

LANGUAGE LEARNING STRATEGIES AMONG SAUDI EFL COLLEGE STUDENTS
AND THEIR RELATIONSHIP TO STUDENTS' PERCEPTUAL LEARNING STYLE,
GENDER, ACADEMIC MAJOR AND PROFICIENCY LEVEL

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DEDICATION

This dissertation is dedicated the most wonderful family in the world who have always been by my side during my academic pursuits. I hope this work will inspire all of you to succeed in your own lives! Without you, I would have never been able to complete this journey. Words cannot adequately express how much I love you all!

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ABSTRACT

This study investigated the type and the frequency of language learning strategies and perceptual learning style preferences among Saudi EFL college students. It was conducted to examine the relationship between the students' perceptual learning style preferences and their use of various types of language strategies. The study also examined the influence of genders, academic disciplines and language proficiency levels on the students' preferences to employ different language learning strategies.

Participants in the study were 667 EFL college students studying at Yanbu English Language Institute (YELI). Participants included 440 male and 227 female students who enrolled in the preparatory English program.

Data for the research study were elicited from two self-reported questionnaires, Oxford's (1990) Strategy Inventory for Language Learning (SILL) and Reid's (1995) Perceptual Learning Style Preference Questionnaire (PLSPQ). In addition, a questionnaire was administrated to gather background information about the participants.

Data received from the returned questionnaires were analyzed using descriptive statistics and inferential statistics including mean scores, standard deviations, frequency calculations for each category and items, *t*-tests and Pearson product-moment correlations.

Data analysis indicated that language strategies were moderately employed by participants, with metacognitive strategies being the most dominant learning strategy. The strategy categories were used in the following order: metacognitive, social, compensation, cognitive, memory and affective strategies. The overall dominant perceptual language style preferences were auditory and group. In addition, significant correlations were found between perceptual language learning styles and the use of language learning strategies. The strongest

correlations existed between visual, auditory, kinesthetic styles and metacognitive strategies. No statistically significant differences were found between participants in using language strategies in either gender or in a particular academic major. However, females tended to employ strategies slightly more often than males, while technical and engineering participants used strategies slightly more often than those in nontechnical fields. There was a statistically significant difference between participants due to their proficiency levels in English in the use of strategy categories. Participants who were less proficient in English employed more affective strategies than did participants who had more advanced English proficiency levels.

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CHAPTER 1

INTRODUCTION

In the last two decades, research on second language learning and teaching has shifted its focus from the teacher and teaching to the learners and the role that individual learning differences play in learning a second language (Cohen & Macaro, 2007; Grenfell, 2007; Macaro, 2006). Researchers have found that not all language learners learn the same way or at the same rate, no matter if all learners are provided with the same instruction for the same amount of time and in exactly the same way (Brown, 2006; Richard & Rodger, 2014). Every learner has a particular way to acquire a second language. Therefore, it becomes important to understand the question of “how the characteristics of individuals are related to their ability to succeed in learning a second language” (Lightbown & Spada, 2013, p. 75).

Numerous and complex individual difference variables (Ehrman, Leaver & Oxford, 2003; Dörnyei, 2005, 2006; Ellis, 2008; Ortega, 2009; Skehan, 1991) are assumed to have an impact on how and how well learners acquire a second language. Among these influential variables, “language learning styles and strategies appear to be among the most important variables influencing performance in a second language” (Oxford, 1989, p. 4).

Early research on language learning strategies (Naiman, Fröhlich, Stern & Todesco, 1978; Rubin, 1975; Stern, 1975) and language learning styles (Dunn & Dunn, 1979; Dunn, Dunn & Price, 1975; Kolb, 1976; Reid, 1984, 1987) strove to identify the characteristics of an effective language learner and account for the variations in learning among successful and less successful language learners. These initial investigations lay the groundwork for many other researchers such as Cohen (1998), Ehrman (1996), O’Malley and Chamot (1987, 1990), Oxford (1990a, 1993), Skehan (1991) and Wenden and Rubin (1987) to further explore different aspects of

language strategies and styles, making the field of language learning strategies and styles as one of the most extensively studied area in second language learning (Dörnyei, 2005).

As the literature grew in this field, research concerning language learning strategies and styles steadily increased in both English as Second Language (ESL) and English as a Foreign Language (EFL) contexts, comparing strategies and styles employed by language learners in different learning environments and investigating factors that may influence learners' strategies and styles. However, there appears to be a paucity of research in the area of language learning strategies and styles in Saudi EFL contexts including those studies conducted by Alhaisoni (2012), Alkhatani (2011) Al-Otaibi (2004) and McMullen (2009). Therefore, there is a need to further investigate this issue to increase the EFL students' awareness about their preferred language learning strategies and styles, while at the same time, draw their attention to other effective strategies and styles available for them but of which they may not be aware to help maximize their use of learning strategies and styles. In addition, this study will help Saudi EFL teachers recognize the diverse learning behaviors of their students and how they can use this information in designing effective and appropriate teaching methodologies, selecting suitable teaching materials and developing activities and assignments to facilitate language learning. The study will also add to the growing body of literature in language learning strategies and styles and fill the gap in research about the learning behaviors of Saudi EFL learners

The purpose of this study, therefore, was to identify the preferred language learning strategies that are most frequently employed by Saudi EFL college in the preparatory English program at Yanbu English Language Institute (YELI). Additionally, this study was designed to examine the most common perceptual learning style preferences among Saudi EFL students, and the possible relationship between the students' learning styles and their strategy use. The study

also explored the students' use of specific language learning strategies in relation to their genders, levels of proficiency in English and academic majors.

Background of the Study

During the last couple of decades, research on language learning and teaching has shifted the focus of research from the behaviorist perspective to the cognitive psychologist view (Brown, 2006; Cohen & Macaro, 2007; Grenfell, 2007; O'Malley & Chamot, 1990; Weinstein & Mayer, 1986; Wenden, 1987). In line with this shift, the emphasis and the interest of researchers have gradually moved the focus of their studies from teachers and teaching methods to what White (2008) described as a "focus on the learner, with growing inquiry into how language learners process, store, retrieve and use TL material" (p. 8).

Retrospectively, learners received more attention in research studies and subsequently so did their learning strategies and styles. The focus of the research in this area has been devoted to identify, describe, and classify learners' behaviors and thoughts while learning a second, foreign or world language. In an effort to account for different aspects of language learning strategies, researchers defined language learning strategies differently (Bremner, 1999; Cohen, 2011; Dörnyei, 2005; Ellis, 2008; Griffiths, 2004, 2008) and identified various classifications for learning strategies (O'Malley & Chamot, 1990; Oxford, 1990a, Rubin, 1987, Stern, 1992). Yet, their research generally exhibits great similarities in definition and categorization without having extreme or fundamental variations amongst them.

Among the various proposed definitions and classifications, Oxford (1990a, 1992) provided one of the most comprehensive definitions and taxonomies for language learning strategies (Dörnyei, 2005). Oxford (1992) defined language learning strategies as:

Specific actions, behaviors, steps, or techniques that students (often intentionally) use to

improve their progress in developing L2 skills. These strategies can facilitate the internalization, storage, retrieval, or use of the new language. Strategies are tools for the self-directed involvement necessary for developing communicative ability. (p. 18)

In addition, Oxford (1990a) drew and expanded upon previous classification systems, providing an extensive taxonomy for language learning strategies that consists of six main strategies and subsumes 62 specific subcategories. The research study will follow Oxford's (1990) taxonomy for language learning strategy and utilize Oxford's Strategy Inventory for Language learning (SILL, 1990) to investigate learners' strategy use.

A great deal of research has indicated that language learning strategies play a significant role in the process of second language acquisition and learning, "The body of work to date suggests a possible relationship between strategy use and second language success" (Macaro, 2006, p. 320). Research findings such as those of Bremner (1999), Chamot, Küpper and Impink-Hernandez (1988), Green and Oxford (1995), Griffiths (2003a), O'Malley and Chamot (1990) and Rubin (1975) have repeatedly revealed a positive relationship between language learning strategies and language proficiency in that language learners who attain a high level of language performance are generally reported to adopt "higher levels of overall strategy use and frequent use of greater number of strategy categories" (Green & Oxford, 1995, p. 265). Successful language learners tend to actively adopt and employ a wide repertoire of learning strategies and apply them more frequently whereas novice learners not only demonstrate less strategy use but also "have a smaller repertoire of strategies and often do not choose appropriate strategies for the task" (Chamot & Küpper, 1989, p. 13). These findings are of a particular importance to language learners and teachers in that "less successful language learners can be taught new strategies, thus helping them become better language learners" (Chamot, 2005, p. 112). The research findings,

however, are not always consistent in this manner (Cohen & Macaro, 2007; Griffiths & Oxford, 2014; Lai, 2009). Some studies did not find any significant differences between successful and unsuccessful language learners in strategy use (Chamot et al., 1988; Vann & Abraham, 1990), while others (Gardner, Tremblay & Masgoret, 1997) yielded even a negative relationship claiming that proficient learners did not need to employ large strategy repertoire.

Although a considerable number of studies have indicated that appropriately used language learning strategies could improve or lead to proficiency in second language learning and acquisition, researchers have identified a number of factors that are responsible for strategy use. Researchers such as Ehrman and Oxford (1989), Green and Oxford (1995), Griffiths (2003b), Nyikos (2008), O'Malley, Chamot, Stewner-Manzanares, Küpper and Russo (1985), Oxford (1989, 1990a, 1993), Oxford and Nyikos (1989) and others have suggested that the frequency and the type of language learning strategy use are subject to individual variations, cultural settings and instructional contexts in which learners acquire the language (Wharton, 2000). These findings have demonstrated the need for more research studies to be conducted on different language learners and in different learning settings.

Among the large number of variables, gender, academic study, language proficiency levels and learning styles are believed to have an impact on the learners' choice of strategy (Oxford, 1990). Gender often influences strategy use (Oxford, 1996). Generally, female language learners are found to adopt a wider range of language learning strategies than male learners (Ehrman & Oxford, 1989; Oxford & Nyikos, 1989). Proficiency in a target language is another factor that could affect learners' choices of strategy (Bremner, 1999; Green & Oxford, 1995; Griffiths, 2008, Wharton, 2000). Second language learners who are more proficient in a second language tend to use more strategies and select a greater number of various types of learning

strategy categories (Green & Oxford, 1995) than language learners who are less proficient in language. In addition, various studies have investigated the relationship between academic disciplines and strategy use. Comparing strategy use across different academic disciplines, students majoring in humanities and social sciences tend to generally employ more strategies than those who are in technical or engineering sciences (Oxford & Nyikos, 1989; Peacock and Ho, 2003; Politzer & McGroarty, 1985).

In terms of learning styles, research investigating the relationship between the underlying learning styles for language learners and their strategy use (Cohen, 2003; Ehrman & Oxford, 1990; Oxford, 1990b, 1993, 2001, 2003b; Rossi-Le, 1995; Willing, 1988) found that language learners have a tendency to adopt specific learning strategies according to their preferred learning styles; hence, they may feel frustrated and stressful if a particular teaching method is inconsistent with their preferred learning styles.

In addition, there are cross-cultural differences in learning style preferences between language learners from diverse cultural backgrounds (Park, 2002). Culture appears to be a strong agent that has an influence on individual preferences of learning styles “culture often does play a significant role in the learning styles unconsciously adopted by many participants in the culture” (Oxford, Hollaway, & Horton-Murillo, 1992, p. 441). Language learners from different cultural backgrounds seem to have distinctive learning style preferences; therefore, no one should automatically attribute a particular learning styles to all individuals or to other learners from different countries (Griggs & Dunn, 1998).

Thus, there is a need to conduct additional research studies to explore how language learners with diverse language abilities and who come from different cultural backgrounds manage their language learning.

Statement of the Problem

English is considered to be a global *lingua franca* for cross-cultural communication (Jenkins, 2006; Seidlhofer, 2011) and, thus, an important language in the modern world. The English language is spoken by millions of people across the globe and enjoys an international recognition as the world's primary language for international communication, business, technology, science, scholarly journals and publications (Graddol, 2006). Nearly 375 million people speak English as their first or native language and around 2 billion people speak or learn English as a second language (Graddol, 2006). In addition, many countries and governments have chosen English as their official language and language of instruction in educational settings. English is considered to be an essential constituent of today's modern world and a key to success in the academic and professional lives of many non-native English speakers (NNES).

Recognizing its global importance, English is a highly regarded language in Saudi Arabia and it is the only foreign language taught in public schools. Students in Saudi public schools take English classes four times a week starting from Grade 4 and continuing for 8 years up to Grade 12 of high school. English is also the primary medium of instruction in most Saudi colleges and universities; English proficiency is seen as a necessary skill for studying scientific subjects, (i.e., engineering, medical fields, science). Most of these universities require students in science major to reach a certain level of English proficiency before they are eligible to register for academic courses. Newly-admitted college students are usually enrolled for one full year studying only EFL (English as a Foreign Language) to improve their level of English language proficiency.

Despite the extensive amount of instruction and the extended time of learning English in public schools and colleges, many researchers (Al-Mohanna, 2010; Al-Seghayer, 2005; Khan, 2011; Rababah, 2005) have expressed their concerns regarding the students being able to reach

the expected level of proficiency. In fact, the outcomes of teaching and learning English in Saudi Arabia seem to be unsatisfactory, and as described by Al-Seghayer (2014) “Saudi English education continues to seriously suffer on all aspects and that the outcome has not been satisfying or, to state the least, is not up to the mark” (p. 17). Many attempts have been made to understand the low achievement level of Saudi EFL students and investigated the problem from different perspectives. Research conducted in Saudi EFL contexts (Al-Fallaj, 1998; Al-Mohnna, 2010; al-Seghayer, 2005; Khan, 2011) attributed the problem to several pedagogical, environmental and personal reasons. Yet, factors such as individual learning strategies and styles that may influences Saudi EFL students’ performance did not receive the necessary attention from researchers.

Although there has been a great number of studies that have investigated the language learning strategies and styles used by various groups of learners around the world in both ESL and EFL contexts (Oxford, 1990b), there is a dearth of research on language learning strategies and styles that have been conducted in Saudi Arabia. Many researchers acknowledge the scarcity of information and the need for more studies to be conducted on the nature of language learning styles and strategies adopted by EFL Saudi students. In fact, Alhaisoni (2012) drew attention to the shortcomings of research on language learning strategies in a Saudi EFL context citing Al-Otaibi (2004) as the only study investigating the use of language learning strategies in Saudi Arabia. Likewise, McMullen (2009) declared that there has not been a lot of research conducted on language learning styles and strategies employed by Saudi EFL students, and states that, “While many studies around the world have investigated the use of language learning strategies (LLSs) for improving language skills, very little has been published on Saudi students and their use of strategies” (p. 418), calling for more studies to be carried out on EFL Saudi learning styles

and strategies. In addition, to date, no research has been reported so far investigating the relationship between students' learning style preferences and their use of language learning strategies in Saudi EFL contexts (Alkhatani, 2011). Thus, the present study intends to fill the gap in this knowledge area in identifying the preferred language learning strategies and styles employed by Saudi language learners.

In addition, research findings have consistently revealed that language learning strategies and styles play an important role in learning a second or a foreign language and “make learning easier, faster, more enjoyable, more self-directed, more effective, and more transferable to new situations” (Oxford, 1990a, p. 8). Successful language learners use various learning strategies and styles (Green & Oxford, 1995; Griffiths, 2003a; O'Malley & Chamot, 1990; Rubin, 1975). Also, using effective language learning strategies and matching teaching styles with students' learning styles appear to be important factors in differentiating between more and less successful language learners (Green & Oxford, 1995; O'Malley & Chamot, 1990; Oxford, 1990; Oxford, Hollaway & Horton-Murillo, 1992; Rubin, 1975).

As has been presented, language learning strategies and styles have a significant impact on learners' level of success. Thus, this study intended to identify the learning strategies and styles among Saudi EFL students and the relationship between language learning strategies use and the students' perceptual learning styles.

Purpose of the Study

The purpose of this study was to identify the preferred language learning strategies that are most frequently employed by Saudi EFL college students in the preparatory English program at Yanbu English Language Institute (YELI). Additionally, this study was designed to examine the most common perceptual learning style preferences among Saudi EFL students, and the

possible relationship between the students' learning styles and their strategy use. The study also aimed to explore the students' use of specific language learning strategies in relation to their genders, levels of proficiency in English and academic majors. The researcher believes that these variables needed to be examined in order to arrive at a better understanding of learning strategies and styles used by Saudi EFL students.

There is sufficient evidence to believe that language learning strategies and styles play a major role in the academic achievement of language learners. Research on language learning strategies reports that good language learners use a variety of effective language learning strategies to assist them in learning a new language. Thus, enhancing the awareness of language learners of the appropriate learning strategies would presumably lead to a more successful learning process (Cohen, 2003; Dörnyei, 2005; Green & Oxford, 1995; Griffiths & Parr 2001; Macaro, 2006; Oxford & Nyikos, 1989; Rubin, 1975). Furthermore, less successful language learners can be taught new effective strategies, helping them become better and potentially more autonomous language learners (Grenfell & Harris, 1999).

Many researchers believe that there is a relationship between learners' learning strategies and their perceptual learning styles in that learning strategies deployed by language learners usually mirror their preferred learning styles (Ehrman & Oxford, 1989). In addition, matching teaching styles to students' particular learning styles is believed to be relevant to the academic performance of language learners (Cohen, 2003; Dörnyei, 2005; Oxford, Hollaway & Horton-Murillo, 1992). Therefore, this study explored language learning strategies and perceptual language learning styles that are most commonly used by Saudi students and examined the influence of learning styles, genders, academic majors and language proficiency levels on their use of learning strategies.

Significance of the Study

This study is significant for primary stakeholders (i.e., EFL learners, teachers, educators, curriculum developers and program administrators) who are interested in understanding the type of language learning strategies and perceptual learning style preferences of Saudi EFL college students. It is anticipated that findings from the current research study will contribute to the effectiveness of the teaching and learning of English as a foreign language to students at Yanbu English Language Institute (YELI) and perhaps at other comparable institutions in Saudi Arabia. The present study is significant because it is expected to increase the awareness of major stakeholders, inform teachers on how to improve their classroom practices and develop an effective curriculum that could better accommodate diverse learning behaviors and empower learners to be aware of their particular learning behaviors.

The present study might also prove useful for EFL teachers in increasing their awareness concerning the use of language strategies and perceptual styles of their students. Teachers can facilitate language learning by promoting awareness of these strategies and by training and encouraging their students to use strategies that best work for their particular learning styles. As Cohen (1998) explained, “language learning will be facilitated if students become more aware of the range of possible strategies that they can consciously select during language learning and language use” (p. 56). However, in order for teachers to successfully do this, they first need to know which learning strategies are available for their students, which strategies their students are already aware of and actually employ in their learning, and which strategies are not employed by their students (Oxford, 2001). Teacher awareness of learning strategies is important because without such awareness, “it is impossible for teachers to assist their students overtly in improving strategy use” (Nyikos, 1996, p. 109). Findings from this study can be beneficial to

EFL teachers because not all EFL teachers are aware of all of the language learning strategies and styles employed by their students. Raising awareness regarding this issue could lead teachers to reconsider or attune their current teaching practices, adjust their roles in the classroom and develop teaching materials to accommodate various learning strategies and styles of their students.

