.

Most Used Reinforcement Strategies

VLS 19. I say new word aloud when studying it.

VLS 21. I say the word out loud more than once.

VLS 25. I take notes in class.

VLS 14. I use new words in sentences.

VLS 22. I study the spelling of a word.

VLS 24. I write the new word several times.

Most Used Linguistic Analysis Strategies

VLS 5. I guess the meaning of the word from the sentence or the passage.

VLS 15. I use English language media (social media, TV, radio) to reinforce my knowledge of the word.

VLS 1. I analyze part of speech to discover meaning of new words.

VLS 3. I check for Arabic translation.

The strategy with the highest mean was "I guess the meaning of the word from the sentence or the passage" ($M = 3.75$, $SD = 1.00$), then "I say new word aloud when studying it" ($M = 3.73$, $SD = 1.12$), followed by "I say the word out loud more than once"

(*M* = 3.71, *SD* = 1.13), and "I use English language media (social media, TV, radio) to reinforce my knowledge of the word" (*M* = 3.71, *SD* = 1.11). The fifth and sixth strategies were reinforcement strategies; "I take notes in class" (*M* = 3.70, *SD* = 1.11), then "I use new words in sentences" (*M* = 3.57, *SD* = 0.99). On the other hand, the seventh and eighth strategies were linguistic analysis strategies; "I analyze part of speech to discover meaning of new words" (*M* = 3.54, *SD* = 1.00), followed by "I check for Arabic translation" (*M* = 3.52, *SD* = 1.04). Finally, the last two top strategies were reinforcement strategies; "I study the spelling of a word" (*M* = 3.44, *SD* = 1.18) and finally, "I write the new word several times" (*M* = 3.37, *SD* = 1.20).

This variety of strategies in the top 10 was not surprising because as academic research and educational strategies advance, students are exposed to more resources to assist them with vocabulary acquisition and learning. Gu (1994, as cited in Stoffer, 1995,) asserted that ELLs "need to realize that words are dynamic in nature, and that learning a foreign language is far more than memorizing the L2 equivalent of words in one's native language" (p. 37). What is surprising with this finding is the lack of social strategies in the top 10 list. From my experience as a Saudi female ELL in the United Kingdom and the United States, I noticed that culture might play a role in how Saudi Arabic-speaking ELL use VLS in the classroom. Social strategies are interactive learning strategies that require the learning to engage in various activities with other ELLs in the classroom and this might not be as simple for Saudi Arabic-speaking ELLs, especially for female ELLs. For starter, female participants might be uncomfortable around male ELLs due to Saudi cultural boundaries and Islamic principles; therefore, they would avoid using social strategies that would require group work.

Reinforcement Strategies

There were six reinforcement strategies in the top 10 most commonly used VLS. The first strategy was "I say new word aloud when studying it." The literature focused extensively on the benefits of reading aloud for vocabulary growth. Graves et al., (2013) remarked on the value of using oral instruction to teach vocabulary to native English speakers as well as to ELLs, stating that an activity involving oral activities such as shared book reading would help learners "make semantic links to other words and concepts and this to attain a deeper and richer understanding of each word's meaning, as well as to learn other words and concepts related to the target word" (p. 19). Greene Brabham and Lynch-Brown (2002) noted that when elementary grade students in a native English classroom read aloud, their vocabulary growth was significant. While most studies on the effects of reading aloud on vocabulary acquisition were conducted in the native English speaker context, scholars including Graves et al. (2013) and Soltero (2016) pointed out the possibility of using the same strategy with ELLs.

This was also true for the second reinforcement strategy, "I say the word out loud more than once;" to which two factors were related. First, it uses a technique similar to the read aloud activity where students develop oral language outcomes as well as their overall vocabulary knowledge. Also, repeating the word several times, either by speaking it out loud or writing it several times, (i.e., "I write the new word several times," shown as strategy nine in Table 8) falls under the repetition and reinforcement methods of increasing exposure to words. Graves et al. (2013) pointed out that repetition and reinforcement tasks like these are well-known "to be effective for strengthening learning" for ELLs (p. 32). Moreover, when ELLs say a word out loud more than once or write it several times, they are internalizing and remembering the word and its meaning. Another

active strategy is the sixth strategy, "I use new words in sentences," which also utilizes repetition and reinforcement activity. When ELLs use a new word in sentences, they increase their exposure to it by transferring their first experience of the word into a new context and experience. From an instructional perspective, ESL teachers can provide ELLs learning experiences which use this strategy through different instructional procedures such as robust instruction which Graves et al. (2013) defined as a "powerful procedure . . . designed to give students deep and lasting understanding of word meanings and is particularly appropriate and effective when used with interesting and somewhat intriguing words such as banter, retort, glum, berate, and impatient" (p. 68). One working version of this procedure is to encourage students to use the word outside of class and/or have them create word lists of the different uses of the word. From an instructional perspective, a downside of this procedure is that more time is required for most words being taught, meaning that not all words would be taught. From a learning perspective, ELLs can continue using this procedure or strategy inside and outside of the classroom; deciding for themselves which words on which to spend more time. Alharbi (2019) noted that participants used this strategy as "a recall trigger or flash back each time they encounter new vocabulary" (p. 100).

The third reinforcement strategy VLS most commonly used with a frequency of 54.3% was "I take notes in class." Several studies on VLS point out that notetaking is a commonly used strategy for many ELLs (Alharbi, 2019; Graves et al., 2013; Kulikova, 2015; Schütz, 2007; Stoffer, 1995). Kulikova stated that "meaning-oriented note-taking correlated positively with general English proficiency" (p. 36). Alharbi (2019) acknowledged that "some participants showed high acceptance of using special notes for

their vocabulary learning," which would assist them with "word retention and proper use of its context" (pp. 99-100). This strategy allows students to personalize their learning by using different ways to discover meaning and then actively using that meaning and the word in creating new sentences. Through notetaking students use a well-known approach to vocabulary learning, the personal glossary is an effective approach both students and teachers can use for vocabulary learning. With a personal glossary, students can add, edit, and expand their vocabulary acquisition with consistency. As a second language learner, I combined these two strategies and was able to keep records and recall a larger amount of vocabulary than if I had used them individually. Classroom teachers approaching vocabulary instruction with these two strategies in mind would increase their effectiveness. For example, vocabulary worksheets could be designed with spaces for notetaking and students given assignments involving use of their personal glossary. When teachers realize that students are drawn to these strategies, they can become flexible as they design multiple approaches for vocabulary instructions.

Linguistic Analysis Strategies

Four linguistic analysis strategies appear in the top 10 list of most commonly used VLS. The first linguistic analysis strategy and the most common was "I guess the meaning of the word from the sentence or the passage." Guessing as a technique for learning vocabulary is a well-documented technique for teaching vocabulary. Schmitt's (2008) principled approach to teaching vocabulary suggested experimenting with guessing from context to teach vocabulary. The disadvantage of this technique was when students make wrong guesses about the word's meaning. Alharbi (2019) noted that because of factors such as differences between languages, inadequate contextual clues,

and linguistic proficiency, “ELL sometimes cannot guess the right meaning” (p. 64). Nonetheless, it remains a common strategy, especially as student vocabulary knowledge increases. In other words, as ELL vocabulary lists grow, they will encounter similar words and their experiments with guessing will improve. As Xhaferi and Xhaferi (2008), found 48% of participants would guess the meaning of unfamiliar words, while here 63.3% of participants were willing to guess the meaning from the passage.