Similarly, students need to be consciously aware of the broad range of strategy options available for them and how to take advantage of such strategies to improve their English learning. Research in the field of language learning strategies and styles (O'Malley & Chamot, 1990; Oxford, 1990b; Oxford & Cohen, 1992) acknowledges the importance of such awareness in helping students learning a second language. The more aware the students are of the strategies they employ, the more effective and skillful learners they will become. Reid (1995) explained that developing an understanding of learning environments and styles “will enable students to take control of their learning and to maximize their potential for learning” (p. xiv). The current study is significant because it could potentially help learners to discover their preferred strategies and styles, realize their actual use, and explore new strategies that are available for them.

This study might also be significant for EFL curriculum developers and EFL program administrators. Findings from the study might help EFL curriculum developers and program administrators in selecting or producing EFL textbooks and materials that accommodate different individuals with diverse perceptual learning styles and subsequently incorporate strategy instructions to facilitate language learning.

In addition, the present study is significant because it will contribute to the existing body of knowledge about language learning strategies and styles but from a different educational and cultural context. This study might contribute to the comprehension of learning strategies and

styles in general and to Saudi EFL context in particular. It provided essential information about Saudi EFL college students, a group of language learners that has not yet been thoroughly investigated. In addition, this study might also inspire other researchers to conduct more studies on important aspects of language strategies and perceptual styles of Saudi EFL learners that have not yet been addressed in previous studies.

Research Questions

The current research study was designed to examine the following research questions:

1. What language learning strategies do Saudi EFL students in the preparatory English program at Yanbu English Language Institute (YELI) use and which ones do they use more frequently when learning the English language?
2. What are the perceptual language learning styles preferences amongst Saudi EFL students in the preparatory English program at Yanbu English Language Institute (YELI)?
3. To what extent is there a relationship between Saudi EFL students' perceptual language learning styles and their language learning strategy use?
4. What are the differences in language learning strategies use between Saudi EFL students studying in the preparatory English program at Yanbu English Language Institute (YELI), based on their genders, academic majors and language proficiency levels?

Assumptions

The following general assumptions were made for the purpose of this study:

1. The self-reported questionnaires, the Strategy Inventory for Language Learning (SILL) and Perceptual Learning Style Preferences Questionnaire (PLSPQ) employed in this

study for measuring the participants' language learning strategies and perceptual learning styles, were reliable and valid.

2. The translation of the questionnaires' directions and statements into the participants' native Arabic language helped participants better understand the questionnaires' statements and led them to respond more accurately.
3. Participants responded to questionnaires honestly and accurately to the best of their knowledge and abilities.
4. A random sampling was used in selecting participants for the study. Therefore, it was assumed that the obtained sample population was a representative of the targeted population.

Limitations of the Study

The present research investigation had the following limitations:

1. The nature of the self-reported questionnaires used in collecting the data depended largely on the participants' accurate recall and understanding of the questionnaires' statements and items. Thus, results were limited to the participants' understanding and honest responses to items on the questionnaires. An attempt was made to avoid misinterpretations of the questions by providing translations of the questionnaires to participants in their native language (i.e., Arabic).
2. Using two self-reported questionnaires (SILL & PLSPQ) in this study might be lengthy for some participants which may lead them to survey fatigue. In this case, some participants may provide inaccurate responses, or may even lose their willingness to complete the questionnaires. The data collected from participants were cleaned from potential outliers, missing values and unusual scores.

3. In terms of external validity, the study targeted only adult EFL college students in Saudi Arabia. As a result, the findings from this study cannot be generalized to other populations of EFL learners and may not be representative of all Saudi EFL students.
4. The present study depended on quantitative methodology (i.e., self-reported questionnaires) for data collection. The quantitative nature of the study may not provide in-depth detailed information about language learning strategies and perceptual styles used by EFL Saudi college students.

Delimitations of the Study

The researcher identified the following delimitations for this research study:

1. Whereby there are several language learning strategies and perceptual learning style inventories available, this study exclusively used the Language Learning Strategies (SILL) and the Perceptual Learning Style Preferences Questionnaire (PLSPQ). Therefore, these instruments inherently examined particular categories and classifications inherent in each instrument. Consequently, other classifications for different learning strategies and styles were not covered by these questionnaires.
2. Several individual characteristics can influence the learners' use of language learning strategies and styles (Oxford, 1990b). However, variables of individual differences in this study were delimited to genders, proficiency levels, academic discipline and learning style.

Definition of Terms

The following definitions of terms were used in the current research study:

A group learner is an individual who learns more effectively through working with others (Reid, 1995).

A kinesthetic learner is a person who learns more effectively through concrete body experience or whole-body movement (Reid, 1995).

A tactile learner is a learner who has a tendency to learn more effectively through touch and hands-on activities (Reid, 1995).

A visual learner is someone who has a tendency to learn more effectively through visual perception (Reid, 1995).

Affective strategies are indirect strategies that help learners regulate their emotions, motivate themselves and gain control over their attitudes while learning (Oxford, 1990). In this study, affective strategies include Oxford's (1990a) strategies: lowering anxiety, encouraging oneself, and taking emotional temperature (e.g., using diary, discussing feelings, self-rewarding).

An auditory learner is a learner who prefers to learn through the oral-aural learning channel (Reid, 1995).

An individual learner is someone who learns more effectively when working alone (Reid, 1995).

Cognitive strategies are direct strategies that enable learners to manipulate and transform the target language (Oxford, 1990a). Cognitive strategies in this study refer to Oxford's (1990a) four main sets of strategies: practicing, receiving and sending messages, analyzing and reasoning, and creating structure for input and output.

Compensation strategies are direct strategies such as switching to one's native language, coining (i.e., inventing) words, using gestures and avoiding communication allowing learners to overcome their linguistic limitations and knowledge about language (Oxford & Ehrman, 1990). The compensation strategies in this study are limited to Oxford's taxonomy (1990) which includes: guessing intelligently and overcoming limitations in speaking and writing.

English as a Foreign Language (EFL) refers to a language-education situation where English language “plays no major role in the community and it is primarily learned in the classroom” (Ellis, 2008, p. 6), such as learning English in Japan, France or China. In such a context, learners’ access and exposure to English outside the classroom is minimal.

English as a Second Language (ESL), according to Ellis (2008, p. 6), describes a language-education situation in which English “plays an institutional and social role in the community (i.e., functions as recognized means of communication among members who speak some other language as their mother tongue),” such as learning English in the United States or New Zealand.

Language acquisition is a subconscious and spontaneous knowledge of language acquired from natural exposure to language in informal settings.

Language learning refers to conscious knowledge of language rules and structures learned usually through formal instruction in classroom.

Language learning strategies can be defined as “specific actions taken by the learner to make learning easier, faster, more enjoyable, more self-directed, more effective, and more transferable to new situations” (Oxford, 1990a, p. 8). In this study, language learning strategies refer to Oxford’s (1990) taxonomy which include memory, cognitive, compensation, metacognitive, affective and social strategies.

Learning style refers to “an individual’s natural, habitual, and preferred way(s) of absorbing, processing, and retaining new information and skills” (Reid, 1995, p. viii). In this research study, learning styles are limited to Reid’s (1995) perceptual language learning style preferences.

Memory strategy is one of several direct strategies used to help learners remember and

retrieve new knowledge (Oxford, 1990a). Memory strategies in this research study are based on Oxford's classification (1990) which includes the following four main sets: creating mental linkage, applying images and sounds, reviewing well and employing action.

Metacognitive strategies are indirect strategies defined as “actions which go beyond purely cognitive devices, and which provide a way for learners to coordinate their own learning processes” (Oxford, 1990a, p. 136). In this research study, metacognitive strategies include three strategy groups identified by Oxford (1990a) as centering learning, arranging and planning learning, and evaluating learning.

Perceptual learning styles preference is a term used by Joy Reid (1998) to refer to different sensory channels that learners prefer to use when learning a second language. In this study, perceptual learning styles refer only to Reid's (1995) categories that include: visual, auditory, group, individual, kinesthetic and tactile styles.

Social strategies are indirect strategies that help learners acquire a second language through interaction with other people (Oxford, 1990a). In this study, social strategies are limited to three main sets of strategies proposed by Oxford (1990a) which include: asking questions, cooperating with others and empathizing with others.

Organization of the Dissertation

Chapter 1 introduces the background of the research study, presents the statement of problem and describes the purpose of the study. The significance of the study is also presented followed by the research questions that guided this research study. Chapter 1 also presents a list of some feasible assumptions, potential limitations and delimitations for the study as well as providing definitions of key terms that were used in this study. Chapter 2 provides a review of the literature and research studies related to language learning strategies and perceptual learning

styles. Chapter 3 presents the methodology used this study which includes a description of the research setting, participants, instruments, procedures for data collection and analyses. Chapter 4 presents the results from the data analyses. Chapter 5 provides a summary of the study and major findings, discussion of findings, theoretical and practical implications, and recommendations for future research.

CHAPTER 2

REVIEW OF THE LITERATURE

This literature review investigates and explores language learning strategies and language learning styles employed by EFL students when learning the English language. The first section examines various definitions of language strategies, characteristics of strategies, different classifications, and factors influencing the use of language learning strategies. The second part of the literature review explores language learning styles considering different views concerning the definition of learning styles, the hypotheses that underlie learning styles and different classifications and dimensions of learning styles. The literature review also highlights the importance of language learning strategies in learning a second language and presents some of the research studies that have been conducted to explore strategy use by Saudi EFL students.

Language Learning Strategies

The language learning strategies employed by learners to acquire a foreign or a second language have become one of the most researched topics in the field of language learning since the birth of language learning strategies in the mid-1970s, when the research perspective shifted from behaviorism to cognitive science in psychology and education (Cohen & Macaro, 2007; Grenfell, 2007; Macaro, 2006; O'Malley & Chamot, 1990; Weinstein & Mayer, 1986). The focus of the research has gradually evolved from focusing on the teachers and the teaching methods to how learners can process new information and what kinds of strategies learners would employ to understand, learn or remember a new language. This first section of this chapter presents various definitions of language learning strategies, describes their characteristics and introduces different classifications and factors influencing the use of language learning strategies.

Definitions of Language Learning Strategies

Since the late 1970s, numerous attempts have been made to reach a conclusive definition for language learning strategies (LLS) yet the definitions offered remain somewhat “inconsistent and elusive” (Dörnyei & Skehan, 2003, p. 608). In general, the definitions for the term language learning strategies (LLS) are viewed as having “no consensus of what constitutes a learning strategy” (O’Malley et al., 1985, p. 22) and the term strategies is rather a “fuzzy one, and...not easy to tie down” (Ellis 1994, p. 529). Bialystok (1983) alluded to the lack of clarity concerning the definition of language learning strategies (LLS), “There is a little consensus in the literature concerning either the definition or the identification of language learning strategies” (p. 100). The term learning strategies has been variously labeled in the literature by different researchers as techniques, tactics, learning behaviors, strategies, learning skills and learner strategies (Griffiths, 2008; Griffiths & Oxford, 2014). Such multiple designations to the same terminology influenced researchers when formulating definitions, leading them to create slightly different definitions for language learning strategies, according to their individual interpretation of these potentially elusive terms.

One of the earliest attempts to define language learning strategies (LLS) was made by Rubin (1975) in an effort to identify the strategies employed by successful language learners. Rubin (1975) provided a very broad definition for the term strategies as “the techniques or devices which a learner may use to acquire knowledge” (p. 43). Another early broad definition of strategies has been proposed by Wenden (1987) who described the concept of learning strategies as “language learner behaviors learners actually engage in to learn and regulate their learning of a second language” (p. 6).

Weinstein and Mayer (1986) defined learning strategies more specifically as “behaviors and thoughts that a learner engages in during learning and that are intended to influence the learner’s encoding process” (p. 315). Weinstein and Mayer (1986) argued that the strategies could facilitate learning and could “affect the learner’s motivational or affective state, or the way in which the learner selects, acquires, organizes, or integrate new knowledge” (p. 315). In a similar vein, Richards, Platt and Platt (1992) defined learning strategies as “intentional behavior and thoughts that learners make use of during learning in order to better help them understand, learn, or remember new information” (p. 209). For these researchers, language learning strategies refer to cognitive behaviors and thought processes that language learners employ to facilitate learning a second language.

Researchers Cohen (1998) and Stern (1992) highlighted the importance of learners’ awareness and the intention of learners when learning a second language in defining learning strategies. Accordingly, language learning strategies are learned consciously and that language learners are aware of the best strategies that fit their needs according to a particular learning objective or situation. Stern (1992), for example, viewed language learning strategies as a conscious means rather than a simple unintentional learning behavior. Stern (1992) claimed that the concept of learning strategy depends largely on “the assumption that learners consciously engage in activities to achieve certain goals and learning strategies can be regarded as broadly conceived intentional directions and learning techniques” (p. 261).

Similarly, Cohen (1998) considered the element of consciousness to be important for the definition of language strategies because it distinguishes strategies from process that are not strategic, particularly in distinguishing between unconscious behaviors such as learning styles.

Cohen (1998) viewed learning strategies as ways that are used consciously by learners to improve learning and retain information about language to use it in other contexts, defining language learning strategies as:

Those processes which are consciously selected by learners and which may result in action taken to enhance the learning or use of a second or a foreign language, through the storage, retention, recall, and application of information about that language. (p. 4)

Oxford (1990a) provided one of the most comprehensive and functional definitions for language learning strategies as “operations employed by the learner to aid the acquisition, storage, retrieval, and use of information” (p. 8). She broadened the definition of language learning strategies by clarifying the purpose of using these strategies to include “specific actions taken by the learner to make learning easier, faster, more enjoyable, more self-directed, more effective, and more transferable to new situation” (p. 8). Oxford’s (1990a) definition for language learning strategies is used as a working definition for the present research study.

Yet, perhaps with such distinct definitions and terminologies, the best way to understand the meaning and the definition of language learning strategies, as Ellis (2008) indicated, is to offer a list of the main characteristics that underlie the language learning strategies.

Characteristics of Language Learning Strategies

Understanding the characteristics of language learning strategies is an important step to an understanding of the nature of these strategies (Ellis, 2008; Griffiths, 2008). Early researchers on language learning strategies (Chamot, 1987; Naiman, Fröhlich, Stern & Todesco, 1978; Rubin, 1975; Stern, 1975) tried to describe the characteristics of a good language learner and identify strategies that successful language learners employ to facilitate their learning of new languages.

A leading attempt to identify the characteristics of language learning strategies was made by Rubin (1975) in her pivotal article “What the ‘Good Language Learner’ can teach us.” Rubin listed several characteristics employed by successful learners through her own observations as a language learner and as a teacher, and through the observations of other learners and teachers. Rubin (1975) claimed that successful learning is dependent mainly on three variables “aptitude, motivation and opportunity” (p. 42). Therefore, a successful language learner may have a natural ability for learning languages, have a strong desire to learn and communicate, and take advantage of opportunities to practice language. Rubin identified and described what she believed as the features of a good language learner as (a) being willing and accurate guesser; (b) willing to communicate; (c) often not inhibited (i.e., has no fear to learn or communicate, tolerate ambiguity and vagueness); (d) able to attend to forms and patterns (i.e., constantly analyzing, categorizing, synthesizing and monitoring); (e) able to create and seek out opportunity to practice and use language; (f) able to monitor his/her own speech performance; and (g) able to pay attention to the meaning and the context of speech.

In a similar vein, Stern (1975) focused on the personal characteristics of the good language learner. Based on his own experience as a teacher and review of related literature, Stern listed the top 10 characteristics of a good language learner which include:

1. A personal learning style or positive learning strategies.
2. An active approach to the task.
3. A tolerance and outgoing approach to the target language and empathy with its speakers.
4. Technical know-how about to tackle a language.
5. Strategies of experimentation and planning with object of developing new language into an ordered or system and/or revising this system progressively.

6. Constantly searching for meaning.
7. Willingness to practice.
8. Willingness to use language in real communication.
9. Self-monitoring and critical sensitivity to language use, and technical expertise about how to tackle a language.
10. Developing the target language more and more as a separate preference system and learning to think in it (as cited in Cohen & Macaro, 2007, p. 11).

Although the works of Rubin (1975) and Stern (1975) primarily focus on identifying the characteristics of successful language learner, not on the characteristics of the strategies themselves, they led other researchers to expand and classify these features into groups of learning strategies. In addition, their works inspired researchers to further investigate the various social strategies (Fillmore, 1976), the psychological characteristics (Naiman, Fröhlich & Stern, 1975), and the cognitive processes used by language learners (Cohen & Aphek, 1978).

Another alternative scheme was proposed by Wenden (1987), which includes six criteria to describe the characteristics of learning strategies. According to Wenden (1987), the language learning strategies appears to have following characteristics:

1. Strategies are specific actions or techniques, not a characteristic that describes a learner general approach.
2. Some strategies are observable while others are not.
3. Strategies are problem oriented, used as a response to learners needs.
4. Strategies can contribute directly or indirectly to learning.
5. Strategies can be conscious and sometimes can become automatized.

6. Strategies are amenable to change. They can be modified, changed, learned and rejected (p. 7).

Oxford (1990) provided an extensive description of the main characteristics of the language learning strategies as follows:

1. Language learning strategies improve the students' communicative competence.

Developing the communicative competence requires students to participate in authentic meaningful communication. Language learning strategies stimulate learners to participate in real communication. Also, specific learning strategies can improve particular fundamental competence (i.e., grammatical, sociolinguistic, discourse and strategic competence). Social strategies, for example, can help students improve sociolinguistic competence while compensation strategies enhance the strategic competence.

2. Language learning strategies allow learners to become more self-directed. These strategies encourage learners to take the lead of their own learning and become more autonomous learners "when students take more responsibility, more learning occur" (Oxford, 1990a, p. 11). Learning strategies create independent long-life learners who are more knowledgeable about their learning strategies.

3. Language learning strategies expand the role of the teachers. Language learning strategies do not limit the responsibility of the teacher in the class to the traditional role of being the only authority in the class, manager, director, or controller. The role of the teacher in language learning strategies extends to facilitate, help, guide, advice the students learning.

4. Language learning strategies are problem-oriented. Language learning strategies are considered as instruments used by learners to solve problems they encountered, complete

tasks, achieve objectives while learning a language. Guessing intelligently, for example, is a learning tool that could be used by students when meaning is not comprehended.

5. Language learning strategies are specific actions undertaken by the learners. They are considered as techniques employed by students to enhance their learning such as taking notes, analyzing and asking for clarification. Choosing specific learning action depends largely on the students' learning styles.
6. Language learning strategies involve many aspects of the learning, not just cognitive. Beside the cognitive strategies, they include other metacognitive, affective and social and memory strategies that do not involve direct mental processing or manipulation of language. A learner may use strategies that do not require higher order of mental thinking, such as seeking an opportunity to communicate or encourage oneself to complete tasks.
7. Language learning strategies support learning directly and indirectly. Some strategies, including cognitive, memory and compensation, contribute directly to the learning process of the language while other metacognitive, affective and social strategies are not directly related to language learning. Though direct and indirect strategies work differently in language learning, these strategies are important and "support each other in many ways" (Oxford, 1990a, p. 12).
8. Language learning strategies are not always observable. Some strategies are hard to detect by teachers as they are processed mentally rather than observable behaviors. Memory and cognitive strategies, for example, are inner mental activities that cannot be easily measured or identified by teachers. Other strategies are used by learners outside the classroom, in natural settings that are typically not observed by teachers.

9. Language learning strategies are often conscious. Most of the strategies involve the learner's conscious efforts to learn a language. However, these strategies could eventually become automatic or unconscious overtime as students practice these strategies and progress in their learning.
10. Language learning strategies can be taught. Oxford (1990a) claimed that, "language learning strategies are easier to teach and modify" (p. 12). Teachers can use strategy training or strategy-based instruction to guide students to the appropriate learning strategies available for them which can teach students how to apply or transfer certain strategies to different contexts.
11. Language learning strategies are flexible. Language learning strategies are independent and differ from one learner to another "They are not always found in a predictable sequences or in precise patterns. There is a great deal of individuality in the way learners choose, combine, and sequence strategies" (Oxford, 1990a, p. 13).
12. Language learning strategies are influenced by a variety of factors. Factors such as gender, age, motivation, proficiency level of learning, learning style, personality traits and purpose of language learning can influence the students' choices of learning strategies. These factors are found to impact language learners' choices and their frequency of use for certain language strategies.

Unlike Oxford (1990), MacIntyre (1994) limited the language learning strategies used by learners to only two general characteristics. First, one of the defining characteristics of the language learning strategies is the "focus on intentional actions" (p. 190). Other accidental or unplanned actions are not considered to be learning strategies but rather as either a personality trait or a situational demand or a combination of both. Second, the language learning strategies

require students to “choose to perform the strategic action” (p. 190). MacIntyre (1994) argued that intentional actions are often choices that are selected from other possible actions. Language learners usually make choices with the intention of improving their learning. If no choices exist while learning, it would be difficult to say that these actions are really strategies.

Although researchers identified various characteristics of the language learning strategies, their characterizations generally appear to have a lot in common. Ellis (2008) summarized the common features made by various researchers about the characteristics of language learning strategies as follows:

1. Strategies refer to both general approaches and specific actions or techniques used to learn an L2.
2. Strategies are problem-oriented- the learner deploys a strategy to overcome some particular learning or communication problem.
3. Learners are generally aware of strategies they use and can identify what they consist of if they are asked to pay attention to what they are doing/thinking.
4. Strategies involve linguistic behavior (such as requesting the name of an object) and nonlinguistic (such as pointing at an object so as to be told its name).
5. Linguistic strategies can be performed in the L1 and in the L2.
6. Some strategies are behavioral while others are mental. Thus, some strategies are directly observable, while other not.
7. In the main, strategies contribute indirectly to learning by providing learners with data about the L2 which they can then process. However, some strategies may also contribute directly (for example, memorization strategies direct at specific lexical items or grammatical rules).

8. Strategy use varies considerably as a result of both the kind of task the learner is engaged in and individual learner preferences. (Ellis, 2008, p. 705)

Classifications of Language Learning Strategies

Research on language learning strategies began in the early 70s with the article of Rubin (1975), “What the ‘Good Language Learner’ can teach us” (Cohen & Macaro, 2007), and since then, researchers have attempted to sort and organize language learning strategies into different categories. Currently, there are a myriad of classifications for language learning strategies yet most of these classifications exhibit great similarities in categorization without having extreme or fundamental variations among them.

Bialystok’s (1978) classification of language learning strategies. Bialystok (1978) offered a model for second language learning that includes four types of language learning strategies: (1) functional practicing, (2) formal practicing, (3) monitoring, and (4) inferencing. Functional practicing strategies refer to strategies used for communication purposes. Formal practicing consists of strategies employed by language learners to learn about the system of the language being studied. Monitoring involves strategies employed to notice errors while learning a second language in formal settings to enhance comprehension. Inferencing is a strategy of guessing the meaning from contexts, using learner’s knowledge of the subject, cues in the environment, gestures or knowledge of other languages.

Rubin’s (1981) classification of language learning strategies. Rubin (1981) proposed a brief classification of strategies employed by successful language learners, dividing them in two primary groupings: direct and indirect cognitive strategies. According to Rubin, direct strategies are specific actions that specifically contribute to the learning process and include (a) clarification and verification, (b) monitoring, (c) memorization, (d) guessing or inductive

inferencing, (e) deductive reasoning, and (f) practice. Indirect strategies are actions that benefit learning but do not contribute directly to learning and include creating opportunity for practice and production tasks related to communication, motivation and opportunity for exposure to language.

Later, Rubin (1987) provided a detailed description of her taxonomy which encompasses three major types of strategies that can contribute directly or indirectly to L2 language learning: learning strategies, communication strategies and social strategies. The first group is identified as learning strategies. These strategies are constructed by the learners and directly contribute to the development of the language. Rubin subdivided these learning strategies into two types: cognitive and metacognitive learning strategies. The cognitive learning strategies refer to processes or steps directly related to language learning language or problem solving and require the learner's attention to direct analysis, transformation and synthesis of learning materials. According to Rubin (1987), cognitive strategies consist of those strategies that enable learner to obtain "knowledge or conceptual understanding" (p. 23). Rubin identified six main cognitive learning strategies: (1) classification/verification, (2) guessing/inductive inferencing, (3) deductive reasoning, (4) practice, (5) memorization and (6) monitoring. The metacognitive learning strategies are operations or steps used by learners to supervise, evaluate, plan, regulate and, self-control their language learning process. These metacognitive strategies assist learners to know more about various aspects of their language learning, evaluate their needs and preferences, and prioritize their learning goals (Rubin, 1987). The strategies include such processes as self-management, advanced preparation planning, monitoring and evaluating activities.

The second group in Rubin's classification is communication strategies. These strategies refer to techniques used by learners to maintain conversation in a second language or when any misunderstanding occurs with co-speakers (Rubin, 1987). Learners may use these strategies in their speaking when they come across any conversational difficulty due to the lack of their linguistics knowledge of the target language. According to Rubin (1987), these strategies contribute indirectly to the development of language learning in two ways "(1) through opportunities to hear more of the target language, and (2) through opportunities to produce new utterances and test their knowledge" (p. 26). In order for language learners to remain in the conversation, they need to deploy certain communication strategies such as using their linguistic and communicative knowledge (i.e., using synonyms, cognates, simple sentences, gestures or mimes, and circumlocution or paraphrasing); prefabricated patterns (e.g., opening and closing conversation, pausing, keeping turns and requesting assistance); avoidance strategies (e.g., avoiding unfamiliar words, phrases or topics) and using clarification strategies (e.g., repeating utterances, writing words, asking questions, using signs).

The third group is called social strategies. Rubin (1987) defined social strategies as "activities learners engaged in in which afford them opportunities to be exposed to and practice their knowledge" (p. 27). These strategies may not directly contribute to the learners' language yet merely create opportunity for learners to practice their language. Rubin (1987) provided a number of social strategies deployed by learners that create "situations with natives in order to verify/test/practice; initiate conversation with fellow student/teacher/native speaker; answer to self, questions to other students; spend extra time in language lab" (p. 27); and that enable them to create opportunity to practice their target language.

O'Malley and Chamot's (1990) classification of language learning strategies.

Another classification, originally adapted from O'Malley et al. (1985), was proposed by O'Malley and Chamot (1990). They organized language learner strategies into three primary categories: metacognitive strategies, cognitive strategies and social strategies. These three main strategies are further divided into several substrategies that include seven metacognitive strategies, 14 cognitive strategies and two social strategies.

1. Metacognitive strategies, according to O'Malley and Chamot (1990), are “higher order executive skills that may entail planning for, monitoring, or evaluating the success of a learning activity...applicable to a variety of learning tasks” (p. 44). The metacognitive strategies encompass: planning (advanced organization, direct attention, functional planning, selective attention, self-management), monitoring (self-monitoring), and evaluation (self-evaluation).
2. Cognitive strategies are tactics that can be used to manipulate incoming information to improve learning (O'Malley & Chamot, 1990). Cognitive strategies fall into three broad strategies: rehearsal, organization and elaboration which include other substrategies such as resourcing, repetition, grouping, deduction, imagery, auditory representation, keyword method, elaboration, inferencing, note taking, summarizing, recombination, translation.
3. Social strategies mainly include communication with other individuals and control over learners' emotional (O'Malley & Chamot, 1990). This category incorporates social and affective strategies such as questioning for clarification and cooperation to assure oneself and to reduce anxiety.

Oxford's (1990) classification of language learning strategies. One of the most cited, extensive and widely used classifications of language learning strategies was provided by Oxford

(1990). Oxford classified language learning strategies into two main groups: direct and indirect strategies. Direct strategies are directly involved in the learning process of a second language and “require mental processing of the language” (Oxford, 1990a, p. 37), while indirect strategies do not contribute to the learning of the second language, but rather “support and manage language learning without (in many instances) directly involving the target language” (Oxford, 1990a, p. 135). Direct group subsumes three categories: memory, cognitive and compensation strategies whereas the indirect group includes: metacognitive, affective and social strategies. These six general strategies include 19 subcategories with 62 specific strategies that compose the Strategy Inventory for Language Learning (SILL). The following taxonomy description is exclusively based on Rebecca Oxford’s (1990) classification of language learning strategies.

Direct strategies. These strategies require mental processing and directly involved in the learning process. These strategies include memory, cognitive and compensatory strategies.

Memory strategies. They help second/foreign language learners memorize and recall new information when needed, and help learners create a connection between different parts of the target language (Oxford, 1990). Oxford divided memory strategies into four sets: creating mental linkages, applying images and sounds, reviewing well and employing actions which cater for different learning styles (i.e., visual, auditory, kinesthetic and tactic) that may exist among L2 learners. The first strategy, creating mental linkages, refers to technique used by language learners to make materials easy to remember such as grouping and classifying language materials into meaningful units, associating new language to concepts already in memory, and placing new words into meaningful context. The strategy of applying images and sounds to remember new words and expression includes using mental image representation of the word itself, the sound of the new word or a combination of sound and image. In order to remember new target language

information, language learners also need to carefully review what has been learned in a consistent manner. In addition, learners tend to choose specific strategies depending on their learning styles. Learners who are more kinesthetic or tactical in language learning, for example, may find employing action strategy such as performing physically new expressions and using flash cards more appealing to their mode of learning (Oxford, 1990a).

Cognitive strategies. These strategies are essential for language learners to manipulate or transform the target language (Oxford, 1990). The cognitive strategies fall into four categories that involve: practicing, receiving and sending messages, analyzing and reasoning and creating structure for input and output. According to Oxford (1990), practicing strategies are considered the most important cognitive strategies. Cognitive strategies include repeating, formally practicing with sounds and writing systems, recognizing and using patterns, recombining and practicing naturalistically. Receiving and sending message strategies subsume the strategy of getting the idea quickly, a helpful strategy to identify the main idea and a point of interest through skimming and scanning (Oxford, 1990), and the strategy of using different resources variable for receiving and sending messages to increase comprehension and production. Analyzing and reasoning strategies, such as reasoning deductively, analyzing expression, analyzing contrastively and translating to L1, are commonly used by language learners to understand or create new expressions. Sometimes, language learners try to create logical and manageable structures for all input and output that surround them by taking notes, summarizing and highlighting important information. These actions are necessary for learners' comprehension and production in the target language (Oxford, 1990).

Compensatory strategies. Oxford (1990a) explained that these strategies can “enable learners to use the new language for either comprehension or production despite limitation in

knowledge” (p. 47). Language learners always encounter difficulty when learning a new language due to their insufficient linguistic ability in that new language. Thus, learners rely on such strategies to understand the new language and produce it. Oxford (1990) identified 10 compensatory strategies and clustered them into two main groups: guessing intelligently and overcoming limitations in speaking and writing. According to Oxford (1990a), guessing strategies refer to the use of both “linguistic and nonlinguistic” (p. 47) clues to guess the meaning of unknown words and expressions from contexts. Learners seek linguistic clues from their previously-acquired linguistic knowledge about the target language in order to compensate for the lack of knowledge on some part of the target language. If their linguistic clues are not available or are not completely acquired, learners may seek clues that are nonlinguistic in nature, using their knowledge of context, their personal relationships, the situation or the text structure (Oxford, 1990). To overcome limitations in speaking or writing, learners may use strategies such as switching to their native language, getting help from others, using mimics and gestures, avoiding certain expressions or topics, selecting familiar topics and words, adjusting their message, coining words, using synonyms and describing difficult concepts to deliver the meaning.

Indirect strategies. As the term suggests, these strategies are not directly involved in the learning process of a second language; however, they help learners to regulate and control their learning (Oxford, 1990). Indirect strategies are further divided into three subsets which include metacognitive, affective and social strategies.

Metacognitive strategies. These strategies are approaches employed by language learners in order to control their own cognition and learning process (Oxford, 1990). According to Oxford taxonomy, these strategies provide indirect support for language learning through three sets of

metacognitive strategies: centering learning, arranging and planning learning and evaluating learning. These three sets of metacognitive strategies are further divided into 10 specific strategies that subsume: overviewing and linking with already known materials, paying attention, delaying speech production to focus on listening, finding out about language learning, organizing, setting goals and objectives, identifying the purpose of language task, planning, practice, self-monitoring and self-evaluation.

Affective strategies. They refer to strategies that help language learners create positive attitude, increase motivation or overcome emotion. The affective side of the learners is an important factor that could have influences on language learning success or failure (Oxford, 1990); therefore, these strategies could help learners gain control over their emotions. Oxford (1990) identified three main affective strategies: lowering anxiety, encouraging oneself and taking emotional temperature. Reducing anxiety can be performed physically or mentally using progressive relaxation, mediation, taking deep breath, listening to soothing music, reading comic books or watching funny movies. Self-encouragement strategies come from inside the learner by making positive statements about oneself, pushing oneself to take risks in learning and rewarding oneself for good performance (Oxford, 1990). Taking emotional temperature strategies refer to techniques used by learners to assess and evaluate their feelings, motivations and attitudes towards target language to control their affective side (Oxford, 1990). Language learners can accomplish that by paying attention to negative feelings, worry, tensions and fear, using checklist to discover feelings, attitude and motivation, writing language learning diary about feelings and discussing feelings with someone else (Oxford, 1990).

Social strategies. According to Oxford (1990), social strategies are techniques employed by learners to communicate and work with others, or to understand culture and language. Social

strategies include three main categories of strategies: asking questions, cooperating with others and empathizing with others. Language learners can ask questions for clarification, verification or correction from other advanced learners, teachers or perhaps native speakers. In addition to asking questions, language learners may adopt other social strategies such as seeking opportunities to cooperate with peers in the classroom or with proficient users of the target language outside the classroom in order to improve their language skills. Another important social strategies empathizing with others by learning and developing a cultural understanding and becoming aware of others' thoughts and feelings (Oxford, 1990).

Although Oxford provided the most comprehensive taxonomy for language learning strategies, she warned that “there is not complete agreement on how many strategies exist; how they should be defined, demarcated, and categorized: and whether it is – or ever will be – possible to create a real, scientifically validated hierarchy of strategies” (Oxford, 1990a, p. 17). For the purpose of this research study, Oxford's (1990) taxonomy for categorizing language learning strategies were used as an underlying basis to obtain information concerning the strategy use of EFL learners at Yanbu English Language Institute (YELI). Oxford's (1990) taxonomy was chosen for the present study because it is the most comprehensive taxonomy that has been widely used in many research studies to measure the use of language learning strategies.

Factors Influencing Language Learning Strategy Use

The fact that many researchers have tried to provide a clear, detailed classification of language learning strategies to identify the most effective strategies used by learners in learning English does not mean that all learners use language learning strategies in the same manner. A host of variables such as age, sex, motivation, attitudes, language anxiety, proficiency levels,

teaching methods, self-confidence and language aptitude are assumed to have an effect on the use of strategies (Griffiths, 2008; O'Malley et al., 1985; Oxford & Nyikos, 1989; Ehrman & Oxford, 1990; Oxford, 1993). The following sections provide a review of the related literature for some of the prominent variables that have an influence on the choice of language learning strategies, gender, level of study, major of study, and learning style.

Gender

Researchers (Ehrman & Oxford, 1989; Green & Oxford, 1995; Oxford & Nyikos, 1989; Nyikos, 1990) have investigated the effect of learners' genders on their strategy use when learning a second or a foreign language. The majority of the researchers have reported that in general females tend to use language learning strategies more frequently than males. As explained by Nyikos (2008), "Women almost invariably use more language strategies than men, and make greater use of general study strategies and formal rule related practice strategies than men" (p. 76). However, findings among these studies are not always consistent. Griffiths (2003), for example, reported variation between sexes in using language learning strategies yet the difference between the two groups was small in magnitude. Similarly, Ehrman and Oxford (1995) found no significant differences between men and women and that "Gender had no relationship with learning success by any measure ...the females were indistinguishable from the males" (p. 81). Other researchers including Radwan (2011) and Wharton (2000) revealed the opposite findings in which males have been reported as using learning strategies more frequently than their counterparts. Radwan (2003), for example, found that Arab male students used more language learning strategies than female students. Wharton (2000) reported similar findings in a study carried out on university students learning foreign languages in Singapore where male students were found to employed more language strategies than females.

Language Proficiency

The use of language learning strategies is also associated with the learner's proficiency in second language (Green & Oxford, 1995; Griffiths, 2008; Wharton, 2000). In general, language learners who demonstrate a high proficiency level in second language significantly reported using more language learning strategies than lower-proficiency level learners (Green & Oxford, 1995; Griffiths, 2008; Park, 1997). In addition, more second language proficient learners employ a wider repertoire of strategies than lower proficient learners. Some research studies have found that specific kinds of strategies shifted somewhat across learners' levels of proficiency. For example, O'Malley et al. (1985) found that intermediate level students of second language tended to consistently use more metacognitive strategies than students in a beginning level proficiency of language learning.

Academic Discipline

Academic discipline or field of specialization (i.e., university major) is another factor that could influence that choice of language learning strategy (Oxford, 1989). Several studies (Oxford & Nyikos, 1989; Peacock & Ho, 2003; Politzer & McGroarty, 1985) have reported that the academic major directly affects the choice of language learning strategies. Generally, humanities and social sciences students are reported to employ various language learning strategies more frequently than engineering and science students. In their study of foreign and second language learners, Oxford and Nyikos (1989) discovered that university students majoring in humanities and social science used two different types of strategies (independent strategies and functional practice) more often than other students majoring in different disciplines. Additionally, Politzer and McGroarty (1985) reported that social science and humanities ESL students scored higher on all language learning strategies compared with ESL students majoring in engineering and

physical sciences. Similarly, Peacock and Ho (2003), comparing strategy use across different academic disciplines, found sharp disciplinary differences in strategy use between second language learners. Specifically, they found that strategy use was higher among humanities students than among science and engineering students, with students majoring in English reported as having the highest overall frequency of strategy use, followed by education major students, then business, math, science and engineering students.