Another strategy similar to the results with previous studies was the second strategy, “I use English language media.” This strategy uses linguistic analysis to learn the meaning. Bintz (2011) noted that vocabulary instruction is evolving, introducing additional instructional strategies for teaching vocabulary, including but not limited to technology use. Participants (18.2% in this study) may prefer to use technology and media to study English vocabulary because of the continuous learning opportunity provided. Morley (2019) stated that “technology can improve vocabulary learning by giving students the ability to access different forms of understanding of the term from multiple forms of media available” (p. 23). Xhaferi and Xhaferi (2008) found that using media to learn new words was one of the top 10 strategies used by their participants (i.e., “I watch English language TV shows in English or watch English movies,” 30%). Regardless of the differences between their research and this study, using media as a strategy appeared to be the most-used strategy reported in the literature on VLS.

Another active strategy is “I check for Arabic translation;” as discussed earlier, this was one of the linguistic analysis strategies, yet it did not fall under any of the factor loadings. The literature indicated that L1 has a great influence on vocabulary acquisition; as a positive or negative influence, it affects the process of vocabulary acquisition (See

Alharbi, 2019, Khan, 2011a, 2011b; Mahmoud, 2005; Odlin, 1989; Santos & Suleiman, 1993). Alharbi (2019) noted that L1 vocabulary acquisition influences L2 vocabulary development in that:

> L1 vocabulary acquisition functions in a systematic way, as semantic features are developed according to the learner's time exposed to the language. On the other hand, L2 learners usually develop a language system and code the most frequent lexical items in their mind based on equivalent L1 lexical input. (Pavičić Takač, 2008, as cited in Alharbi, 2019, p. 9).

With this finding, one would anticipate that using translation or even a bilingual dictionary would be a highly preferred strategy. In the Xhaferi and Xhaferi (2008) study, using L1 translation was the third most used strategy at 38%; the authors stated that this represents the role of L1 in learning new words. Many beginner ELLs choose translation and write Arabic meanings in notes and book margins to help them retain and reinforce the meaning of the word.

Several studies on Arabic-speaking ELLs agreed that spelling is a noticeable struggle for Arab ELLs when learning English (See AbiSamra, 2003; Khan, 2011a; Saigh & Schmitt, 2012), which is why using a strategy such as "I analyze part of speech to discover meaning of new words" could be effective with the spelling of a word to learn new words. Saigh and Schmitt identified a condition among Arab ESL learners called "vowel blindness," defined as "difficulties with the spelling of English vowels in general," (p. 24, as cited in Suliman, 2019, p. 335). The literature supported the concept that learning the spelling of the new word through linguistic analysis of the parts of speech reinforced the meaning and the interconnected aspects of learning the new word. Therefore, it was not surprising to see these two strategies among the top 10 most commonly used strategies.

Several takeaways from these findings would benefit Saudi Arabic-speaking ESL students and ESL instructors and provide data for future research. The first is that students may find these results to be additional resources as they struggle to advance their vocabulary acquisition. If they have been overwhelmed by not learning as fast or as many words as they anticipated, perhaps they have been using strategies that did not match the vocabulary tier group, or they have not been combining strategies to improve learning. Learning how effective these strategies were and how they improve vocabulary acquisition, students can plan their own approach to vocabulary learning. This may push them to explore other strategies, expanding their learning processes. Applied correctly, students can use these strategies to learn other languages beyond English.

Secondly, these findings suggest that ESL instructors can increase their methods of differentiating vocabulary instruction, using multiple approaches aligning with the needs of Arabic-speaking ESL students. Some teachers may have recognized student preferences and use of some strategies more than others, and started tailoring instructions accordingly. Teachers can use these findings to confirm which strategies to teach in the classroom. With the findings of this study, I hope other ESL instructors would gain a starting point to be more innovative in their vocabulary instruction. Although the sample here was Saudi Arabic-speaking ESL students, with some effort similar approaches can be applied with other Arabic-speaking ESL students.

Finally, these findings answer several questions for the attempt to increase knowledge and fill a research gap in vocabulary acquisition for Arabic-speaking ELLs. The main research question afforded a way to explore specific areas in the field of second language learning, providing a step toward the larger possibility of expanding the field as

further research is encouraged. Additional research can analyze the process of SLA for Arabic-speaking ELLs and experiment with these strategies to understand their effectiveness inside and outside of the classroom.

Gender Differences

Answers to Research Question 2 about gender differences in VLS indicated there were no gender differences in three of VLS categories except for VLS Category II Reinforcement Strategies, where female participants used reinforcement strategies more than male participants did (See Table 10). I established earlier that reinforcement strategies were most likely to be used to help ELLs retain and recall new words, which requires a level of commitment and effort unlike other VLS strategies (e.g., strategies such as "I take notes in class," "I use new words in sentences", and strategies which require extra effort such as "I write the new word several times). ELLs employ skills such as repetition, journaling, and self-testing to master these strategies, which where the extra effort lies. This finding is supported by the growing literature in gender and language learning. According to Xhaferi and Xhaferi (2008), several studies reported that "female learners are more persistent in accomplishing different learning tasks" (p. 71), which makes gender a characteristic influencing the choice of VLS. They reported that female participants differentiated their VLS and used them more often than male participants.

As a Saudi female ELL and former ESL instructor, my experience recognizes that this gender difference could be a result of societal influence; an idea shared with Kissau (2006) who identified that societal influence was the root of gender differences in their study. In this study, I established earlier that reinforcement strategies entail additional effort and commitment from the learner to succeed. Furthermore, Saudi females are

considered and accepted by most of Saudi society as being more committed to learning and more likely to put extra efforts into their academic success. Therefore, it is logical to see such differences in using reinforcement strategies, especially considering that society expects them to be better and work harder to maximize their learning.

Saudi Arabic-Speaking ESL Student Attitudes Toward and Motivation for Learning English as a Second Language

From my first look at the results for the attitude and motivation section of the survey, I deduced that Saudi Arabic-speaking ESL student attitudes toward learning English were positive and their motivations for learning English were high. Table 13 illustrated the 10 highest scores on the ATM survey; seven statements represented positive attitudes and three statements showed high motivational intensity.

Highest Scoring Motivational Intensity Items

ATM 1. Studying English is important because it allows me to be more at ease with people who speak English.

ATM 4. Studying English allows me to expand my knowledge and learning.

ATM 36. Studying English is important because I think it will someday be useful in getting a good job when I return to Saudi Arabia.

Highest Scoring Positive Attitude Items

ATM 31. Being good in English helps me communication in English effectively.

ATM 25. I want to learn as much English as I can.

ATM 26. English is an important part of my educational program to get into a top rank university.

ATM 28. Being good at English language will help me do better in the other subjects that I study.

ATM 29. I study English because it will help me study other courses at university.

ATM 24. Studying English is important because it will allow me to meet and establish friendships with people from different cultures.

ATM 30. Knowing English is an important personal goal in my life.

These results were supported by the literature, including Krashen's (1983b) assumption of the Affective Filter Hypothesis in second language learning. According to Krashen, the affective variables of motivation and attitude are important in second language learning.

An extensive body of theory and research spoke of the influence of attitudes and motivation on SLA and learning. For instance, Fakeye (2010) asserted that the process of second language learning could be affected dramatically by learner attitudes toward the language. Similarly, Dehbozorgi (2012) concluded that EFL students with positive attitudes toward the second language helped create an easier learning environment than did those with negative attitudes. Their results indicated that in general, Saudi Arabic-speaking ESL students had highly positive attitudes toward learning English. The general perception of the English language is that it is an international, prestigious, and highly regarded language. Saudi Arabic-speaking ESL students believe that learning English will help them secure better job opportunities in Saudi Arabia.

From these results, we see that high positive attitudes align with high positive motivations for learning English. Statements representing intrinsic motivations (e.g., "studying English is important because it allows me to be more at ease with people who

speak English"; "studying English allows me to expand my knowledge and learning"; and "speaking English increases my self-confidence.") and extrinsic motivation (e.g., "studying English is important because I think it will someday be useful in getting a good job when I return to Saudi Arabia.") and (e.g. "knowing English is an important personal goal in my life.") reflect high participant motivation for learning English. These positive attitudes and motivations coincide with the literature about key factors for effective second language learning (Ng & Ng, 2015).

This study looked at the important role attitudes and motivations play in SLA. When ELLs are aware of their attitudes and motivations toward learning English, they control their learning. For instance, a student who learns they have low motivation and high negative attitude may start to investigate the reasons behind this attitude and change it. If the negative attitude is due to personal prejudice or previous learning experiences, the student can work with the teacher to change this perception, and the teacher can work toward creating a suitable learning environment for that student. Either way, exploration of ELL attitudes and motivations can help improve SLA. Seeing the high positive effect that attitudes and motivations have on could help students learning English in the United States to be motivated to improve vocabulary acquisition through engaging in conversations with native speakers; they may also have better access to resources available in their schools or universities.

Correlations with Years of Learning English

Analyses for Research Question 3: "Is VLS related to the years of learning English?" and Question 6: "Are attitudes toward and motivations for learning ESL related to the years of learning English?" indicated there was no relationship between VLS and

years of learning ESL in Saudi Arabia or in the US; or between attitudes and motivations and years of learning English in Saudi Arabia or the U.S. In other words, the number of years ELLs spent learning English did not affect their use of VLS or influence their attitudes and motivations for learning English.

This was an unexpected finding because in language learning and teaching the logic dictates that the more time one spends learning the language the more likely they will master it or in the least improve their language learning skills. Therefore, one would expect that after spending several years learning English, whether in Saudi Arabia or in the U.S., learner language skills would improve. However, this research concluded the contrary. Several possible explanations for this include factors that could influence learning such as ELL learning goals, language school program, teaching instructions, classroom size, and location. For instance, with location, ELLs in Saudi Arabia may not feel obligated to use English outside of the classroom; thus, restricting their usage to academic purposes only. This could limit their progress in language learning and may delay its development. On the contrary, ELLs learning English in the U.S. must train themselves to apply what they learn in their everyday practices in order to effectively function in society. Nonetheless, if the goal is only that and they believe they have achieved enough language skills to get through their daily life, they might not feel the need to improve. From my experience with other Saudi Arabic-speaking ESL in the U.S., I discovered that the goal of learning is limited sometimes to learning enough language skills to get them into universities and cope with everyday life. That being said, I did come across a number of Saudi ELLs who think differently and take advantage of the learning opportunities provided.

Correlations between VLS and ATM

Based on the results from the bivariate correlation and the canonical correlation analyses, a positive correlation existed between VLS and ATM, which confirms a relationship between the variables. The first set of correlations was conducted between ATM Category I Motivational Intensity and VLS Categories II Reinforcement Strategies and VLS IV Linguistic Analysis Strategies. The correlation analysis showed that students who use these two VLS strategies had high motivational intensity. Student motivation to learn vocabulary increased when using these two strategies. One way to understand motivational intensity is to look at Jack Brehm's Motivational Intensity Theory (Brehm, 1975, 1999; Brehm & Self, 1989; Wright & Brehm, 1989) According to Brehm,

> this theory explains effort mobilization in goal pursuit. . . . He also suggested that effort investment is primarily governed by a resource (or energy) conservation principle: given that resources are important for survival, individuals are motivated to avoid wasting them and aim at investing only those that are required for successful task execution That is, people seek to avoid investing more than is required because this would waste resources (as cited in Richter et al., 2016, pp. 150-151).

Applying Brehm's Motivational Intensity Theory to the case of vocabulary acquisition explains how much effort ELLs put toward achieving the goal of vocabulary acquisition. Students invest in VLS strategies as resources for successful task execution. VLS Category II strategies such as "I say the word out loud more than once." and "I use new words in sentences." require students to put in additional effort to learn the new words, unlike VLS Category I strategies such as "I use flash cards" or "I test myself with word tests." This is a pyramid learning process. Students use discovery strategies to learn the meaning of the word; then they use reinforcement strategies to retain, transfer, and apply that meaning to new situations. Here, reinforcement learning increases student ability to recall the learned words with little effort. Once students see successful

achievement of the goal of learning and recalling the new words, no doubt their motivation will increase, leading to more successful learning.

When students use VLS Category IV Linguistic Analysis Strategies, their motivation increases. Linguistic strategies such as “I analyze parts of speech to discover meaning of new words.” and “I connect a word to a personal experience.” are strategies requiring students to know the linguistic and grammatical structure of the language to become successful in using the words. For example, students would need to know the difference between verbs and nouns to be able to analyze them and connect them with other words. Like VLS Category II strategies, students need to put in more effort with these strategies; therefore, there may be times these strategies are overwhelming for the students using them. Linguistic strategies can be used to discover new meanings as well as to reinforce learned meanings. Students can guess the meaning of the word from analyzing the part of speech, then they can use media as a training strategy to test their understanding of the learned word or to improve their application of it. Clearly, these strategies affect student motivation to learn and acquire vocabulary.

The second set of correlations was between ATM Category II Negative Attitude and VLS Categories II Reinforcement Strategies and VLS IV Linguistic Analysis Strategies. As illustrated in the previous correlation, students who use these VLS are more likely to have high positive motivation to learn English; in contrast, those who do not use them will be less motivated to learn, which increases negative attitudes toward learning. The two VLS categories require more effort to master; understandably, this could create a never-ending process of learning for some students which could trigger negative attitudes. Students have high motivation to learn but they have negative attitudes

at the same time. It may be difficult to understand how this could happen, but it is important to realize the possibility. These students are willing to put in the effort to learn, but they do not want to do so. At this point the goal might shift from learning the words for transfer or retention to learning the words to pass exams or complete an assignment.