Language Learning Styles

Learning styles are also important variables that may have an influence on the learners' choice of language learning strategies. The following sections present a detailed description of language learning styles, draw a distinction between the definitions of language learning styles and strategies, review some of the principles that underlie learning styles, explore different classifications of learning styles, and investigate the relationship between language learning styles and strategy use.

Definitions of Language Learning Styles

The difference between language learning strategies and language learning styles might sometimes be unclear (Cohen, 2003). It is important to clarify the meaning and definition of learning styles and learning strategies before carefully investigating learning styles.

The term *strategy* refers more to specific actions or behaviors that are consciously retained to achieve specific goals. Generally, learning strategies can be regarded as specific learning skills such as seeking out conversation partners, or giving oneself encouragement that can be taught to students to enhance their learning. Reid (1995) described learning strategies as “external skills that students use, often consciously, to improve their learning” (p. viii).

The term *style*, however, is a more general term that is used to refer to “consistent and rather enduring tendencies or preferences within an individual” (Brown, 2000, p. 113). Learning style refers to an individual’s general a preferred, habitual or natural way to learn. Reid (1998) defined learning styles as “internally based characteristics, often not perceived or consciously used by learners, for the intake or comprehension of new information” (p. 11).

Keefe (1979) provided a broad definition that included three dimensions for learning styles as “cognitive, affective and psychological behaviors that serve as relatively stable indicators of how learners perceive, interact with and respond to the learning environment ... Learning style is a consistent way of functioning, that reflects underlying causes of behavior” (p. 4). Simply stated, learning styles are the general and stable approaches or preferences to learn while learning strategies are the specific behaviors or actions, often conscious to improve learning process (Cohen, 2003).

Fundamentals of Learning Styles

There are various theories for language learning styles proposed by many researchers, depending on their different perspectives of learning styles. However, Reid (1995) argued that most of the learning styles in ESL/EFL settings are based on some hypotheses that include:

1. Every person, student and teacher alike, has a learning style and learning strengths and weaknesses;
2. Learning styles exist on wide continuums; although they are described as opposites;
3. Learning styles are value-neutral; that is, no one style is better than others (although clearly some students with some learning styles function better in a US school system that values some learning styles over others);

4. Students must be encouraged to “stretch” their learning styles so that they will be more empowered in a variety of learning situations;
5. Often, students’ strategies are linked to their learning styles;
6. Teachers should allow their students to become aware of their learning strengths and weaknesses. (Reid, 1995, p. 13)

Classifications of Language Learning Styles

There are numerous ways of classifying and identifying dimensions of learning styles. Over 20 styles dimensions have been identified by different researchers to be utilized by language learners and believed to have influence on their language learning (Ehrman & Oxford, 1990; Oxford et al., 1992).

Willing (1988), for example, proposed a model for language learning style dimensions classifying styles according to different phases of language learning as: perceiving, processing and using. In the first phase, the perceiving phase, learners receive language input through all their senses and, therefore, learners involve kinesthetic, visual, auditory or tactile sensory preferences in learning a language. In addition, in this stage, Willing (1988) included personality style (involved-observing, identity secure and identity anxious, and self-directing and authority-oriented) as factors that determine the way information is searched, collected and processed.

The second phase, the processing phase, is defined as “the area of what happens inside the head” (Willing, 1988, p. 61), and includes cognitive style (analytical tendency and concrete tendency) and acquired learning styles (selective focusing, hypothesis testing, utilizing contextual clues and imaging). In the last phase, the using phase, learners retrieve information learned in the previous stages, and use this information whenever needed (Willing, 1988).

Reid (1995) proposed another classification for language learning styles dividing them into three major categories: cognitive learning styles, sensory learning styles and personality learning styles. First, cognitive learning styles involve field independent learners who usually learn more effectively by analyzing facts sequentially, separating details from the general background and proceeding to broad and general ideas (Reid, 1995). Field dependent learners, on the other hand, prefer to learn “in context, holistically, intuitively and specially sensitive to human relationships and interactions” (Reid, 1995, p. ix). Under cognitive learning styles, Reid further classified learners as either analytical or global learners. Analytical learners are detail-oriented and prefer to learn individually and step-by-step in order to achieve their goals while global learners view a holistic picture and learn more through communication with other individuals and through concrete experiences (Reid, 1995). In addition, the cognitive learning styles classification offered by Reid (1995) distinguishes between reflective learners, accurate learners who are more effective when given time, and responsive learners, fluent learners who prefer to respond immediately.

The second category in Reid’s (1995) classification of language learning styles includes sensory learning styles. Reid (1995) further divided the sensory learning styles into two dimensions: perceptual learning styles (auditory, visual, tactile, kinesthetic) and environmental learning styles (physical and sociological). In perceptual learning styles, auditory learners depend mostly on their listening and speaking abilities and learn more effectively by listening to instructions, directions and oral interactions without the need for visual aids. Visuals, on the other hand, learn more effectively through their eyes (seeing). Visually-oriented learners prefer to read, draw, study charts and use visual cues and graphic information when learning a second language (Reid, 1995). Some learners may fall into the tactile group and those who prefer to

learn through touch and hands-on activities while other students are described as kinesthetic learners (i.e., they enjoy whole-body movement and physical actions for learning a language such as miming and role-play), according to Lightbown & Spada (2013). The environmental learning style, according to Reid (1995), subsumes physical learners who are more comfortable in learning environment when such variables as sound, light, temperature, time and a classroom's arrangement are suitable. Sociological learners are sensitive to variables such as group, individual, pair and teamwork, and the teacher's role and level of authority in the classroom. Reid (1995) includes the two social styles (group and individual) along with the sensory learning styles (auditory, visual, tactile and kinesthetic) to form the Perceptual Learning Style Preferences Questionnaire (PLSPQ).

The third category of learning styles is the affective or temperament learning style which subsumes three dimensions: temperament styles, tolerance of ambiguity styles and right-and left-hemisphere learners. Reid (1990) adopted the Myers-Briggs temperament styles (Myers & McCaulley, 1985) to distinguish between four dimensions of learning styles: extraversion and introversion; sensing and intuition; thinking and feeling; and judging and perceiving. Tolerance of ambiguity is another style proposed by Reid (1995) and refers to the degree to which learners are willing to tolerate ambiguity usually associated with learning a new language. Ambiguity-tolerant learners prefer to practice, communicate and take risk to learn a new language while ambiguity-intolerant learners feel more comfortable with less flexible, less risky and more structure situation (Reid, 1995). Left- and right-brain learners may tend to employ different styles in language learning (Reid, 1995). Left-brain-dominant learners favor visual, analytic and reflective learning while right-brained learners tend to use auditory, global, impulsive and interactive learning (Brown, 2000).

Importance of Language Learning Strategies and Styles

Many teachers may assume that a particular teaching methodology, a teacher's qualifications and a teacher's role in the classroom are the only affective factors involved in learning a language. These teachers expect students to learn a new language if they just teach well or use a certain teaching method. However, this view is quite inconclusive (O'Malley & Chamot, 1990). If students are not motivated, are not taking risks wisely, do not know how to take notes and summarize or do not seek opportunities to learn, it may not matter how well teachers are teaching. Therefore, teachers should not depend solely on teaching content materials but rather they need to develop the students' ability to regulate their own learning. Good teaching, as characterized by Weinstein and Mayer (1983), "includes teaching students how to learn, how to remember, how to think, and how to motivate themselves" (p. 3).

The attributes that individual learners bring to language learning, such as their learning strategies and styles, impact their learning performance and success. Therefore, teachers should take into consideration these attributes, as Norman (1980) indicated:

It is strange that we expect students to learn yet seldom teach them about learning. We expect students to solve problems yet seldom teach them about problem solving. And, similarly; we sometimes require students to remember a considerable body of material yet seldom teach them the art of memory. It is time we made up for this lack, time that we developed the applied disciplines of learning and problem solving and memory. We need to develop the general principles of how to learn, how to remember, how to solve problems, and then to develop applied courses, and then to establish the place of these methods in an academic curriculum. (p. 97)

In the last decade, a significant shift has taken place from teachers to learners, resulting in less stress on teachers and teaching and greater emphasis on the students' learning, characteristics and contributions to their own learning (Cohen & Macaro, 2007; Grenfell, 2007; Macaro, 2006). This change towards student-centered approaches led many studies (Chamot, Barnhardt, El-Diary & Robbins, 1996; Weinstein & Mayer, 1983; Green & Oxford, 1995; Griffiths & Parr, 2001; O'Malley & Chamot, 1990; Oxford, 1990a; Oxford & Nyikos, 1989) to explore how learners efficiently learn a new language, what makes learners successful and why some people are more successful at learning than others. The majority of these studies have found that using the appropriate language learning strategies is an important factor in differentiating between more successful and less successful learners. According to Macaro (2006) "The body of work to date suggests a possible relationship between strategy use and second language learning success" (p. 320).

Weaver and Cohen (1998) explained the twofold role that language learning strategies play in the learning process, "these strategies will facilitate the language learning process by promoting successful and efficient completion of language learning tasks, as well as by allowing the learners to develop their own individualized approach to learning (p. 68)" Also, when learners are accountable for their own learning, it is expected that "more learning occur, and both teacher and learner feel more successful" (Oxford, 1990a, p. 11).

In addition, research affirms that every person has preferences along the sensory, the personality and the cognitive styles dimensions in which she/he can locate her/his position somewhere on a continuum for each style dimension (Oxford, 2003). For example, an individual may show a tendency towards a specific sensory style (i.e., visual, auditory, tactile, kinesthetic) when learning a language and, thus, could be described as being a visual learner rather than an

auditory learner. One might also tend to be an extroverted and right-brained learner while someone else might be an introverted and left-brained learner (Ehrman & Oxford, 1998).

In addition, researchers (Cohen, 2003; Ehrman & Oxford, 1990, 1998; Lawrence, 1984; Leaver, 1986; Willing, 1988) found a relationship between the underlying learning styles for language learners and their use of language learning strategies. As Cohen (2003) indicated, specific learning styles are found to be linked to a particular learning strategy use. Visually-oriented learners, for instance, tend to use strategies such as listing and word grouping whereas auditory learners prefer to learn language with tapes and practice aloud. Learners with extroverted personalities prefer using social and cognitive strategies while introverts utilize metacognitive strategies with general rejection of affective and social strategies.

In a study conducted by Ehrman and Oxford (1990) exploring the strategy choice in relation to learning styles, the results revealed that extroverts reported using more social and affective strategies than introverts. Extroverts were also found to prefer cognitive strategies while introverts were more inclined towards metacognitive strategies. The results of the study also revealed that sensing (concrete) learners liked memory strategies and preferred both cognitive and metacognitive strategies yet rejected compensation strategies such as guessing intelligently and overcoming limitation in speaking and writing. Intuitive learners, on the other hand, reported strong preferences for compensation strategies. In addition, thinkers reported extensive use of metacognitive strategies yet showed no preference towards social strategies. Feelers rejected metacognitive strategies but liked social strategies. Judgers liked metacognitive strategies and social strategies yet rejected compensation strategies, unlike perceivers who liked such strategies (Ehrman & Oxford, 1990).

Research Studies on Language Learning Strategies in Saudi Arabia

Little research has been conducted to investigate the use of language learning strategies employed by Saudi EFL learners. Al-Otaibi (2004) examined the kind of language learning strategies Saudi students learning EFL might employ and how often they used those strategies, if students' language proficiency levels could affect their language learning strategies, whether male and female students were different or similar in their language learning strategies, and the relationship between language learning strategy use and motivation.

Al-Otaibi used the Strategy Inventory for Language Learning (SILL), developed by Oxford (1990), to explore the strategy use by 237 Saudi participants. In general, Saudi EFL students reported a moderate use of language learning strategies in this study. In addition, there were no significant differences between male and female participants in all categories of strategies.

The results, however, indicated significant differences in using strategies according to the students' language proficiency levels and motivation. Saudi EFL students who were more proficient in the second language, or highly motivated, used particular language learning strategies more frequently than others. Participants with higher proficiency levels used a greater number of strategies more frequently than their counterparts with lower proficiency levels in all categories. The findings also revealed that both teachers and teaching practices affect students' motivation and their particular strategy use.

In a similar study, Alhaisoni (2012) investigated the type and the frequency of language learning strategies by Saudi EFL students in an intensive English learning program in Saudi Arabia. His study sought to explore the relationship between participants' genders and levels of language proficiency and their use of language learning strategies. Participants in this study

involved 701 male and female Saudi college students enrolled the first-year at intensive English language program. The researcher used a modified version of Oxford's (1990) Strategy Inventory for Language Learning (SILL) to examine the type and the frequency of language learning strategies used by Saudi EFL students.

In terms of frequency, the result from Alhaisoni (2012) study revealed that Saudi students in an EFL setting can be classified as low to moderate users of language learning strategies, a finding consistent with Al-Otaibi's (2004) results. Saudi students preferred to use cognitive and metacognitive strategies more frequently than other strategies while affective and memory strategies were the least frequently used among all language learning strategies.

The results of Alhaisoni (2012) research indicated that gender was not a significant determiner of students' language learning strategies, which seemed inconsistent with previous studies (Green & Oxford, 1995; Oxford et al., 1988; Oxford & Nyikos, 1989). Saudi female students didn't differ significantly in using language learning strategies from their male counterparts except only for one strategy (social strategies), in which females reported using more frequently than male students did.

The study also indicated a positive relationship between the students' levels of proficiency in the English language and their use of language learning strategies. Advanced level students used all six language learning categories more frequently than those having lower proficient levels.

An additional study, conducted by McMullen (2009), investigated the use of language learning strategies used by Saudi EFL students. The study was conducted to determine if gender and academic major have any influence on the Saudi EFL students' use of language learning strategies, and whether Strategy Based Instruction (SBI) can help students improve their writing

abilities. Data were also collected from 165 Saudi EFL male and female students from three universities across the country using the questionnaire developed by Oxford (1990), Strategy Inventory for Language Learning (SILL).

The results revealed that both male and female students reported a similar rank for their most frequently used strategies in the following order: social, metacognitive, compensation and cognitive strategies. Although no statistically significant differences concerning language learning strategies were found between Saudi EFL students, based on their genders or their academic major, McMullen (2009) found that Saudi female students in general used more strategies than male students.

McMullen (2009) claimed that there has not been a lot of research on the language learning strategies employed by Saudi EFL students “While many studies around the world have investigated the use of language learning strategies (LLSs) for improving language skills, very little has been published on Saudi students and their use of strategies” (p. 418), identifying only one documented study that Al-Otaibi (2004) conducted on Saudi EFL students. She urged the research community, Saudis in particular, to become more involved in action research on EFL Saudi learning strategies and styles. McMullen (2009) also suggested integrating strategy instruction with course content in EFL classroom to develop the students’ language abilities, particularly their writing skills.

Based on the previous literature review, there seems to be a plethora of definitions, characteristics and classifications for language learning strategies. In addition, the literature review signifies numerous factors influencing the use of language learning strategies. Similarly, there are different views concerning the definition of learning styles, the hypotheses that underlie learning styles and several classifications and dimensions of learning styles. Although the

literature review revealed inconsistency regarding the definitions, characteristics and classifications of language strategies and styles, the majority of the researchers affirmed the impact and the importance of language learning strategies and styles on language learning performance. The findings from the comprehensive literature review support the theoretical framework on which this present research study is based.

Chapter Summary

Chapter 2 presented a review of the related literature on language learning strategies, definitions, characteristics, and classifications of language learning strategies. This literature review provided a comprehensive overview of Oxford' (1990) typology for language learning strategies. In addition, it explored some of the possible factors that influence a learner's choice of language learning strategies such as the gender of the participants, their academic major and their proficiency levels in English. The chapter also reviewed literature on language learning styles, definitions, fundamentals and classifications of language learning styles, focusing on Reid's (1995) classification of perceptual language learning styles. Additionally, Chapter 2 discussed the importance of language learning strategies and styles in learning a second language. It also reviewed some of the research studies on language learning strategies that have been conducted in Saudi EFL contexts.

Chapter 3 will present the methodology for this study, which includes the research setting, participants, instruments and procedures for data collection and analysis.

CHAPTER 3

METHODOLOGY

Introduction

This chapter provides an overview of the research methodology that was used in this research study. It begins with an overview of the purpose of the study and a review of the research questions. The chapter provides a comprehensive description of the research setting, the participants and the instruments used for data collection. It also reviews the validity and reliability of the instruments. Chapter 3 also presents the procedures used for data collection and the statistical methods for data analysis.

The purpose of this study was to identify the preferred language learning strategies that are most frequently employed by Saudi EFL college students in the preparatory English program at Yanbu English Language Institute (YELI). Additionally, this study was designed to examine the most common perceptual learning style preferences among Saudi EFL students, and the possible relationship between the students' learning styles and their strategy use. The study also aimed to explore the students' use of specific language learning strategies in relation to their genders, levels of proficiency in English and academic majors. The research questions that guide this study are:

1. What language learning strategies do Saudi EFL students in the preparatory English program at Yanbu English Language Institute (YELI) use and which ones do they use more frequently when learning the English language?
2. What are the perceptual language learning styles preferences amongst Saudi EFL students in the preparatory English program at Yanbu English Language Institute (YELI)?

3. To what extent is there a relationship between Saudi EFL students' perceptual language learning styles and their language learning strategy use?
4. What are the differences in language learning strategies use between Saudi EFL students studying in the preparatory English program at Yanbu English Language Institute (YELI), based on their genders, academic majors and language proficiency levels?

The following sections provide detailed information about the targeted population, sampling method, instruments and procedures for gathering data, method of data collection and statistical techniques for data analysis methods.

Research Setting

The current research study was carried out in Yanbu English Language Institute (YELI), Saudi Arabia. The English Language Institute of Yanbu (YELI) is a teaching unit affiliated with Yanbu Industrial College (YIC) and Yanbu University College (YUC) and prepares students for academic study taught in English in the two educational institutes. Yanbu Industrial College (YIC) is a technical institute that offers associate and bachelor degrees for Saudi male students in different fields of engineering. Yanbu University College (YUC) is an educational institution that offers a bachelor's degree for male and female students in the fields of business, computer science, applied linguistics and other non-technical fields.

English is the medium of instruction for all content academic courses at Yanbu Industrial College (YIC) and Yanbu University College (YUC). In order to improve the students' linguistic proficiency levels to undertake academic courses taught in English, students are required to take a number of EFL courses offered by Yanbu English Language Institute (YELI) before they are allowed to take any academic courses in the two colleges.