The third set of correlations was found between ATM Category III Positive Attitude and VLS Category II Reinforcement Strategies and VLS Category IV Linguistic Analysis Strategies. The relationships explain that ELL positive attitudes increase the more they use these strategies. VLS Categories II and IV are correlated with all three ATM categories, making them important strategies for influencing attitudes and motivations. Nevertheless, this does not exclude the other two strategies (Discovery Strategies used with external tools and Social Strategies) from affecting attitudes and motivations. The correlation analysis shows that ATM Category I Motivational Intensity and ATM Category II Negative Attitude were affected by VLS Category III Social Strategies. Thus, social strategies are interactive strategies used in different contexts inside and outside of the classroom; therefore, using these strategies and mastering them can affect ELL motivations as well as attitudes toward learning English.

A major takeaway for students would be the need to understand the relationships among the resources they use for their learning (i.e., VLS), the factors driving that learning (i.e., attitudes and motivations), and the outcomes of their learning (i.e., successful vocabulary acquisition). When students learn the effects attitudes and motivations have on their vocabulary acquisition, they are more likely to try to change those attitudes and motivations to benefit their learning. An example might be students with a negative attitude toward learning; through these findings they may be able to

understand that this relates to the use of improper VLS or to previous perceptions about the language. The best course of action for these students would be to use different VLS and/or change their perception of the language by using alternative approaches to learning. They can work with the ESL teacher to understand, possibly changing their attitudes to positive ones. Students can use these findings to reflect on their learning. Consequently, these findings can assist teachers in predicting student attitudes and motivations based on the strategies the students use. Teachers can introduce new strategies to students and could increase motivations and attitudes toward learning.

Limitations of the Study

Several limitations were noted in this study. The first lies in the sample selected for the research. Sample size was relatively small as a general representation of the almost 30,000 Saudi Arabic-speaking ESL population within the United States. Also, this study focused specifically on Arabic-speakers from Saudi Arabia and did not include any other Arabic-speaking nationals. This limitation prevents generalization to other Arabic-speaking ESL students from countries such as Jordan, Egypt, or the Gulf countries. Another limitation results from the research design chosen. Based on the research questions and the purpose of the study, a nonexperimental quantitative research design was deemed most appropriate. Nonetheless, this research design limits the study. First, the results demonstrated descriptive and frequency data, but did not elaborate on causations. While the results showed which VLS were most used, it did not provide reasons why. In addition, several items were self-report questions, resulting in some of the results being discounted because of unusable data. Finally, an inconsistent number of participants completed all three sections of the survey. Even though 235 participants

responded to the survey, not all of them answered all sections. For instance, only 175 respondents completed the third section and 210 completed the VLS section.

Recommendations and Implications

Based on the literature review and the discussion of the results, recommendations for further research emerged. Initially, a research gap was evident in regards to the Arabic-speaking ESL population, especially in terms of vocabulary learning and teaching. Despite rapid growth in the research about teaching vocabulary to ELLs, little effort has been made toward improving the processes of teaching and learning English as a second language to Arabic speakers. I believe the findings of this study benefits this field of study in the areas of research, practice, and instructional design, as well as benefitting ESL students.

Recommendations for Future Research

The first recommendation is to address the research design limitations. In this nonexperimental research design, the sample size was small and specific to Saudi Arabian ESL nationals studying English in the US; therefore, a recommendation would be to expand the sample size and type to include Arabic-speaking ESL students from other countries. These findings could facilitate the work of researchers as they investigate whether other Arabic-speaking ESL students have similar preferences for VLS as these ESL students from Saudi Arabia.

A second recommendation would be to conduct an experimental quantitative research design to investigate which VLS are more effective with Arabic-speaking ESL students. This study concluded that Saudi Arabic-speaking ESL students prefer to use reinforcement strategies, followed by linguistic strategies, then social strategies and

discovery. If students were introduced to new VLS, would they be motivated to use the strategies? Or would they resist the change and continue to use their existing strategies? Also, an investigation of whether student vocabulary acquisition changed after being introduced to new strategies would be interesting.

Another recommendation suggests exploration of the relationships between attitudes and motivations with VLS in relation to classroom environment, personal development, and/or academic progress. The attitude and motivation factors considered here were limited to student perceptions of the language, and their personal intrinsic and extrinsic motivations to learn. Additional factors could affect ELL motivations and attitudes to learn; these include the language school environment or personal and social factors such as traveling to a new country and being alone. If not addressed or recognized, these factors can affect ELL motivations to learn. For example, when a Saudi Arabic-speaking ESL student is new to the US, his/her motivation can be affected by the classroom environment, i.e., is the teacher welcoming to Saudi students? are there other Saudi students in the classroom or in this school? If other factors are considered, a better understanding of the relationship between ATM and VLS could be established.

Implications for Practice

The first implication for practice is for teachers to use these findings when designing instruction or selecting content. Based on these findings, Arabic-speaking ESL students are likely to prefer VLS such as repetition and notetaking; therefore, teachers can incorporate these into their instructions, similar to the robust instruction procedure. With these findings, ESL teachers have additional information regarding the most commonly used VLS used by Saudi Arabic-speaking ESL students. Even though the

study focused on Saudi Arabian nationals, ESL teachers might be able to assume other Arab nationals might use the same or similar strategies. Accordingly, to provide better learning opportunities, ESL teachers could provide direct exposure to and explanations of these strategies to students. According to Graves et al. (2013), "direct explanation of strategies" is supported by a large body of research for its balanced and deliberate approach to vocabulary instruction design. Indeed, teachers can use the VLS instrument as a measurement tool at the beginning of the course to learn what VLS students are inclined to use and incorporate the findings into their teaching.

Furthermore, ESL teachers can use these findings to establish a baseline to predict ELL attitudes and motivations, depending on the VLS they prefer. The canonical correlation analysis concluded that two of the four VLS could predict negative attitudes (i.e., reinforcement and linguistic analysis strategies); therefore, teachers can work with students to discover which VLS they could use more often to increase student positive attitudes and motivations. For examples, ELLs could be encouraged to use linguistic analysis strategies with social strategies to create balance in their learning attitude. Perhaps, teachers could use engaging linguistic strategies requiring teamwork or partners so the ELLs would be more motivated to learn.

Implications for Arabic-speaking ESL Students

Students can use these findings to learn more about each of the strategies, learn how to take advantage of them, and learn how to use them. Students who are already familiar with these strategies can learn about other useful strategies or can combine several strategies. For example, when combining strategies, students can keep a vocabulary notebook where they write the meaning of the word, underline the word

whenever they see it, say the word out loud more than once, while also learning its spelling. As Gu (1994) pointed out, by using multiple strategies students are utilizing and internalizing the word and its meaning in a deeper learning experience.

Summary

This study showed that VLS Category II Reinforcement Strategies and VLS Category IV Linguistic Analysis Strategies were the most commonly used strategies of Saudi Arabic-speaking ESL students. Another finding was that Saudi Arabic-speaking ESL students had high motivational intensity for learning English. Attitudes toward and motivations for learning English were affected by the VLS ELLs used. Based on the findings of this study, several suggestions were provided for students and English teachers. Finally, implications and recommendations were provided for future research.

APPENDICES

APPENDIX A

CONSENT FORM AND SURVEY

Andrews University

Online Survey Consent Form for Participants

You are invited to participate in a research study entitled "Vocabulary Learning Strategies Used by ESL Saudi Students in the United States." This study is being done by Alya Abdullah Suliman, a PhD student at the Andrews University. You were selected to participate in this study because you are a Saudi Arabian student who is currently studying, or previously studied English as a second language in an educational institution in the United States.

You will be asked to complete an online survey about your language proficiency level, preferred vocabulary learning strategy, and attitude towards and motivation for learning English as a second language. This may take you approximately 30 minutes to complete.

You may not directly benefit from this research; however, your participation in the study may assist in improving future learning process for Saudi Arabian studying English as a second language abroad. There are no known risks associated with this research study. Except for gender, no personal information will be required; your answers cannot be associated to you personally, and all responses will be kept confidential. All data collected will be securely saved in a password protected folder on the researcher's personal computer.

Your participation in this study is completely voluntary and you may withdraw at any time.

If you have questions about this project or if you have a research-related problem, you may contact the researcher's advisor Lori Imasiku, Ed.D. (+1 269 471-3182) or the

researcher, Alya Abdullah Suliman (+966 54436 8842) or alya@andrews.edu. If you have any questions concerning your rights as a research subject, you may contact the Andrews University IRB Office at (+1 269 471-6361) or irb@andrews.edu

By clicking “I agree” below you are indicating that you are at least 18 years old, have read and understood this consent form and agree to participate in this research study. Please print a copy of this page for your records.

I Do Not Agree I Agree

RESEARCH SURVEY AND INSTRUMENT

Vocabulary Learning Strategies Used by Saudi Arabic-Speaking ESL Students in the United States

Questionnaire

Section 1: Please tell us about yourself and your experiences with using English.

1. Gender: Male____ Female_____ Choose not to disclose_____
2. How long have you studied English in Saudi Arabia? _____ Years.
3. How many years have you studied/been studying English in the United States? _____ Years.
4. What is the highest level of school you have completed or the highest degree you have received?

   _____High school degree or equivalent

   _____Associate degree

   _____Bachelor degree

   _____Master degree

   _____Doctoral degree
5. Your most recent TOEFL (iBT) score _____ **OR** IELTS score _____
6. Year (most recent) TOEFL (iBT) test taken _____ **OR** IELTS test taken _____ .
7. Using the following rating scale, please rate your English proficiency in the following areas:
   1. Beginner
   2. Low intermediate
   3. Intermediate
   4. High intermediate
   5. Advanced

	1 = Beginner	2 = Low Intermediate	3 = Intermediate	4 = High Intermediate	5 = Advanced
Vocabulary					
Writing					
Reading					
Listening					
Speaking					

8. Rate your level of difficulty with the following aspect of learning English.
    1. Very difficult
    2. Difficult
    3. Neutral
    4. Easy
    5. Very easy

Skill	1 = Very difficult	2 = Difficult	3 = Neutral	4 = Easy	5 = Very Easy
Vocabulary					
Writing					
Reading					
Listening					
Speaking					

9. How important do you believe vocabulary learning is in learning English?

    Not important at all: _____

    Slightly Important: _____

    Moderately Important:_____

    Very important: _____

    Extremely Important: _____

Section II. This section lists various strategies that students use to learn new English words. Please read each statement carefully and then circle the answer that applies to you most accurately. There are no right or wrong answer.

Statement	1 = never	2 = rarely	3 = sometimes	4 = usually	5 = always
I. Rate how often do you use the following strategies for the discovery of a new word's meaning.					
1. I analyze part of speech to discover meaning of new words.					
2. I analyze affixes and roots.					
3. I check for Arabic translation.					
4. I use pictures to learn the meaning of the word.					
5. I guess the meaning of the word from the sentence or the passage.					
6. I use a dictionary (Bilingual or Monolingual).					
7. I study and practice meaning in a group.					
8. I ask classmates for meaning.					
9. I ask the teacher for paraphrase or synonyms of new word.					
10. I discover new meaning through group work activity.					
II. Rate how often do you use the following strategies to strengthen a word's meaning once it has been learned.					
11. I create word lists.					
12. I use word maps to connect meaning with the word.					
13. I use flash cards.					
14. I use new words in sentences.					
15. I use English language media (social media, TV, radio) to reinforce my knowledge of the word.					
III. Rate how often do you use the following strategies to relate the new word with some previously learned words.					
16. I connect a word to a personal experiences.					
17. I test myself with word tests.					
18. I organize words in groups to study them (verbs with verbs, nouns with nouns, etc.).					
19. I say new word aloud when studying it					
20. I use physical action when learning a word.					
IV. Rate how often do you use the following mechanical strategies to study vocabulary.					
21. I say the word out loud more than once.					
22. I study the spelling of a word.					
23. I underline first letter of the word.					

24. I write the new word several times.
25. I take notes in class.
26. I highlight/underline/circle new words in my textbook and write their meaning.
27. I put English labels on physical objects.
28. I keep a vocabulary notebook.

Section III. This section is about your attitudes and motivation for learning English as a second language. Please read each statement very carefully and then indicate your response to each statement as accurately as you can. There are no right or wrong answer.

Statement	1 = Strongly Disagree	2 = Disagree	3 = Neutral/ Not Sure	4 = Agree	5 = Strongly Agree
1. Studying English is important because it allows me to be more at ease with people who speak English.					
2. In my opinion, studying English is important for me because it will make me a more knowledgeable person.					
3. In my opinion, people who speak more than one language are very knowledgeable.					
4. Studying English allows me to expand my knowledge and learning.					
5. I look forward to the time I spend studying English in the language program.					
6. I am satisfied with my performance in learning English.					
7. I am interested in studying English because learning English is a great experience.					
8. Speaking English increases my self-confidence.					
9. Studying English makes me have more confidence in expressing myself.					
10. I enjoy listening to English.					

Statement	1 = Strongly Disagree	2 = Disagree	3 = Neutral/ Not Sure	4 = Agree	5 = Strongly Agree
11. Studying foreign languages like English is enjoyable.					
12. I feel happy when I write notes and instructions in English.					
13. My aptitude toward learning English is high.					
14. I think that learning English is dull and boring.					
15. Watching English programs is not enjoyable for me.					
16. I feel board when I listen to others while they speak English.					
17. I put off studying English at home as much as possible.					
18. Speaking English causes fear for me.					
19. In my opinion, the English language is difficult and complicated to learn.					
20. Frankly speaking, I really have little interest in learning English.					
21. I would rather spend my time on subjects other than English.					
22. I hate English.					
23. I think writing in English is not important.					
24. Studying English is important because it will allow me to meet and establish friendships with people from different cultures.					
25. I want to learn as much English as I can.					
26. English is a very important part of my educational program to get into a top rank university.					
27. Studying English helps me to improve my personality.					