All newly-admitted students to YELI are placed into the Preparatory English Program in ENG 001 and ENG 002, according to their performance on the English Placement Test (EPT) or IELTS or TOEFL tests. Each level is a one academic semester study and consists of courses in four core skill areas of reading, writing, listening and speaking.

Participants

Participants in this study included a total number of 667 Saudi EFL college students (18 years or older) enrolled in the English preparatory year at Yanbu English Language Institute (YELI) for the spring semester of 2016. There were 440 male students (approximately 66%) and 227 female students (nearly 34%) who responded to the two questionnaires. There were 320 students (nearly 48%) enrolled in English level one (ENG.001) while 347 students (about 52%) were enrolled in English level two (ENG. 002). From the entire group of respondents, 365 students (nearly 55%) indicated that they majored in technical and engineering fields while 302 (nearly 45%) reported that they were studying business, managements and other non-engineering academic disciplines. Table 1 shows the distribution of participants by gender, EFL course level and academic major.

Table 1

Population Distribution for EFL Students at YELI

	Female		Male		Total	
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
EFL Courses						
ENG 001	99	14.84%	221	33.13%	320	47.97%
ENG 002	128	19.20%	219	32.83%	347	52.03%
Total	227	34.04%	440	65.96%	667	100%
Academic Major						
Technical/Engineering	50	7.50%	315	47.22%	365	54.72%
Business/Management/Other	177	26.53%	125	18.75%	302	45.28%
Total	227	34.03%	440	65.97%	667	100%

All students speak Arabic as their first language and they have studied English for at least 9 years before they came to college. Students had English classes four times a week for 45 minutes a day starting from Grade 4 in elementary school and continuing for 9 years up to and including Grade 12 of high school. In college, new students upon arrival are tested and placed into the program levels based on their demonstrated proficiency in English.

Students in the preparatory English program vary in language proficiency levels (elementary and pre-intermediate), according to the Common European Framework of Reference for languages (CEFR). Most students who are newly-admitted to the colleges have sufficient English skills and are placed in the first intensive English course ENG 001. Students enrolled in ENG 001 are considered to be at the EFL elementary stage. Following successful completion of ENG 001, students proceed to the next level ENG 002. At this level, students are more skillful in English and are described as pre-intermediate EFL learners, based on the Common European Framework of Reference for languages (CEFR).

Instruments

Data for this study were mainly collected through two published self-reported questionnaires, reproduced with permission of the copyright owners. Oxford's (1990) Strategy Inventory for Language Learning (SILL) was used to investigate language learning strategies (see Appendix A), and Reid's (1995) Perceptual Learning Style Preference Questionnaire (PLSPQ) measured the students' learning style preferences (see Appendix C). The survey instruments are structured questionnaires with a series of close-ended statements developed to assess how often language learners employ specific learning strategies and styles when learning a second or a foreign language.

In this research study, a translated version of the SILL in Arabic, developed by Ismail and Alkhatib (2013) with a few modifications, was displayed side-by-side along with the English version of the SILL (see Appendix B, for the Arabic translation of the SILL). Having a corresponding translation of the SILL in the participants' native language, in addition to the English version, would help participants overcome any problems they might encounter in understanding instructions, items or responses written in English which should result in achieving greater reliability.

The Perceptual Learning Style Preference Questionnaire (PLSPQ) was translated into the students' native language, Arabic (see Appendix D). The researcher followed the guidelines for cross-cultural questionnaire adaptation suggested by Beaton, Bombardier, Guillemin, and Farraz (2000) using a range of translation techniques to produce an effective translation. The process of translating the PLSPQ went through five stages: (1) forward translation, (2) synthesis, (3) back translation, (4) expert committee review and (5) pretesting (Beaton et al., 2000).

The researcher and another translator, who is highly proficient in Arabic and English, worked independently to produce the initial translation of the PLSPQ into Arabic. The two initial versions of the translated PLSPQ were then analyzed and compared to identify any discrepancies of ambiguous wording within the original survey and other problems related to structure, vocabulary and comprehension in order to yield one translation.

Next, an EFL teacher, blinded to the original survey, back-translated the new survey into the source language. The back translation (i.e., Arabic to English) was then compared with the original survey to check the validity of the translation.

A panel of three experts including the researcher, the translator and a psychometrician worked together in assessing the two versions in order to reconcile the different versions of the

survey and produce a final form. The panel also examined the final translated version to find whether translation of the statements effectively corresponded to the English version and captured the topic under investigation. The psychometrician rechecked the translated version of the survey for common errors like double-barreled, confusing, and leading items or questions.

The final version of the translated questionnaire was pretested on a subset sample of 50 individuals from the target population at Yanbu English Language Institute (YELI). The aim of the pilot study was to assess the clarity of the items and instructions of the questionnaires and to avoid any possible deficiency when conducting the study. In addition, data collected from pilot study were used to examine the validity and the reliability of the questionnaires.

The Strategy Inventory for Language Learning (SILL)

The Strategy Inventory for Language Learning (SILL) is a self-reported questionnaire developed by Rebecca Oxford (1990) and based on her strategy taxonomy for language learning strategies (see Appendix A). The SILL is used to examine the type and the frequency of language learning strategies used by ESL/EFL students. Two versions of SILL exist: (1) version 5.1 (80 items) developed for native speakers of English, and (2) version 7.0 (50 items), geared to learners of English as a second or foreign language. The SILL version 7.0 (ESL/EFL) was used in this study.

The SILL version 7.0 is a 5-point Likert-scale questionnaire with multiple-choice statements that ask participants to select statements that best describe what they actually do in the process of learning a new language. Participants are asked to rate their response to statements on scale of 1 to 5 running from (*Never or almost never true of me*) to (*Always or almost always true of me*), such that higher scores represent a higher frequency use of learning strategies. In response to each item, participants are expected to respond to how true the statements are

according to the following frequency scale: 1 (*Never or almost never true of me*), 2 (*Generally not true of me*), 3 (*Somewhat true of me*), 4 (*Generally true of me*) and 5 (*Always or almost always true of me*).

The SILL consists of 50 items that measure six broad categories or constructs about language learners' use of memory, cognitive and compensation direct strategies, and metacognitive, affective and social indirect strategies. Part A of the SILL questionnaire measures memory strategies (i.e., how to remember more effectively) such as grouping, imagery and rhyming which include the first nine items. Part B consists of 14 items, 10 through 23, intended to measure cognitive strategies (i.e., using all mental processes) such as reasoning, analyzing and summarizing. Part C, items 24 through 29, accounts for compensation strategies (i.e., compensating for limited knowledge), for example, guessing meaning, using synonyms and switching to the native tongue. The strategies of metacognitive (i.e., organizing and evaluating learning) are measured in Part D and include items 30 through 38. Part D involves measuring nine metacognitive strategies such as paying attention, organizing, delaying speech, searching for practice and monitoring errors. The effective strategies (i.e., managing emotion), such as anxiety reduction, self-encouragement and self-reward, are measured in Part E of the questionnaire and consist of six items, items 39 through 44. The social strategies (i.e., learning with others) are measured in Part F and include the last six items, items 45 through 50. Asking questions, cooperating with others, and developing culture understanding are examples of items that measure social strategies for language learners (see Appendix A).

The SILL can be used to measure a student's strategy across the entire questionnaire, for the six broad categories and for particular strategies. The scores are averaged either across the 50 items or for each part of the summative rating scale "The overall average indicates how often the

learner tends to use learning strategies in general, while averages for each part of the SILL indicate which strategy groups the learner tends to use most frequently” (Oxford, 1990, p. 199).

To understand the composite score of the whole and each part of the SILL, Oxford (1990) developed an intensity profile scale of three levels which reflects the usage of strategy as follows: 1 (3.5 – 5.0 = *High, always or almost always used*), 2 (2.5 – 3.4 = *Medium, sometimes used*) and 3 (1.0 – 2.4 = *Low, generally not used*).

The SILL was chosen for this study to collect data from the participants for its clarity, comprehensiveness, applicability and its high reliability and validity. Additionally, it has been widely used in many countries. The SILL version 7.0 (ESL/EFL) has been translated and used in over 20 languages such as Arabic, Chinese, French, Japanese, Korean, Russian, Spanish and Thai (Oxford, 2011).

The Perceptual Learning Style Preference Questionnaire (PLSPQ)

Joy Reid’s (1995) Perceptual Learning Style Preference Questionnaire (PLSPQ) is an instrument developed and normed to measure four sensory learning styles (visual, auditory, Kinesthetic and tactile) and two social styles (group and individual) for non-native English speakers (see Appendix C).

The PLSPQ is a self-reporting questionnaire designed and patterned after the Center for Innovative Teaching Experiences (CITE) Learning Styles Inventory (Reid, 1990, 1995), an existing learning style questionnaire used to identify the preferred perceptual learning styles of students who are native speakers of English. Originally developed in 1984, it was the first learning style instrument and the most widely used and known in second language learning field (DeCapua & Wintergerst, 2005; Dörnyei, 2005).

The PLSPQ is a 5-point Likert-scale questionnaire that consists of 30 randomly-arranged statements designed to elicit six sensory learning style preferences: visual, auditory, kinesthetic, tactile, individual and group learning. Each of these six learning style constructs is measured with a set of five items that describe a particular type of learning style. Participants respond to statements on an intensity scale ranging from 5 to 1 in terms of their degree of agreement or disagreement wherein 5 = (*Strongly Agree*), 4 = (*Agree*), 3 = (*Neutral*), 2 = (*Disagree*) and 1 = (*Strongly Disagree*). The scale higher numerical values represent greater preference toward learning styles.

The visual subscale includes items 6, 10, 12, 24 and 29 with statements describing a visual behavior in learning a second language like, “*I learn better by reading what the teacher writes on the chalkboard*” and “*When I read instructions, I remember them better.*”

The auditory subscale consists of items 1, 7, 9, 17 and 20, and has statements that describe learning through hearing and oral explanations such as “*When the teacher tells me the instructions, I understand better*” and “*When someone tells me how to do something in class, I learn it better.*”

The kinesthetic behavior involves items 2, 8, 15, 19 and 26, which refer to learning by experience in classroom. The kinesthetic statements are ones like “*I prefer to learn by doing something in class*” and “*When I do things in class I learn better.*”

The tactile statements describe participants who learn best when having the opportunity to do “*hands on experiences with materials*” (Reid, 1995, p. 206). This section includes items 11, 14, 16, 22 and 25, and has statements such as “*I learn more when I make something for a class project*” and “*I learn better when I make drawings as I study.*”

The subscale that describes group-oriented learners includes items 3, 4, 5, 21 and 23 while the individual learning style subscale is composed of items 13, 18, 27, 28 and 30. The following statements “*I get more work done when I work with others*” and “*I learn more when I study with a group*” are examples of the group-oriented subscale items. The individual subscale includes the following examples “*When I study alone, I remember things better*” and “*I prefer to work by myself.*” It includes the following items: 13, 18, 27, 28, and 30.

Reid (1995) also provided a self-scoring guideline, sorting learning style preferences of participants into three categories: major, minor and negligible learning style preference. Reid specified the final score of each style construct with minimum and maximum scores of 38-50, 25-37 and 0-24, that reflect preferences to learning styles as the major, minor or negligible learning style, respectively.

In this research study, the PLSPQ was chosen as a measure of learning styles of the participants because it is specifically designed to investigate learning styles for language learners of non-native speakers of English (NNES). Though the questionnaire was originally designed for ESL students, it can also be used for EFL learners because “the items do not motion any subject matter” (Dörnyei, 2005, p. 142). In addition, the PLSPQ is user-friendly. It is relatively short and written in a simple language for NNES, enabling the respondents to easily assess their styles.

The last part of the questionnaire includes a demographic information section about the participants’ genders, levels of English and academic majors. Information about the participants includes necessary independent demographic variables that were used to describe the representation of each group and the frequency of different types of language learning styles and strategies. In addition, demographics were used to determine the influence of these independent variables on the participants’ use of particular language learning strategies.

Validity and Reliability of the Instruments

Reliability refers to the consistency of the test results while validity indicates the degree to which the instrument measures what it is intended to measure (Bordens & Abbott, 2011). The SILL has been used in many research studies worldwide and its psychometric characteristics have been widely explored and tested for validity and reliability (Green & Oxford, 1995; Hsiao & Oxford, 2002; Oxford, 1996; Oxford & Burry, 1993; Oxford & Burry-Stock, 1995). Compared with other scales of strategy assessments, the SILL seems to be “the only language learning strategy instrument that has been extensively checked for reliability and validated in multiple ways” (Oxford & Burry-Stock, 1995, p. 4).

In general, the SILL (ESL/EFL version) has been found to have high indices of reliabilities with an overall Cronbach’s alpha ranging from .93 to .98 depending on depending on whether the students take the survey in their own language or in the target language (Green & Oxford, 1995). The internal consistency of the entire SILL, measured with Cronbach’s alpha, has been high in most of the studies when administrated in learners’ native language, α above .90 (Oxford & Burry-Stock, 1995). For instance, a high Cronbach’s alpha coefficient of .94 has been reported when using the Chinese translated version (Hsiao & Oxford, 2002), .93 using Japanese translated version (Robson & Midorikawa, 2001) and .94 for the translated Korean version of SILL (Lee & Oxford, 2008).

The SILL appears to generally enjoy a high degree of reliability. Although the reliability of the SILL may decline slightly when administrated in the target language rather than in the first language, the reliabilities reported in most studies are still above .85. Oxford and Burry-Stock (1995) indicated that “these reliabilities are very acceptable” (p. 7) and, thus, the SILL can be administrated in the students’ native language or the target language.

The SILL also appears to have a high level of validity. In reviewing the validity of the SILL, Oxford (1996) and Oxford and Burry-Stock, (1995) reported on a series of validation studies for the SILL in multiple ways including content validity (Oxford, 1986), criterion validity (Ehrman & Oxford, 1989; Rossi-Le, 1989), construct validity (Chang, 1991; Rossi-Le, 1989) as well as other aspects of validity such as utility, value implications, social consequences, interpretation and real-world action (Oxford & Burry-Stock, 1995). Most of these studies reported a high degree of validity for the SILL questionnaire. In addition, confirmatory factor analysis studies (Ardasheva & Tretter, 2013; Hsiao & Oxford, 2002; Woodrow, 2005) provided more details about the construct validity of the SILL and revealed further strong evidence that supports the assertion of the validity of the SILL.

The PLSPQ has been previously validated and tested for its reliability and reported to have adequate indices for the instrument reliability and validity. Reid (1987) indicated that the questionnaire has been reviewed and modified by “NNS informants and U.S. consultants in the fields of linguistics, education, and cross-cultural studies” (p. 92). Using a split-half method in establishing the reliability of the survey instrument, Reid (1990) claimed that “the construct correlation coefficient fell within the acceptable range for a reliable instrument” (p. 335) though the value of Cronbach’s alpha that measures the internal consistency was not reported in her article. The researcher, therefore, rechecked the reliability of the instrument and found it acceptable for the present research study.

Some researchers (DeCapua & Wintergerst, 2005; Wintergerst, DeCapua & Itzen, 2002) expressed their concern regarding the validity and the reliability of the Perceptual Learning Style Preference Questionnaire (PLSPQ). Wintergerst et al. (2002) examined Reid’s (1995) Perceptual Learning Style Preference Questionnaire (PLSPQ) using exploratory factor analysis and

found that specific survey items did not necessarily group into factors conceptually compatible with Reid's learning style model.

Therefore, the principal investigator of this study further pilot-tested both the SILL and the PLSPQ in fall semester 2015 on a sample of EFL students ($n=50$) from the preparatory English program at Yanbu English Language Institute (YELI). The pilot study was carried out to test the internal consistency reliability and to check the validity of the Arabic/English translation for the questionnaires. The reliability for the questionnaires was assessed using Cronbach's alpha measuring the overall reliability for each instrument and each individual subscale.

As seen in Table 2, the Cronbach's alpha value revealed an excellent internal consistency of ($\alpha = .95$) for the overall SILL questionnaire. In addition, the Cronbach's alphas for the six components of the SILL were generally adequate. The correlation coefficient for most of the SILL components was above ($\alpha = .8$).

Table 2

The Reliability of the Arabic/English Version of the SILL

Measure and Components	Cronbach's Alpha
The overall reliability for the SILL	.950
Memory Strategies	.835
Cognitive Strategies	.873
Compensation Strategies	.723
Metacognitive Strategies	.881
Affective Strategies	.808
Social Strategies	.854

The PLSPQ also demonstrated an acceptable reliability. As seen in Table 3, the overall internal consistency reliability value for the PLSPQ was also high ($\alpha = .89$). The values of

Cronbach's alpha for the six components of the PLSPQ were also acceptable in general, except for the auditory component, ($\alpha = .58$).

Table 3

The Reliability of the Arabic/English Version of the PLSPQ

Measure and Components	Cronbach's Alpha
The overall reliability of the PLSPQ	.892
Visual Style	.677
Auditory Style	.582
Kinesthetic Style	.805
Tactile Style	.675
Group Style	.849
Individual Style	.820

In the current study, the SILL and the PLSPQ and the translated version of the instruments demonstrated good reliability and validity to measure the students' language learning strategies and perceptual learning styles.

Data Collection Procedures

All required permissions were obtained for the research study before conducting the research study. The researcher obtained permission for data gathering from the Director of Yanbu English Language Institute (YELI), (see Appendix E). An approval to employ the SILL questionnaire version 7.0 (ESL/EFL) for collecting data had been granted by the instrument developer, Rebecca Oxford (see Appendix F). In addition, necessary permission to adapt and use the Arabic translation version of the SILL by Ismail and Alkhatib (2013) was also obtained (see Appendix G) by the principal investigator. No contact information for Joy Reid was available and, therefore, the researcher was not able to obtain permission directly from the developer of the PLSPQ. The researcher, however, used the instrument and used the proper citation for the

instruments as required. Additionally, the researcher obtained the Institutional Review Board IRB approval form (see Appendix H) from The University of Tennessee to conduct the study. After obtaining all required permissions to conduct the study, the researcher arranged for time with the Director of Yanbu English Language Institute (YELI) to dispense the online questionnaires to all first-year EFL students in the Preparatory year program at the YELI.

The data for the current study were collected with the SILL and the PLSPQ online questionnaires from Saudi EFL students in the Preparatory EFL Program at YELI. On May 2016, an email containing a link to an online web survey (Qualtrics) was sent to nearly 2019 male and female EFL students along with the informed consent. To increase the response rate, three subsequent emails reminders were sent to all EFL students. The process of data collection took about 3 weeks. Out of nearly 2019 online surveys sent to EFL students in the preparatory English year program, 667 questionnaires (approximately 33%) were returned (see Table 1).

Data Analysis

Data collected from the SILL and the PLSPQ about students learning strategies and perceptual learning styles were analyzed quantitatively using descriptive statistics, Pearson correlation and multiple of independent *t*-tests through the Statistical Package for Social Sciences (SPSS). In this study, genders, academic majors, English proficiency levels and learning styles are considered independent variables while each of the six language learning strategy subscale scores constitute the dependent variables. A probability level of less than .05 was adopted as the cut-off for significant results for the statistical analyses. A Bonferroni correction was used with multiple comparison analyses to minimize the chance of making a Type I error (Green & Salkind, 2009; Huck, 2012; Tabachnick & Fidell, 2013).