Statement	1 = Strongly Disagree	2 = Disagree	3 = Neutral/ Not Sure	4 = Agree	5 = Strongly Agree
28. Being good at English language will help me do better in the other subjects that I study.					
29. I study English because it will help me study other courses at university.					
30. Knowing English is an important personal goal in my life.					
31. Being good in English helps me communication in English effectively.					
32. I like to learn English because it helps me travel abroad.					
33. Studying English is important because other people will respect me more if I know English.					
34. To tell the truth, I study English just to pass the exams (TOEFL/IELTS).					
35. I can use the vocabulary I learned from the English classes in everyday conversation in real life.					
36. Studying English is important because I think it will someday be useful in getting a good job when I return to Saudi Arabia.					
37. I like to master English to help me resume my education. (scholarship program/SACM).					

APPENDIX B

VARIABLE DEFINITIONS

VARIABLE DEFINITIONS

Variable 1: Language Proficiency Level

Teaching English as a Second Language (*TOEFL*)

International English Language Testing System (*IELTS*)

The Instrument:

Self-reported scores from the TOEFL iBT or the IELTS. Participants will answer a question related to their *TOEFL* iBT Test or IELTS test. ETS published reports about the validity and reliability of TOEFL test scores. Evidence of validity and reliability were taken from the following ETS reports. *Validity Evidence Supporting the Interpretation and Use of TOEFL iBT ™ Scores* (2011) and *Reliability and Comparability of TOEFL iBT™ Scores* (2011).

Evidence of Validity:

The TOEFL and IELTS exams are the most common tests to assess the general English language proficiency exams, and due to their high demands across the world, it becomes important that test organizations "provide evidence of quality control in the form of assessment reliability and validity to the outside world" (Shaw, 2007 as cited in Hashemi & Daneshfar, 2018, p. 40). First, for the TOEFL iBT test, ETS (2011) affirmed the validity of the test by stating the propositions that support the proposed interpretations and uses and summarizing evidence supporting each proposition (Enright & Tyson, 2011). These propositions included the relevance and representativeness of the content of the test, the appropriateness of task design and scoring rubrics, the relationship to academic language proficiency of the linguistic knowledge, the processes and strategies which test takers use to respond to test tasks, the relationship between the test structure

and theoretical views of the relationships among English language skills, and the relationship between TOEFL (iBT) scores and other criteria of language proficiency.

According to the ETS report, over 130 countries and more than 9,000 universities, agencies, and other institutions accept TOEFL scores. ETS (2011) argues that TOEFL (iBT) scores are comparable and reliable because the appropriate scales for each section on the test were developed; score comparability across test forms was maintained by equating the reading and listening sections including statistical analysis of both tasks and raters on the speaking and writing sections; research guides detailed test specifications and future test development; standardized administration and security measures are adhered to; and score reliability and generalizability are monitored.

Furthermore, the IELTS Academic exam

Evidence of Reliability:

On the TOEFL iBT test, the reliability estimation for the Listening and Reading sections containing selected-response questions was carried out using a method based on Item Response Theory (ETS, 2011). For the Writing and Speaking sections which contain constructed-response tasks, generalizability theory (G-theory) was used (ETS, 2011). Reported test scores were derived statistical scaling. A student who answered 55 questions correctly out of 60 questions would receive a score of 55 if each correct answer was worth one point. This score is the number-correct score, also called a raw score. The maximum number of raw score points on the four sections of the form used in the field study ranged from 20 for Writing to 44 for Reading.

The reliability indices for Reading and Listening were acceptably high at 0.85, based on operational data from 2007 (ETS, 2011), The G-theory-based reliability for

Speaking was 0.88, yet weaker for Writing (0.74); however, there are only two writing tasks. Score reliability estimates and the SEM were based on the operational data from 2007; Reading = 3.35, Listening = 3.20, Speaking = 1.62, Writing = 2.76. Scales for the measures on the TOEFL iBT test were established so that the same scale range (0-30) was used for each of the four sections (Reading, Listening, Speaking, Writing); the goal was to weight all sections equally to wholistically measure the construct of academic language ability.

For the IELTS Academic test, reliability estimation was calculated using the Test Report Form, which consists of the Overall Band Score of each of the four components: Reading, Writing, Listening, and Speaking. Each component score is rounded to the nearest whole or half band; the average score of the four components was shown in the TRF. Scores were weighted equally. For example, if test-taker A scored as follows in each component: Reading 6.5, Listening 6.5, Writing 5, Speaking 7; the average score would be 6.25, resulting in a band score is 6.5 (IELTS, 2021b).

Variable	Conceptual Definition	Instrumental Definition	Operational Definition
Language Proficiency Level	Self-reported data of the TOEFL (iBT) test or the IELTS test score that the students share.	Two questions were presented to the participants. Your most recent TOEFL (iBT) score ____ OR IELTS score ____. Most recent year TOEFL (iBT) test taken _____ OR IELTS test taken _____.	For the TOEFL (iBT) test, participants wrote their overall score. Score range 0-120. Scores below 61 are considered very low, 61-69 is low, 70-79 are intermediate, scores 80 and above are advanced. For the IELTS test, Participants wrote in their overall score. Score range (1-9) Scores 1 - 4 are considered low. Scores 5 - 6.5 are considered intermediate. Scores 7 - 9 are considered advanced.

Variable 2: Vocabulary Learning Strategies

The Instrument:

The items used were based on Schmitt's (1997) taxonomy of vocabulary learning strategies. Four out of the five categories identified in Schmitt's taxonomy were used. The sections addressed the different usage of learning strategies: (a) strategies to learn new words and meaning, (b) strategies to reinforce learning, (c) strategies used to create connections between new words and previously learned words, and (d) mechanical strategies used to study vocabulary. This survey adopted 28 strategies from Schmitt's taxonomy; the researcher made slight changes to wording and organization of the strategies to avoid confusion for the participants.

Variable	Conceptual Definition	Instrumental Definition	Operational Definition
Vocabulary Learning Strategies	Vocabulary Learning Strategies (VLS) are defined as the particular strategies second language learners use to acquire new words in the second language. (Schmitt, 1997).	I. Rate how often do you use the following strategies for the discovery of a new word's meaning: 1. I analyze part of speech to discover meaning of new words. 2. I analyze affixes and roots. 3. I check for Arabic translation. 4. I use pictures to learn the meaning of the word. 5. I guess the meaning of the word from the sentence or the passage. 6. I use a dictionary (Bilingual or Monolingual). 7. I study and practice meaning in a group. 8. I ask classmates for meaning. 9. I ask the teacher for paraphrase or synonyms of new word. 10. I discover new meaning through group work activity. II. Rate how often do you use the following strategies to strengthen a word's meaning once it has been learned. 11. I create word lists. 12. I use word maps to connect meaning with the word. 13. I use flashcards.	The statements were rated with a five-point scale (1 = *Never* to 5 = *Always)*. Possible scores were from 30 to 140: a higher score indicates a higher positive attitude toward or motivation for learning English as a second language.

Variable	Conceptual Definition	Instrumental Definition	Operational Definition
		14. I use new words in sentences. 15. I use English language media (social media, TV, radio) to reinforce my knowledge of the word. III. Rate how often do you use the following strategies to relate the new word with some previously learned words: 16. I connect a word to a personal experience. 17. I test myself with word tests. 18. I organize words in groups to study them (verbs with verbs, nouns with nouns, etc.). 19. I say new word aloud when studying it. 20. I use physical action when learning a word. IV. Rate how often do you use the following mechanical strategies to study vocabulary: 21. I say the word out loud more than once. 22. I study the spelling of a word. 23. I underline the first letter of the word. 24. I write the new word several times. 25. I take notes in class. 26. I highlight/underline/circle new words in my textbook and write their meaning. 27. I put English labels on physical objects. 28. I keep a vocabulary notebook.	

Variable 3: Attitudes Toward and Motivations for Learning English as a Second Language.

The Instrument

The measures of participant attitude toward and motivation for learning English as a second language were adapted from a survey used in a study by Tamador Abu-Snoubar (2017). In her research, she depended on Gardner's (1985) Attitude and Motivation Test Battery (AMTB) which consists of 55 items. For this study, 24 items were adapted from Abu-Snoubar; six new items were added to match participant criteria and the research questions.

Evidence of Validity and Reliability

The 24 items adapted for this study concerned language attitudes and motivation for learning a foreign language. The statements appeared as a five-point Likert scale from 1 = *Strongly Disagree* to 5 = *Strongly Agree*. Abu-Snoubar (2017) declared that the study enjoyed satisfactory reliability and construct validity. Some items were modified from Abu-Snoubar's work, and an additional five items were added to meet the purpose and sample of this study. Therefore, a total of 29 items were used in this study.

Variable	Conceptual Definition	Instrumental Definition	Operational Definition
Attitude toward and Motivation for learning English as a second language.	**Attitude Definition:** Students' attitude is an essential factor influencing language performance and received considerable attention from both first and second language researchers. **Motivation Definition:** The attitude, feeling, perception a second language learner has toward the target second language. In particular, motivation here is viewed as a construct of attitude that explains linguistic behavior in learning English as a second language (Abidin et al., 2012).	1. Studying English is important because it allows me to be more at ease with people who speak English. 2. Studying English is important for me because it will make me a more knowledgeable person. 3. Studying English allows me to expand my knowledge and learning. 4. I look forward to the time I spend studying English in the language program. 5. I am satisfied with my performance in learning English. 6. I am interested in studying English because learning English is a great experience. 7. Speaking English increases my self-confidence. 8. Studying English makes me have more confidence in expressing myself. 9. I feel happy when I write notes and instructions in English. 10. My aptitude toward learning English is high. 11. I think that learning English is dull and boring. 12. Watching English programs is not enjoyable for me. 13. I feel bored when I listen to others while they speak English. 14. In my opinion, the English language is difficult and complicated to learn. 15. Frankly speaking, I really have little interest in learning English. 16. I would rather spend my time on subjects other than English. 17. I hate English. 18. I think writing in English is not important. 19. Studying English is important because it will allow me to meet and establish friendships with people from different cultures. 20. I want to learn as much English as I can. 21. English is a very important part of my educational program to get into a top-rank university. 22. Studying English helps me to improve my personality. 23. Being good at the English language will help me do better in the other subjects that I study. 24. Knowing English is an important personal goal in my life. 25. Being good in English helps me communicate in English effectively. 26. I like to learn English because it helps me travel abroad.	The statements were put in a five-point Likert scale (1 = *Strongly Disagree* to 5 = *Strongly Agree*). To measure the variable, a summation of all the items was calculated after the completion of reverse scoring for negative items. Possible scores ranged from 30 to 150: the higher score indicated a higher positive attitude toward and motivation for learning English as a second language.

Variable	Conceptual Definition	Instrumental Definition	Operational Definition
		27. Studying English is important because other people will respect me more if I know English. 28. To tell the truth, I study English just to pass the exams (TOEFL/IELTS). 29. Studying English is important because I think it will someday be useful in getting a good job when I return to Saudi Arabia. 30. I like to master English to help me resume my education (scholarship program/SACM).	

APPENDIX C

IRB COMMUNICATION

Andrews University

Office of Research and Creative Scholarship
Institutional Review Board
(269) 471-6361 Fax: (269) 471-6246 E-mail: irb@andrews.edu
Andrews University, Berrien Springs, MI 49104-0355

APPLICATION FOR APPROVAL OF HUMAN SUBJECTS RESEARCH

Please complete this application as thoroughly as possible. Your application will be reviewed by a committee of Andrews University IRB, and if approved it will be for one year. Beyond the one year you will be required to submit a continuation request. It is the IRB's responsibility to assign the level of review: Exempt, Expedited or Full. It is your responsibility to accurately complete the form and provide the required documents. Should your application fall into the exempt status, you should expect a response from the IRB office within 2 weeks; Expedited within 2 weeks and a Full review 4-6 weeks.

Please complete the following application:

1. Research Project	
Title: Vocabulary Learning Strategies Used by ESL Saudi Students in the United States	
Will the research be conducted on the AU campus? ___ Yes _X__ No If no, please indicate the location(s) of the study and attach an institutional consent letter that references the researcher's study. The study will be conducted via online survey distributed through an online survey platform and from the researcher's contacts. What is the source of funding (please check all that apply)	
_ x Unfunded	
____ Internal Funding	Source:
External Funding	Sponsor/Source:
Grant title:	Award # / Charging String:
If you do not know the funding/grant information, please obtain it from your department	
2. Principal Investigator (PI)	
First Name: Alya Abdullah K. Last Name: Suliman Telephone: +1 (619) 762-0706 E-mail: alya@andrews.edu	
__X_ Yes I am a student. If so, please provide information about your faculty advisor below.	

First Name: Lori Last Name: Imasiku Telephone: (269) 471-3182 E-mail: lorii@andrews.edu

Advisor's signature:

Department: Teaching Learning and Curriculum Program: Curriculum and Instruction

3. Co-investigators (Please list their names and contact information below)

First Name:	Last Name:	Telephone:	E-mail:
First Name:	Last Name:	Telephone:	E-mail:

4. Cooperating Institutions

Is this research being done in cooperation with any institutions, individuals or organizations not affiliated with AU?

___ Yes _X__ No If yes, please provide the names and contact information of authorized officials below.

Name of Organization: Address:

First Name: Last Name: Telephone: E-mail:

Have you received IRB approval from another institution for this study? ___ Yes __X_ No

If yes, please attach a copy of the IRB approval.

5. Participant Recruitment

Describe how participant recruitment will be performed. Include how and by whom potential participants are introduced to the study *(please check all below that apply)*

___ AU directory ___ Postings, Flyers ___ Radio, TV

___ E-mail solicitation. Indicate how the email addresses are obtained:

___ Web-based solicitation. Specify sites:

___ Participant Pool. Specify what pool:

_X__ Other, please specify:

Recruitment will be done using the contacts previously obtained from the researcher like friends, family, work and school colleagues.

6. Participant Compensation and Costs

Are participants to be compensated for the study? Yes ___ No _X__ If yes, what is the amount, type and source of funds?

Amount:	Source:	Type:

Will participants who are students be offered class credit? ___ Yes ___ No _X__ NA

Are other inducements planned to recruit participants? ___ Yes __X_ No If yes, please describe.

Are there any costs to participants? ___ Yes __X_ No If yes, please explain.