Prior to conducting the statistical analyses on the data sets, preliminary data cleaning was performed to inspect potential outliers, missing values, error coding, normality of data, unusual scores and problematic values, following Morrow's and Skolits's (2013) 12 steps for data cleaning. Univariate outliers are outlandish cases with standardized scores of 3.29 standard deviation below or above the mean (Tabachnick & Fidell 2013). There were no outliers found in the data set. An exploratory data analysis was conducted to determine if the scores distribution obtained from SILL and PLSPQ were normally distributed. The univariate normality was assessed using Shapiro-Wilks test for normality, and the standardized skewness and kurtosis of each independent variable, making comparison against ± 3.29 (Tabachnick & Fidell, 2013). In this study, Shapiro-Wilks test for normality ($p = 000$) in conjunction with the skewness and kurtosis test signified a departure from the normality for some of the data sets.

To address Research Question 1, data obtained from the SILL survey about language learning strategy were analyzed using descriptive statistics such as measures of central tendency, standard deviation, frequency and percentage to rank order the strategy categories from the most frequently used to the least-employed category.

Similar statistical procedures were applied to analyze the data obtained from the PLSPQ survey to address Research Question 2. Descriptive statistics and measures of central tendency revealed the major, minor, and negligible learning style preference among the students. In addition, paired-samples *t*-tests were conducted to further investigate if there were any statistically significant differences in students' preferences of various modalities of the perceptual language learning styles.

To address Research Question 3, Pearson product-moment bivariate correlations (r) were computed to reveal whether a significant linear relationship existed between the preferred

perceptual learning styles and the students' preferences in employing different language learning strategies. In this study, the six broad categories of language learning strategy were used as criteria (dependent) variables while the six main learning styles are used as predictors (independent) variables. A Bonferroni correction approach was used to control for Type I error across all the correlations between learning style and strategies

To answer Research Question 4, the researcher conducted multiple of independent *t*-tests to examine whether there were significant differences in the overall use of the six strategies between students according to their genders (male and female), levels of proficiency in English (elementary and pre-intermediate) and academic majors of study (technical/engineering or business/management). Independent *t*-tests were used to analyze his research question because the data sets violated the assumption of normality.

Chapter Summary

Chapter 3 presented the research methodology that was used in the research study. It provided a detailed description of the research setting and the participants. In addition, the chapter described the instruments used for collecting data and reviewed their validity and reliability. Chapter 3 also discussed the procedures for gathering data and the statistical producers for analyzing the data. Chapter 4 will present the results of the statistical analysis for the data collected in this research study, following the procedures described in Chapter 3.

CHAPTER 4

RESULTS

The present study explored the language learning strategies and the perceptual learning style preferences that Saudi students employ most frequently when learning English as a foreign language. In addition, this study was designed to understand the relationships between the Saudi EFL students' perceptual language learning style preferences and their use of language learning strategies. The study also investigated the effect of students' genders, levels of proficiency in English and academic majors of study on their use of the language learning strategies. Four research questions were formulated to guide the study:

1. What language learning strategies do Saudi EFL students in the preparatory English program at Yanbu English Language Institute (YELI) use and which ones do they use more frequently when learning the English language?
2. What are the perceptual language learning styles preferences amongst Saudi EFL students in the preparatory English program at Yanbu English Language Institute (YELI)?
3. To what extent is there a relationship between Saudi EFL students' perceptual language learning styles and their language learning strategy use?
4. What are the differences in language learning strategies use between Saudi EFL students studying in the preparatory English program at Yanbu English Language Institute (YELI), based on their genders, academic majors and language proficiency levels?

To answer the research questions, data collected from participants through Oxford's (1990) SILL and Reid's (1995) PLSPQ surveys were analyzed quantitatively using a Statistical Package for Social Sciences (SPSS). Data were analyzed using descriptive and inferential

statistics. Descriptive statistics were used to answer Research Questions One and Two. In addition, paired sample *t*-tests were used for Research Question Two. To answer Research Question Three, Pearson product-moment correlation coefficients were computed among the categories of language strategies and perceptual styles. Multiple of independent sample *t*-tests were conducted to address Research Question Four.

In this study, the significance level of alpha was set to be less than .05. However, a Bonferroni correction approach was performed on the correlational analyses for Research Question Three and on independent sample *t*-tests for Research Question Two and four. Bonferroni correction, an adjustment made to *p* values by dividing critical *P* value (α) by the number of comparisons being made, reduces the chance of Type I error. In this study, Bonferroni adjustments required a significant alpha level of less than .001 for the correlational analyses and alpha level of less than .008 for all independent sample *t*-tests.

Research Question One

Research Question One sought to investigate the most frequently language learning strategies used by Saudi EFL students. In order to answer this question, participants' responses to Strategy Inventory for Language Learning (SILL) were analyzed using descriptive and frequency statistics to rank order strategies from the most frequently used to the least employed ones. The frequencies and the percentages were based on the holistic mean scores for the overall language learning strategy, for each category and for individual strategy.

Following Oxford's (1990) scale of strategy use, the students' use of various strategies was categorized into three levels (high, medium and low). The strategy that had a mean score between 3.5 and 5.0 was considered as a strategy with high frequency use, the strategy that had a mean score between 2.5 and 3.4 was regarded as a strategy with medium frequency use, and the

strategy that had a mean score between 1.0 and 2.4 was regarded as a strategy with low frequency of use. Table 4 below presents the frequency measure for strategy use.

Table 4

Oxford's (1990) Guidelines for Understanding Average Scores on the SILL

Frequency	Use of strategy	Range
High	Always or almost always used	4.5 to 5.0
	Usually used	3.5 to 4.4
Medium	Sometimes used	2.5 to 3.4
Low	Generally not used	1.5 to 2.4
	Never or almost never used	1.0 to 1.4

Language Learning Strategies

The results of the descriptive statistics revealed that in general Saudi EFL students reported a medium use of language learning strategies. The mean score of the overall SILL for all participants ($M = 3.28$) suggested that Saudi students, on average, sometimes used language learning strategies when learning English language. As seen in Table 5, the mean scores for Saudi EFL students in the six categories of language strategies ranged from 3.57 to 3.08. According to Oxford's (1990) interpretation scale for judging the degree of strategy use, all of the strategies employed by students fell in the medium range use, except metacognitive strategies which was used at high frequency level. Saudi EFL students, on average, reported metacognitive strategies as the most frequently used among all the six categories of language learning strategies ($M = 3.57$, $SD = 0.82$), followed by social strategies as the second preferred strategies with an average mean score of ($M = 3.42$, $SD = 0.87$). Compensation strategies ranked third in position ($M = 3.34$, $SD = 0.80$) among the six categories while cognitive strategies ($M = 3.21$, $SD = 0.75$) were in fourth place. Memory and affective strategies had a relatively slight difference in

frequency of use ($M = 3.09$, $SD = 0.72$) and ($M = 3.08$, $SD = 0.86$), respectively. Participants ranked memory strategies as the fifth preferred strategies whereas affective strategies ranked in last position, as the least preferred strategies. Although the mean scores for cognitive, memory and affective strategies fell in medium frequency use, they had lower mean scores than the overall mean score for SILL.

Table 5

Descriptive Statistics, Level of Use and Rank Order of Language Strategies

Category	<i>M</i>	<i>SD</i>	Frequency Level	Rank
Metacognitive Strategies	3.57	0.82	High Use	1
Social Strategies	3.42	0.87	Medium Use	2
Compensation Strategies	3.34	0.80	Medium Use	3
Cognitive Strategies	3.21	0.75	Medium Use	4
Memory Strategies	3.09	0.72	Medium Use	5
Affective Strategies	3.08	0.86	Medium Use	6
Overall SILL	3.28	0.64	Medium Use	

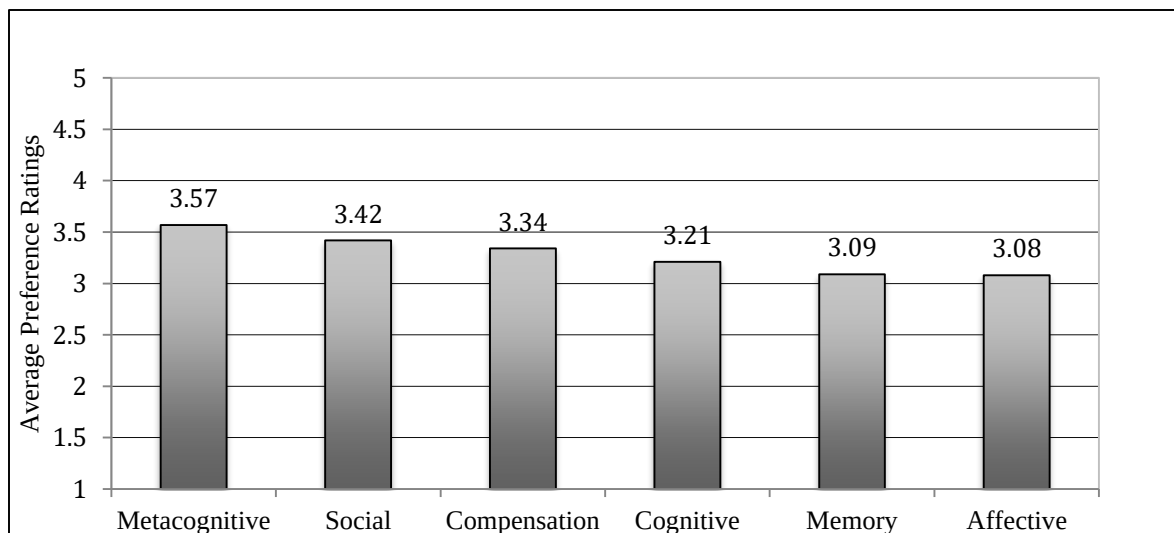


Figure 1. Average preference ratings for language learning strategies

In addition, the results revealed that the majority of the Saudi EFL students used, in general, each of the six individual strategies between the high and the medium range of use, as seen in Table 6. Approximately 35% (n = 236) of the students indicated that they employ all language strategies in high frequency manner. Most of the students, nearly 56% (n = 372), reported themselves as being moderate users of language strategies while only about 9% (n = 59) indicated that they use these strategies in the low range.

Table 6

Strategies Levels of Use, Number and Percentage of Students

Category	High		Medium		Low		Total	
	n	%	n	%	n	%	N	%
Metacognitive Strategies	371	55.6	243	36.4	53	7.9	667	100
Social Strategies	341	51.1	241	36.2	78	11.7	667	100
Compensation Strategies	320	48.0	271	40.6	76	11.4	667	100
Cognitive Strategies	235	35.2	338	50.7	94	14.1	667	100
Memory Strategies	180	27.0	366	54.9	121	18.1	667	100
Affective Strategies	225	33.7	299	44.8	143	21.4	667	100
Overall SILL	236	35.4	372	55.8	59	8.8	667	100

Metacognitive strategies. The metacognitive strategies seemed to be the most preferred strategies for Saudi students with almost 56% (n = 371) reporting a high frequency use for this category and about 36% (n = 243) indicating a medium use. Less than 8% (n = 53) participants reported a low use for metacognitive strategies.

Social strategies. Students rated social strategies as their second favorite strategies, with nearly 51% (n = 341) students reported using social strategies in the high range, nearly 36% (n = 241) in the medium range and about 12% (n = 78) in the low range.

Compensation strategies. Compensation strategies were ranked in third position. Forty-eight percent of the students (n = 320) considered themselves as high users of compensation

strategies, nearly 41% (n = 271) as medium users and almost 11% (n = 76) as low users.

Cognitive strategies. In the category of cognitive strategies, about 35% (n = 235) of the students indicated that they highly implemented cognitive strategies, approximately 51% (n = 336) employed them in a moderate level and 14% (n = 94) fell in the low usage category.

Memory strategies. Students showed a lower tendency to employ memory strategies compared with other strategies. Twenty-seven percent of the students (n = 180) implied that they highly employed memory strategies whereas almost 55% (n = 366) reported using memory strategies in a moderate way. Only about 18% (n = 121) indicated that they generally never or almost never used memory strategies.

Affective strategies. The affective strategies were the least frequently used among the six strategies. Affective strategies were used by nearly 34% (n = 225) in a high frequency, nearly 45% (n = 299) in a medium frequency and nearly 21% (n = 143) in a low frequency use.

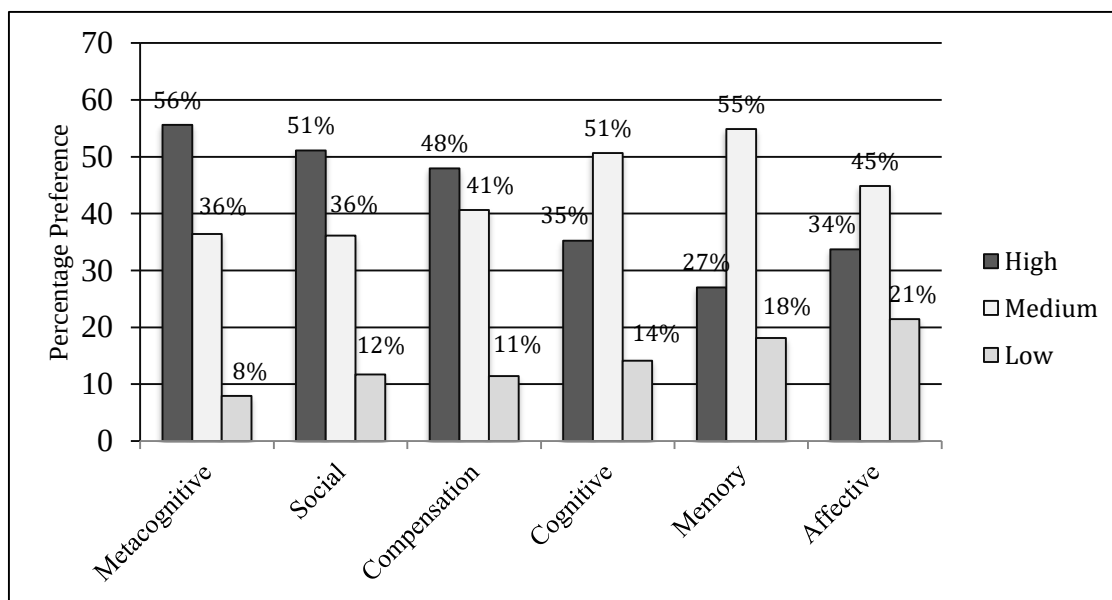


Figure 2. Percentages of frequency levels of use for language learning strategies

The six main categories of language learning strategy were further investigated looking for the mean scores, standard deviations, and the frequency of use for each strategy set. As explained in the literature review, the six categories of language learning strategy include 19 sets of strategies with 62 specific strategies that compose the Strategy Inventory for Language Learning (SILL). The following sections provide the results for these 19 sets of strategies.

Metacognitive strategies. The metacognitive strategies include three strategy sets: centering learning (item 32); arranging and planning learning (items 30, 33, 34, 35, 36 and 37); and evaluating learning (items 31 and 38). The overall average of metacognitive strategies fell in the high range making metacognitive strategies as the most frequently-used strategies. However, as Table 7 shows, only two of the metacognitive strategies, namely, centering learning ($M = 3.97$, $SD = 1.11$) and evaluating learning ($M = 3.77$, $SD = 1.00$) fell in the high range of use. Arranging and planning learning ($M = 3.44$, $SD = 0.86$) were moderately employed.

Under the centering learning strategy, nearly 73% ($n = 484$) of the students implied that they always or almost always used this strategy when learning English language, nearly 16% ($n = 105$) rated themselves as moderate users, and only about 12% ($n = 78$) stated that they rarely or never used it. In addition, students reported almost a similar use for the category of evaluating learning with nearly 71% ($n = 475$) of the participants regarded themselves to be high users of these strategies, almost 21% ($n = 138$) as moderate users and only about 8% ($n = 54$) as low users. Fewer students, however, reported that they implemented the strategies of arranging and planning learning in the high range than the two former metacognitive strategies. Nearly 51% ($n = 341$) students reported that they always or almost always used strategies related to arranging and planning their learning, nearly 38% ($n = 254$) moderately used such strategies and about 11% ($n = 72$) implement them in the low range of use when they learn English.

Table 7

Descriptive Statistics for Metacognitive Strategies

Strategy	<i>M</i>	<i>SD</i>	High		Medium		Low	
			<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
Centering your learning	3.97	1.11	484	72.6	105	15.7	78	11.7
Evaluating your learning	3.77	1.00	475	71.2	138	20.7	54	8.1
Arranging and planning your learning	3.44	0.86	341	51.1	254	38.1	72	10.8

Social strategies. Social strategies consist of three sets of strategies: asking questions (items 45, 46, 48 and 49); cooperating with others (item 47); and empathizing with others (item 50). All the three sets of social strategies were moderately used by students, as seen in Table 8. The most frequently used of these social strategies was asking questions ($M = 3.50$, $SD = 0.93$), followed by the strategy of empathizing with others ($M = 3.26$, $SD = 1.35$), and then cooperation with others ($M = 3.25$, $SD = 1.23$).

Saudi EFL students, nearly 57% ($n = 379$), indicated that they always or almost always used the strategy of asking questions as a strategy for learning English. Almost 32% ($n = 216$) of the students employed the strategy of asking questions moderately while only about 11% ($n = 72$) reported that they rarely or never used this strategy while learning English language. The results also revealed a relatively slight difference in the participants' use of cooperating strategies and empathizing strategies. As Table 8 presents, the percentages of the students who stated that they highly employed the strategies of empathizing with others were nearly 44% ($n = 296$) while cooperating with others were 45% ($n = 300$) for high range users. Nearly 26% ($n = 176$) of the students indicated that they moderately used the strategies of empathizing with others whereas 28% ($n = 189$) used cooperating with others in the medium range. Empathizing with others and cooperating with others strategies were used by nearly 29% ($n = 195$) and 27% ($n = 178$) in the low range, respectively.

Table 8

Descriptive Statistics for Social Strategies

Strategy	<i>M</i>	<i>SD</i>	High		Medium		Low	
			<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
Asking questions	3.50	0.93	379	56.8	216	32.4	72	10.8
Empathizing with others	3.26	1.35	296	44.4	176	26.4	195	29.2
Cooperating with others	3.25	1.23	300	45.0	189	28.3	178	26.7

Compensation strategies. The compensation strategies consist of two sets of strategies: guessing intelligently (items 24, 27 and 28); and overcoming limitations in speaking and writing (items 25, 26 and 29). Although both of these strategies fell in the medium range of use, students showed more tendency toward implementing the strategies of overcoming limitations in speaking and writing ($M = 3.42$, $SD = 0.92$) than guessing intelligently strategies ($M = 3.27$, $SD = 0.87$).