7. Confidentiality and Data Security

Will personal identifiers be collected? ___ Yes _X_ No	Will identifiers be translated to a code? __Yes ___ No

Will recordings be made (audio, video)? ___ Yes _X__ No If yes, please describe.

Who will have access to data (survey, questionnaires, recordings, interview records, etc.)? Please list below.

The main investigator and the transcriptionist are the only ones who will have access to the data.

8. Conflict of Interest

Do you (or any individual who is associated with or responsible for the design, the conduct of or the reporting of this research) have an economic or financial interest in, or act as an officer or director for, any outside entity whose interests could reasonably appear to be affected by this research project: ___ Yes __X_ No

If yes, please provide detailed information to permit the IRB to determine if such involvement should be disclosed to potential research subjects.

9. Results

To whom will you present results (highlight all that apply)

___ Class _X__ Conference __X_ Published Article ___ Other If other, please specify:

10. Description of Research Subjects

If human subjects are involved, please highlight all that apply:

___ Minors (under 18 years) ___ Prison inmates ___ Mentally impaired ___ Physically disabled

___ Institutionalized residents ___ Anyone unable to make informed decisions about participation

___ Vulnerable or at-risk groups, e.g., poverty, pregnant women, substance abuse population

None of the above are applicable.

11. Risks

Are there any potential damage or adverse consequences to researcher, participants, or environment? These include physical, psychological, social, or spiritual risks whether as part of the protocol or a remote possibility.

Please highlight all that apply (Type of risk):

___ Physical harm ___ Psychological harm ___ Social harm ___ Spiritual harm

None of the above are applicable.

12. Content Sensitivity

Does your research address culturally or morally sensitive issues? ___ Yes __X_ No If yes, please describe:

13. Please provide (type in or copy - paste or attach) the following documentation in the boxes below:

Protocol:
See attachment

Survey instrument or interview protocol:
See attachment for the Word copy of the survey.
Click here for the online version of the survey:
https://www.surveymonkey.com/r/Preview/?sm=wNIdm5Eg0ygSivOJVX6PdVpfa1ZeewDmbwxkiZoobdDLbNl76g9_2ByQ2jclzbV8Pt

Institutional approval letter (if off AU campus):
Not Applicable

Consent form (for interviews and focus groups):
See attachments.

Participants recruitment documents:

Principal Investigator's Assurance Statement for Using Human Subjects in Research

__**X**__ I certify that the information provided in this IRB application is complete and accurate.

__**X**___ I understand that as Principal Investigator, I have ultimate responsibility for the conduct of IRB approved studies, the ethical performance of protocols, the protection of the rights and welfare of human subjects, and strict adherence to the study's protocol and any stipulation imposed by Andrews University Institutional Review Board.

__**X**___ I will submit modifications and / or changes to the IRB as necessary prior to implementation.

__**X**___ I agree to comply with all Andrews University's policies and procedures, as well as with all applicable federal, state, and local laws, regarding the protection of human participants in research.

__**X**__ My advisor has reviewed and approved my proposal.

Andrews University
Office of Research & Creative Scholarship

March 1, 2021

Alya Abdullah K. Suliman
Tel. 619-762-0706
Email: alya@andrews.edu

RE: APPLICATION FOR APPROVAL OF RESEARCH INVOLVING HUMAN SUBJECTS

IRB Protocol #:21-015 **Application Type:** Original **Dept.:** Teaching, Learning & Curriculum
Review Category: Exempt **Action Taken**: Approved **Advisor:** Lori Imasiku
Title: Vocabulary learning strategies used by ESL Saudi students in the United States.

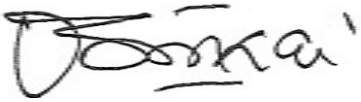
Your IRB application for approval of research involving human subjects entitled: "*Vocabulary learning strategies used by ESL Saudi students in the United States"* IRB protocol # 21-015 has been evaluated and determined Exempt from IRB review under regulation CFR 46.104 (2)(i): Research that includes survey procedures in which information obtained is recorded by the investigator in such a manner that the identity of the human subjects cannot readily be ascertained, directly or through identifiers linked to the subject. You may now proceed with your research.

Please note that any future changes made to the study design and/or informed consent form require prior approval from the IRB before such changes can be implemented. Incase you need to make changes please use the attached report form.

While there appears to be no more than minimum risks with your study, should an incidence occur that results in a research-related adverse reaction and/or physical injury, this must be reported immediately in writing to the IRB. Any research-related physical injury must also be reported immediately to the University Physician, Dr. Katherine, by calling (269) 473-2222.

We ask that you reference the protocol number in any future correspondence regarding this study for easy retrieval of information.

Best wishes in your research.
Sincerely,



Mordekai Ongo, PhD.
Research Integrity and Compliance Officer

Institutional Review Board – 8488 E Campus Circle Dr Room 234 - Berrien Springs, MI 49104-0355
Tel: (269) 471-6361 E-mail: irb@andrews.edu

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EDUCATION

Andrews University Berrien Springs, MI	2021	Ph.D., Curriculum Theory
University of Kent Canterbury, UK	2010	Masters of Arts, English and American Literature.

Thesis: *The New Woman: A Theme of Twentieth-Century American and English Fiction*

King Abdul-Aziz University, Jeddah, KSA	2007	Bachelor of Arts in English

PROFESSIONAL EXPERIENCE

Andrews University Berrien Springs, MI	2017 – 2021	Part-time Instructional Facilitator
Effat University, Jeddah, KSA	2013 - 2016	English Language Instructor
	2011- 2016	Co-Chair of the Executive Team of the Ministry's Higher Education Scholarships Program
	2011 – 2013	Part-time Research Coordinator
Effat University, Jeddah, KSA	2011-2014	other work experience: The Security of KSAALT in Jeddah's branch. Secretary of the Recruitment Team Registration Department Organizer of Effat University's Annual Career Day (Job Fair) Translator (English-Arabic, Arabic-English). The Security of the Research Council
The Ministry of Education, Jeddah, KSA	2013	part-time trainer

PRESENTATIONS AT PROFESSIONAL MEETINGS

Suliman, A., *"Integration of Saudi Local Curriculum in IB Program School in the U.S."*. Andrews University Teaching and Learning Conference. Berrien Springs, MI, March 2019

Wilczynski, S., & Suliman, A., *"Engaging and Inclusive Technology Learning Tools"*. Andrews University Teaching and Learning Conference. Berrien Springs, MI, March 2019

Suliman, A., *"Paving the Road for Arabic-Speaking Students in ESL Classes".* Andrews University Teaching and Learning Conference. Berrien Springs, MI, March 2018

Suliman, A., *"A Historical Preview of the Role of the Teacher in the American School from 1890-1940".* Andrews University Teaching and Learning Conference. Berrien Springs, MI, March, 2017

PUBLICATIONS

Suliman, A. A. (2019). An overview of the research: Vocabulary learning strategies used By ESL Arabic-speaking students. International Journal of Research in Educational Sciences. (IJRES), 2(1), 329-352.

INVITED PRESENTATIONS

Effat University, May 2013

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SCHOLARSHIPS

King Abdullah Scholarship Program, 2013 - 2021

Ph.D. Scholarship Candidate

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Skills

Professional communication skills.
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