As Table 9 shows, almost 50% ($n = 332$) of the students reported using the strategies of overcoming limitations in speaking and writing in a high range, nearly 35% ($n = 232$) employed them moderately and about 15% ($n = 103$) indicated that they rarely or never employed such strategies. On the other hand, nearly 40% ($n = 270$) of the students stated that they always or almost always employed the strategies of guessing intelligently, about 42% ($n = 281$) used them moderately and nearly 17% ($n = 116$) used them in the low range of use.

Table 9

Descriptive Statistics for Compensation Strategies

Strategy	<i>M</i>	<i>SD</i>	High		Medium		Low	
			<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
Overcoming limitations	3.42	0.92	332	49.8	232	34.8	103	15.4
Guessing intelligently	3.27	0.87	270	40.5	281	42.1	116	17.4

Cognitive strategies. The category of cognitive strategies involves four sets of strategies: practicing (items 10, 11, 12, 13, 14, 15, 16 and 20); receiving and sending messages (item 18); analyzing and reasoning (items 19, 21 and 22); and creating structure for input and output (items 17 and 23). All these four sets of strategies fell in the medium range of use, as shown in Table 10. Yet, among these four cognitive strategies, students, reported that they first preferred to employ practicing strategies ($M = 3.33$, $SD = 0.80$), followed by receiving and sending messages ($M = 3.21$, $SD = 1.26$), and analyzing and reasoning ($M = 3.15$, $SD = 0.29$). The strategies of creating structure for input and output ($M = 2.83$, $SD = 1.07$) were the least frequently used.

Nearly 46% ($n = 305$) of the students rated themselves as high users for practicing strategies, nearly 42% ($n = 278$) as moderate users, and about 13% ($n = 84$) fell in the low range category. In addition, almost 43% ($n = 284$) of the students reported that they employed receiving and sending messages in a high range while nearly 28% ($n = 185$) were considered moderate users and nearly 30% ($n = 198$) were in the low range category. Almost 36% ($n = 239$) of the students considered themselves as high users of analyzing and reasoning strategies, nearly 41% ($n = 276$) as moderate users and nearly 23% ($n = 152$) as low users. Creating structure for input and output strategies were used in a high range by nearly 34% ($n = 224$), in a medium range by 35% ($n = 234$) and in a low range by 31% ($n = 209$) of the participants, see Table 10.

Table 10

Descriptive Statistics for Cognitive Strategies

Strategy	<i>M</i>	<i>SD</i>	High		Medium		Low	
			<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
Practicing	3.33	0.80	305	45.7	278	41.7	84	12.6
Receiving and sending messages	3.21	1.26	284	42.6	185	27.7	198	29.7
Analyzing and reasoning	3.15	0.92	239	35.8	276	41.4	152	22.8
Creating structure for input and output	2.83	1.07	224	33.6	234	35.1	209	31.3

Memory strategies. The category of memory strategies includes four strategy sets: creating mental linkage (items 1, 2 and 9); applying images and sounds (items 3, 4 and 5); reviewing well (item 9); and employing action (items 6 and 7). As seen in Table 11, Saudi EFL students moderately used these four strategies. The results revealed that the most frequently-used strategies were creating mental linkage ($M = 3.39$, $SD = 0.82$), followed by applying image and sounds ($M = 3.18$, $SD = 0.98$), reviewing well ($M = 2.89$, $SD = 1.17$), and employing action ($M = 2.60$, $SD = 1.06$). The strategies related to employing action were rated as the least frequently-used strategies among all the strategies listed by SILL.

Approximately, 46% ($n = 309$) of the students used creating mental linkage strategies in the high range, nearly 40% ($n = 270$) used them moderately and about 13% ($n = 88$) used them in the low range. The strategies of applying images and sounds were highly used by almost 39% ($n = 259$) of students, moderately by nearly 37% ($n = 249$) and never or almost never by nearly 24% ($n = 159$) of the students. Students exhibited a relatively slight difference in their use for reviewing well and employing actions strategies. The percentages of students who indicated that they employed the strategies of reviewing well and employing action were nearly 29% ($n = 192$) and 27% ($n = 182$) for high range users, nearly 35% ($n = 232$) and 34% ($n = 230$) for the medium range users and nearly 36% ($n = 243$) and 38% ($n = 255$) for low range users, respectively.

Table 11

Descriptive Statistics for Memory Strategies

Strategy	<i>M</i>	<i>SD</i>	High		Medium		Low	
			<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
Creating mental linkage	3.39	0.82	309	46.3	270	40.5	88	13.2
Applying images and sounds	3.18	0.98	259	38.8	249	37.3	159	23.8
Reviewing well	2.89	1.17	192	28.8	232	34.8	243	36.4
Employing action	2.60	1.06	182	27.3	230	34.5	255	38.2

Affective strategies. The category of affective strategies subsumes three strategies: lowering anxiety (item 39); encouraging oneself (items 40 and 41); and taking emotional temperature (items 42, 43 and 44). The category of affective strategies was reported as the least frequently-used among the six categories of language learning strategy. As seen in Table 12, the three sets of affective strategies fell in the medium range category. Yet, students, on average, revealed that they first preferred strategies related to self-encouragement ($M = 3.29$, $SD = 1.07$), followed by lowering anxiety ($M = 3.29$, $SD = 1.38$). The strategies of taking emotional temperature ($M = 2.87$, $SD = 1.00$) were the least frequently-used strategies in this category.

Approximately, 49% ($n = 329$) of the students stated that they highly employed self-encouragement strategies, nearly 34% ($n = 224$) used them moderately and about 17% ($n = 114$) fell in the low range. In addition, almost 47% ($n = 313$) of the students were found to adopt the strategy of lowering anxiety in the high range level, nearly 25% ($n = 164$) used them moderately and about 28% ($n = 190$) indicated that they rarely or never employed such strategies. On the other hand, only about 26% ($n = 177$) of the students stated that they always or almost always employed the strategies of taking emotional temperature and nearly 35% ($n = 235$) used them moderately. A higher percentage of the participants, nearly 38% ($n = 255$), reported that they rarely or never used any affective strategies related to taking emotional temperature.

Table 12

Descriptive Statistics for Affective Strategies

Strategy	<i>M</i>	<i>SD</i>	High		Medium		Low	
			<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
Encouraging yourself	3.29	1.07	329	49.3	224	33.6	114	17.1
Lowering your anxiety	3.26	1.38	313	46.9	164	24.6	190	28.5
Taking emotional temperature	2.87	1.00	177	26.5	235	35.2	255	38.2

Individual SILL Strategies Frequencies

Descriptive statistics were used to look at the students' responses to each individual language learning strategy as reported by Oxford' (1990) SILL. In reporting frequency of use for each individual strategy, Oxford's (1990) key to understanding the mean scores was adopted to categorize individual strategies into three levels (high, medium and low) that reflect the respondent's use of each strategy.

The following sections present the results of each individual language learning strategy. Table 13 summarizes the mean scores and the standard deviations of the participants' responses for each item of the 50 strategies listed by Oxford instrument, Strategy Inventory for Language Learning (SILL).

Memory strategies include specific items from 1 to 9. Under the memory strategies, students reported that the most preferred strategies were "using new English words in a sentence" ($M = 3.42$, $SD = 1.19$); followed by "remembering new words or phrases according to their location" ($M = 3.39$, $SD = 1.29$); "thinking of the relationship between what is already know and new things" ($M = 3.37$, $SD = 1.17$); "remembering English word by making a mental picture of a situation in which the word might be used" ($M = 3.36$, $SD = 1.24$); and "connecting the sound and image of a new words" ($M = 3.33$, $SD = 1.26$).

Cognitive strategies subsume strategies for items 10 to 23. In cognitive strategies, students reported that their most favored strategies were "trying to talk like native English speakers" ($M = 3.72$, $SD = 1.16$); followed by "watching TV shows or go to movies in English" ($M = 3.70$, $SD = 1.29$); then "saying or writing new English words several times" ($M = 3.53$, $SD = 1.20$); "practicing the sounds of English" ($M = 3.50$, $SD = 1.18$); "starting conversations in

English” ($M = 3.35$, $SD = 1.24$); and “using English words in different ways” ($M = 3.34$, $SD = 1.18$)

In compensation strategies (items 24 to 29), the most frequently employed strategies reported by participants were “using similar words or phrase if the exact English word is unknown” ($M = 3.77$, $SD = 1.16$); followed by “using gestures when can’t think of a word in English” ($M = 3.48$, $SD = 1.28$); “trying to guess what other person will say next in English” ($M = 3.45$, $SD = 1.22$); and “making guesses to understand words” ($M = 3.43$, $SD = 1.16$).

Under the metacognitive strategies (items 30 to 38), the most frequently reported strategies were “finding out how to be a better learner of English” ($M = 4.00$, $SD = 1.11$); “paying attention when someone is speaking English” ($M = 3.97$, $SD = 1.11$), “noticing my English mistakes to improve” ($M = 3.79$, $SD = 1.15$); “think about my progress in learning English” ($M = 3.76$, $SD = 1.18$); “finding as many ways as possible to use English” ($M = 3.62$, $SD = 1.17$); and “looking for people to speak English” ($M = 3.54$, $SD = 1.24$).

Affective strategies include items 39 to 44. Students indicated that the most favored strategies were “encouraging oneself to speak English” ($M = 3.63$, $SD = 1.23$) and “noticing tenseness or nervousness when using English” ($M = 3.53$, $SD = 1.24$).

Items 44 to 50 measure the social strategies. Students revealed that the most preferred strategies were “asking for help from English speakers” ($M = 3.60$, $SD = 1.19$); followed by “asking others to slow down to understand” ($M = 3.53$, $SD = 1.21$); “ask questions in English” ($M = 3.50$, $SD = 1.16$); and “asking English speakers for correction” ($M = 3.41$, $SD = 1.26$).

Table 13

Mean Scores and Standard Deviation for Individual SILL Items

Item	Description	<i>M</i>	<i>SD</i>
Memory Strategies (1-9)			
1.	Relate what I already know and new things	3.37**	1.17
2.	Use new English words in a sentence	3.42**	1.19
3.	Connect the sound and image of a new words	3.33**	1.26
4.	Create a mental picture where word might be used	3.36**	1.24
5.	Use rhymes to remember new words	2.87**	1.28
6.	Use flashcards to remember new English words.	2.55**	1.33
7.	Physically act out new English words.	2.67**	1.31
8.	Review English lessons often.	2.90**	1.17
9.	Remember new words or phrases according to their location	3.39**	1.20
Cognitive Strategies (10-23)			
10.	Say or write new English words several times	3.53***	1.20
11.	Try to talk like native English speakers	3.72***	1.16
12.	Practice the sounds of English	3.50***	1.18
13.	Use English words in different ways	3.34**	1.18
14.	Start conversations in English	3.35**	1.24
15.	Watch TV shows or go to movies in English	3.70***	1.29
16.	Read for pleasure in English	2.57**	1.33
17.	Write notes, messages, letters, or reports in English	2.66**	1.28
18.	Skim English passage then read carefully	3.21**	1.26
19.	Find words in my language that are similar to English words	3.27**	1.22
20.	Find patterns in English	2.96**	1.21
21.	Find meaning of English word by dividing it into parts	3.28**	1.29
22.	Try not to translate word-for-word.	2.91**	1.31
23.	Summarize information that I hear or read in English	3.00**	1.26
Compensation Strategies (24-29)			
24.	Make guesses to understand unfamiliar words	3.43**	1.16
25.	Use gestures when I can't think of a word in English	3.48**	1.25
26.	Make up new words if I do not know the right ones	3.03**	1.23
27.	Read English without looking up every new word	2.93**	1.24
28.	Try to guess what other person will say next in English	3.45**	1.22
29.	Use similar words if I don't know the exact English word	3.77***	1.16
Metacognitive Strategies (30-38)			
30.	Find as many ways as I can to use my English	3.62***	1.17
31.	Notice my English mistakes to improve	3.79***	1.15
32.	Pay attention when someone is speaking English	3.97***	1.11
33.	Find out how to be a better learner of English	4.00***	1.11
34.	Plan my schedule to have enough time to study English	2.96**	1.24
35.	Look for people to speak English	3.54***	1.24
36.	Read as much as possible in English	3.12**	1.24

Table 13 Continued

Item	Description	<i>M</i>	<i>SD</i>
37.	Have clear goals for improving my English	3.42**	1.24
38.	Think about my progress in learning English	3.76***	1.18
Affective Strategies (39-44)			
39.	Relax myself when I feel afraid of using English	3.27**	1.38
40.	Encourage myself to speak English	3.63***	1.23
41.	Reward myself when doing well in English	2.97**	1.36
42.	Notice when I am tense or nervous when using English	3.53***	1.24
43.	Write down my feelings in a learning diary	2.22*	1.38
44.	Talk with others about my feeling when learning English	2.87**	1.43
Social Strategies (45-50)			
45.	Ask others to slow down or repeat to understand	3.53***	1.21
46.	Ask English speakers for correction when talking	3.41**	1.26
47.	Practice English with other students.	3.25**	1.23
48.	Ask for help from English speakers	3.60***	1.19
49.	Ask questions in English	3.50**	1.16
50.	Learn about culture of English speakers	3.26**	1.35

* Low frequency use

** Medium frequency use

*** High frequency use

Research Question Two

Research Question Two aimed to explore the preferred perceptual language learning styles among the Saudi EFL students as reported by Reid's (1995) PLSPQ. In order to answer this question, descriptive statistics were used to rank order the preferences of respondents to the six categories of perceptual language learning styles. In addition, paired-samples *t*-tests were conducted to assess if there were any significant differences between various modalities of perceptual learning styles among Saudi EFL students.

Reid's (1995) sorted students' preferences of perceptual language learning styles into three categories: major, minor and negligible styles. According to Reid (1995), the mean score for any style that falls between 38 and 50 is considered a major learning style preference while

any mean score ranging from 25 to 37 is a minor learning style. When a mean score falls below 25, it is considered as a negligible learning style preference.

As shown in Table 14, the mean scores for every perceptual language learning style ranged between ($M = 33.03$ to $M = 36.20$) and, therefore, responses fitted the minor preference category. Yet, it is noteworthy to point out that although all perceptual styles fell in the minor preference category, the mean scores in most of the styles were at the high end of the minor preference category range.

The results revealed that the most preferred language learning style among Saudi EFL students was auditory ($M = 36.20$, $SD = 8.00$), followed by group style ($M = 36.00$, $SD = 10.19$), with a relatively slight difference in mean scores between these styles. Kinesthetic style ($M = 35.23$, $SD = 8.39$) ranked third in students' preferences and followed by visual style in fourth place ($M = 34.31$, $SD = 7.52$). Tactile style ($M = 33.28$, $SD = 8.53$) ranked fifth in students' preferences while individual style ($M = 33.03$, $SD = 33.03$) was rated as the least preferred style for all students.

Table 14

Descriptive Statistics, Level of Use and Rank Order of Perceptual Learning Styles

Style	<i>M</i>	<i>SD</i>	Level of Use	Rank Order
Auditory	36.20	8.00	Minor	1
Group	36.00	10.19	Minor	2
Kinesthetic	35.23	8.39	Minor	3
Visual	34.31	7.52	Minor	4
Tactile	33.28	8.53	Minor	5
Individual	33.03	9.56	Minor	6

As seen in Table 15 and Figure 3, Saudi EFL students indicated a strong preference towards the auditory style as a major learning style. More than half of the students, about 53% (n

= 351), selected auditory as a major learning style compare to nearly 37% (n = 250) who favored auditory leaning as a minor style and only about 10% (n = 66) as negligible learning style. The results also indicated that students, approximately 46% (n = 306), expressed a preference to use group learning as a major style, nearly 35% (n = 235) of the students selected group learning as a minor style and only about 19% (n = 126) as negligible learning styles. The kinesthetic style was selected as a major learning style by nearly 44% (n = 295) of the participants, as a minor style by 45% (n = 301) and 10% (n = 71) as a negligible learning style. Approximately 37% (n = 248) of the students favored visual learning as a major learning style, nearly 53% (n = 353) selected visual learning a minor style and only about 10% (n = 66) fitted in the negligible category. In addition, almost 35% (n = 231) of the students reported having tactile as their major learning style preference, nearly 49% (n = 239) as their minor style and 16% (n = 107) as their negligible learning style preference. Nearly 35% (n = 236) of the students preferred individual learning as a major style while almost 44% (n = 297) selected individual learning as their minor style. Individual learning style was chosen as negligible style by nearly 20% (n = 134) participants.

Table 15

Descriptive Statistics, Ranking and Levels of Use of Perceptual Learning Styles

Style	<i>M</i>	<i>SD</i>	Rank Order	Major		Minor		Negligible	
				<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
Auditory	36.20	8.00	1	351	52.6	250	37.5	66	9.9
Group	36.00	10.19	2	306	45.9	235	35.2	126	18.9
Kinesthetic	35.23	8.39	3	295	44.2	301	45.1	71	10.6
Visual	34.31	7.52	4	248	37.2	353	52.9	66	9.9
Tactile	33.28	8.53	5	231	34.6	329	49.3	107	16.0
Individual	33.03	9.56	6	236	35.4	297	44.5	134	20.1

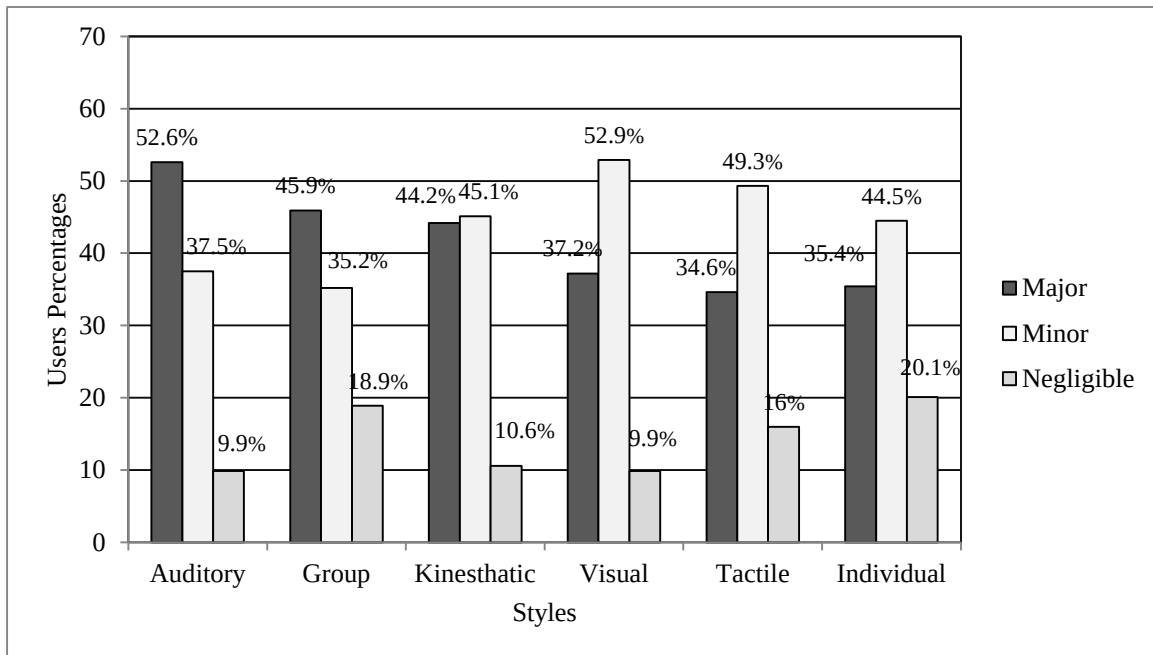


Figure 3. Levels of preferences for perceptual language learning styles

The researcher also conducted paired-samples *t*-tests to investigate whether there were any significant differences in the students' use of various modalities of perceptual learning styles. A Bonferroni correction approach was used to control for Type I error. The results, see Table 16, revealed statistically significant differences in students' preferences in most of the perceptual learning styles, except for group and kinesthetic, group and visual, group and individual. In addition, no statistically significant difference was depicted between tactile and individual styles.

The paired-samples *t*-tests indicated that Saudi EFL students preferred to use their auditory sensory more significantly than any other perceptual styles. The paired-samples *t*-tests indicated that students' preferred auditory style ($M = 36.20$, $SD = 8.00$) significantly more than group style ($M = 36$, $SD = 10.19$), $t(666) = 4.63$, $p = 0.000$, $d = 17$. The results also showed that auditory style was significantly higher than kinesthetic ($M = 35.23$, $SD = 8.39$) and visual styles ($M = 34.31$, $SD = 7.52$), $t(666) = 3.87$, $p = 0.000$, $d = 14$ and $t(666) = 7.78$, $p = 0.000$, $d = 30$,

respectively. In addition, Saudi EFL students rated auditory style significantly higher than tactile ($M = 33.28$, $SD = 8.53$) and individual ($M = 33.03$, $SD = 9.56$), $t(666) = 10.17$, $p = 000$, $d = 21$ and $t(666) = 8.54$, $p = 000$, $d = 32$, respectively.

The results indicated that Saudi EFL students preferred group learning style more significantly than tactile styles only. The results from the paired-samples t -tests suggested that Saudi EFL students significantly preferred to use group learning style ($M = 36$, $SD = 10.19$) than tactile ($M = 33.28$, $SD = 8.53$), $t(666) = 3.38$, $p = 001$, $d = 31$.

Also, the results from paired-samples t -tests indicated that Saudi EFL students preferred kinesthetic learning style over visual, tactile and individual learning styles. Saudi EFL students used kinesthetic learning style ($M = 35.23$, $SD = 8.39$) significantly higher than visual styles ($M = 34.31$, $SD = 7.52$), $t(666) = 3.36$, $p = 001$, $d = 13$. In addition, kinesthetic style was found to be significantly higher than tactile ($M = 33.28$, $SD = 8.53$) and individual style ($M = 33.03$, $SD = 9.56$), $t(666) = 8.58$, $p = 000$, $d = 33$ and $t(666) = 5.50$, $p = 000$, $d = 21$, respectively.

In addition, Saudi EFL students showed significantly higher preference to use visual learning style ($M = 34.31$, $SD = 7.52$) compare to tactile ($M = 33.28$, $SD = 8.53$) and individual learning ($M = 33.03$, $SD = 9.56$), $t(666) = 3.76$, $p = 000$, $d = 14$ and $t(666) = 3.90$, $p = 000$, $d = 17$, respectively.

It is noteworthy to point out that the effect size in this present study was found to be small for all significant pair comparisons. As shown in Table 16, all the statistically significant results did not exceed Cohen's (1988) convention for a small effect size, small ($d = .2$), medium ($d = .5$) and large ($d = .8$).

Table 16

Paired Samples Statistics for Perceptual Language Learning Styles

Paired Differences		Mean Difference	SD	<i>t</i>	<i>df</i>	<i>d</i>	<i>p</i>
Auditory	Group	.165	.922	4.63	666	.17	.000*
	Kinesthetic	.096	.646	3.87	666	.14	.000*
	Visual	.188	.625	7.78	666	.30	.000*
	Tactile	.291	.738	10.17	666	.21	.000*
	Individual	.316	.958	8.54	666	.32	.000*
Group	Kinesthetic	-.068	.934	-1.90	666	-.07	.057
	Visual	.023	.991	.602	666	.02	.548
	Tactile	.125	.960	3.38	666	.13	.001*
	Individual	.151	1.48	2.64	666	.10	.008
Kinesthetic	Visual	.092	.707	3.36	666	.13	.001*
	Tactile	.194	.585	8.58	666	.33	.000*
	Individual	.220	1.03	5.50	666	.21	.000*
Visual	Tactile	.102	.700	3.76	666	.14	.000*
	Individual	.128	.735	3.90	666	.17	.000*
Tactile	Individual	.025	1.02	.649	666	.02	.516

* $p < .008$ **Research Question Three**

Research Question Three looked for the relationship between perceptual language learning style preferences and language learning strategy use. In order to determine whether there was a statistically meaningful relationship between the perceptual learning style preferences and language strategy use by the students, Pearson product-moment correlations were computed among the categories of perceptual language learning styles and language learning strategies. Such correlations do not imply any causality, yet depict the degree and the direction of the correlations.

Using the Bonferroni correction approach to control for a Type I error across all the correlations between perceptual learning styles and language learning strategies, a p value of less than .001 (.05/36) was required for significance.

In addition, Cohen's (1992, 1998) convention for the effect size ($r = .10$ = small; $r = .30$ = medium; $r = .50$ = large) was used to determine the magnitudes (strength) of the relationships between variables.

There were statistically significant positive correlations as seen in Table 17 between the students' perceptual language learning styles and their overall use of language learning strategies, $p > .001$. Visual ($r = .43$), auditory ($r = .43$), tactile ($r = .40$) and kinesthetic ($r = .42$) correlated with the overall language learning strategies relatively higher than the group ($r = .24$) and the individual learning styles ($r = .34$). Visual and auditory styles accounted for nearly 18% ($r^2 = .18$) of the variation among the participants in the overall use of language learning strategies while tactile ($r^2 = .16$) and kinesthetic ($r^2 = .17$) accounted for 16% and 17% of the variations. Approximately 11% ($r^2 = .11$) of the variation in participants' use of the whole language learning strategies could be explained by their individual learning style and only about 5% ($r^2 = .05$) by group learning style.

In addition, the correlational analyses results presented in Tale 17 reported that all 36 correlations were statistically significant with small to medium positive relationships between the perceptual learning styles and the categories of language learning strategies. However, none of the correlational effect size was greater than .40 or exceeded Cohen's (1992, 1998) convention for medium effect size, small ($r = .1$), medium ($r = .3$) and large ($r = .5$).

The correlation results indicated a significant positive relationship between the visual style and the metacognitive strategies, $r(665) = .40$, $p > .001$, exhibiting a slightly higher-moderate correlation coefficient compare to other correlations. Approximately 16% ($r^2 = .16$) of the variation in the students' use of the metacognitive strategies was explained by the students' visual learning style. In addition, the visual style significantly correlated to the cognitive

strategies, $r(665) = .35, p > .001$ and accounted for nearly 12% ($r^2 = .12$) of the variation among Saudi students in using the cognitive strategies. A similar correlation was depicted between the visual style and the compensation strategies, $r(665) = .35, p > .001$ with $r^2 = .12$. As a measure of association strength, the coefficient of determination ($r^2 = .12$) implied that the visual style learning accounted for nearly 12% of the variation in the participants' use of the compensation strategies. Additionally, the results revealed that the visual learning style significantly correlated to the memory and the social strategies, $r(665) = .32, p > .001$ and $r(665) = .33, p > .001$, respectively, with a medium effect size for both correlations. Both correlations had similar coefficient of determination values of ($r^2 = .10$), indicating that the visual learning style accounted for approximately 10% of the variance among participants in using either the memory or the social strategies. Furthermore, the visual learning style significantly correlated to the affective strategies, $r(665) = .30, p > .001$, with a medium effect size. As a measure of association strength, the coefficient of determination ($r^2 = .09$) implied that the visual style learning accounted for nearly 9% of the variation in the participants' use of the affective strategies.

In the auditory learning style, the correlation results indicated a significant positive relationship with the metacognitive, the compensation and the social strategies, $r(665) = .40, p > .001$, $r(665) = .39, p > .001$, $r(665) = .38, p > .001$, respectively. The correlation coefficients represented a medium effect sizes yet slightly higher in magnitude than other correlations. The auditory learning style appeared to account for nearly 16% ($r^2 = .16$) of the variance among participants in employing the metacognitive strategies, about 15% ($r^2 = .15$) in using the compensation strategies and about 14% ($r^2 = .14$) in using the social strategies. In addition, the correlation results revealed that the auditory learning style significantly correlated to the

cognitive and the memory strategies with relatively similar moderate correlation coefficients, $r(665) = .34, p > .001$ and $r(665) = .33, p > .001$, respectively. The correlations of the auditory learning style to the cognitive and the memory strategies accounted for nearly 11% ($r^2 = .11$) and 10% ($r^2 = .10$), respectively, of variance among participants in using the cognitive and the memory strategies. The auditory learning style significantly correlated to affective strategies, $r(665) = .26, p > .001$. However, the correlation coefficient was of a small effect size which accounted for only 6% ($r^2 = .06$) of the variance in using the affective strategies.

In the correlation results between the tactile style and language strategies, a positive significant correlation with a medium effect size was depicted between the tactile style and the metacognitive strategies, $r(665) = .37, p > .001$. The results suggested that nearly 13% ($r^2 = .13$) of the variation in the participants' use of the metacognitive strategies could be justified by their tactile learning style. In addition, the tactile style correlated significantly in a similar magnitude to the memory and the affective strategies, $r(665) = .34, p > .001$. The correlation coefficient for both correlations fell in the medium effect size. As seen in Table 17, the tactile learning style accounted for nearly 11% ($r^2 = .11$) of the variance among the participants in using either the memory or the affective strategies. The tactile style also correlated significantly to the compensation, the cognitive and the social strategies, $r(665) = .31, p > .001$, $r(665) = .30, p > .001$ and $r(665) = .30, p > .001$, respectively, exhibiting a similar coefficient of determination ($r^2 = .09$) for three correlations. The tactile style, therefore, accounted for almost 9% of the variation for the compensation, the cognitive and the social strategies.

The correlations between the kinesthetic style and language strategies revealed a significant positive relationship with the metacognitive strategies, $r(665) = .40, p > .001$. The correlation coefficient represented a medium effect size yet a relatively stronger one than other

strategies. Approximately 16% ($r^2 = .16$) of the variation in participants' use of the metacognitive strategies could be explained by their kinesthetic learning styles. Also, a significant correlation of a medium effect size was depicted between the kinesthetic style and the compensation strategies, $r(665) = .36, p > .001$. The coefficient of determination ($r^2 = .12$) denoted that the kinesthetic learning style accounted for nearly 12% of the variance in the participants' use of compensation strategies. In addition, the correlation results indicated a significant relationship with the social, the memory and the cognitive strategies, $r(665) = .33, p > .001$, $r(665) = .32, p > .001$, $r(665) = .32, p > .001$, respectively. The three correlations had a similar coefficient of determination ($r^2 = .10$) suggesting that nearly 10% of the variance in employing the social, the memory and the cognitive strategies could be explained by the kinesthetic learning style. The kinesthetic style also correlated significantly to the affective strategies, $r(665) = .31, p > .001$ and accounted for almost 9% ($r^2 = .09$) of the variance in employing the affective strategies.

The correlations between the group learning style and the six categories of learning strategies were thought to be weaker compared with the previously mentioned correlations. As shown in Table 17, all correlations exhibited small effect size. The highest significant correlation coefficient, $r(665) = .27, p > .001$, was between the group learning style and the compensation strategies and accounted for about 7% ($r^2 = .07$) of the variance in employing the compensation strategies. The group learning style also correlated significantly to the social strategies, $r(665) = .24, p > .001$ accounting for about 5% ($r^2 = .05$) of the variance in using the social strategies. In addition, the results suggested that the group learning style significantly correlated to the memory and the metacognitive strategies, $r(665) = .20, p > .001$ and $r(665) = .21, p > .001$, respectively. Both correlations had similar coefficient of determination values ($r^2 = .04$),

indicating that the group learning style accounted for only 04% of the variance in using the memory or the metacognitive strategies. Likewise, the group style significantly correlated to the cognitive strategies, $r(665) = .15, p > .001$ and accounted for only 2% ($r^2 = .02$) of the variation in using the cognitive strategies. A similar correlation was found between the group learning style and the affective strategies, $r(665) = .17, p > .001$ with $r^2 = .02$, denoting that only 2% of the variation in using the affective strategies were explained by the group learning style.

The individual learning style correlated significantly to the metacognitive and the cognitive strategies to a moderate effect size, $r(665) = .33, p > .001$ and $r(665) = .31, p > .001$, respectively. The individual style accounted for nearly 10% ($r^2 = .10$) and 9% ($r^2 = .09$) of the variation among the participants in their use of the metacognitive and the cognitive strategies, respectively. The results also revealed significant correlations with a similar effect size between the individual learning style and the memory and the social strategies, $r(665) = .25, p > .001$, for both correlations. The correlation coefficients in these correlations fell in the small effect size. The individual learning style accounted for only 6% ($r^2 = .06$) of the variance among participants who employed the memory or the social strategies. The individual learning style correlated significantly in weaker magnitudes to the affective and the compensation strategies $r(665) = .23, p > .001$ and $r(665) = .22, p > .001$, respectively. The correlations between the individual learning style and the affective and the compensation strategies accounted for nearly 5% ($r^2 = .05$) and 4% ($r^2 = .04$), respectively, of variance among the participants using the affective and the compensation strategies.

Table 17

Correlation Matrix Between Perceptual Styles and Strategies

Category	Effect size	Memory	Cognitive	Compensation	Metacognitive	Affective	Social	SILL
Visual	<i>r</i>	.32*	.35*	.35*	.40*	.30*	.33*	.43*
	<i>r</i> ²	0.10	0.12	0.12	0.16	0.09	0.10	0.18
Auditory	<i>r</i>	.33*	.34*	.39*	.40*	.26*	.38*	.43*
	<i>r</i> ²	0.10	0.11	0.15	0.16	0.06	0.14	0.18
Tactile	<i>r</i>	.34*	.30*	.31*	.37*	.34*	.30*	.40*
	<i>r</i> ²	0.11	0.09	0.09	0.13	0.11	0.09	0.16
Kinesthetic	<i>r</i>	.32*	.32*	.36*	.40*	.31*	.33*	.42*
	<i>r</i> ²	0.10	0.10	0.12	0.16	0.09	0.10	0.17
Group	<i>r</i>	.20*	.15*	.27*	.21*	.17*	.24*	.24*
	<i>r</i> ²	0.04	0.02	0.07	0.04	0.02	0.05	0.05
Individual	<i>r</i>	.25*	.31*	.22*	.33*	.23*	.25*	.34*
	<i>r</i> ²	0.06	0.09	0.04	0.10	0.05	0.06	0.11

* Correlation is significant at the .000 level (2-tailed).

Research Question Four

Research Question Four sought to examine whether genders, academic majors and language proficiency levels had impacts on the students' choice or frequency use of particular language learning strategies.

Preliminary analyses were conducted to ensure no violation of the assumptions of independence, linearity, multivariate normality, multivariate and homogeneity of variance and covariance before conducting the multivariate analysis. As mentioned previously in initial data cleaning, the tests of standard univariate normality, examining standardized skewness and kurtosis and Shapiro-Wilks test, indicated that the data were not normally distributed.

In addition, the MANOVA assumption of multivariate normality was not met. The multivariate normality for the data sets was assessed using Henze-Zirkler test for multivariate normality (Henze & Zirkler, 1990) and Mardia's coefficient of multivariate skewness and

kurtosis test (Mardia, 1970). The result of Henze-Zirkler test ($HZ = 1.94, P < .05$) revealed that the data set was not multivariate normal. In addition, Mardia's multivariate test (skewness = 1.71, $p = 0$ & kurtosis = 58.70, $p = 0$) suggested that the multivariate data set deviated from multivariate normality.

Since the MANOVA assumption of multivariate normality was violated, a univariate statistical approach (independent-samples t -test) was used to examine the differences between the students in strategies usage based on their genders, academic majors and language proficiency levels. An adjustment was made to p values using Bonferroni correction to guard against making a Type I error. The following sections present the results from the independent t -tests comparing the students' mean scores on different language learning strategies contributed by their genders, academic majors and language proficiency levels.

Gender

The results of the independent t -tests, Table 18, revealed no significant difference between males ($M = 3.27, SD = .66$) and females ($M = 3.30, SD = .59$) in employing all language learning strategies in general, $t(665) = -.702, p = .483$. Gender, in this study, did not have a significant effect on the students' choice or frequency of use for a particular learning strategy.

An independent sample t -test was conducted to evaluate the whether the use of the memory strategies differed significantly as a function of whether students were males or females. The result of the independent t -test was not statistically significant, $t(665) = -1.86, p = .063$, indicating that, on average, there was no significant difference between the scores of males ($M = 3.05, SD = .74$) and the scores of females ($M = 3.16, SD = .67$). In addition, no significant difference, $t(665) = -.898, p = .370$, was found between male students ($M = 3.19, SD = .78$) and

female students ($M = 3.25$, $SD = .68$) in employing cognitive language learning strategies. Likewise, the results showed no statistically significant difference between the mean scores of Saudi male ($M = 3.36$, $SD = .81$) and female students ($M = 3.31$, $SD = .77$) in using the compensation strategies, $t(665) = .696$, $p = .487$. In the metacognitive strategies, the test was not significant, $t(665) = -1.25$, $p = .212$. On average, male students ($M = 3.54$, $SD = .82$) and female students ($M = 3.63$, $SD = .82$) did not differ significantly in employing the metacognitive strategies. In evaluating the participants' usage of the affective strategies, the independent sample t -test yielded no statistically significant difference between students contributed by their gender, $t(665) = -.687$, $p = .49$. The results indicated that, on average, Saudi males ($M = 3.06$, $SD = .88$) and females ($M = 3.11$, $SD = .81$) had no difference in using for the affective strategies. Gender did not have an impact on the students' use of the social strategies, $t(665) = -1.59$, $p = .111$. On average, Saudi male students ($M = 3.46$, $SD = .89$) did not differ significantly from Saudi female students ($M = 3.34$, $SD = .84$) in using the social strategies.

Table 18

Descriptive Statistics and T-Test for Strategies Use by Gender

Strategy	Gender				<i>t</i>	<i>p</i>
	Male (<i>n</i> = 440)		Female (<i>n</i> = 227)			
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>		
Memory	3.05	.74	3.16	.67	−1.86	.063
Cognitive	3.19	.78	3.25	.68	−.898	.370
Compensation	3.36	.81	3.31	.77	.696	.487
Metacognitive	3.54	.82	3.63	.82	−1.25	.212
Affective	3.06	.88	3.11	.81	−.687	.493
Social	3.46	.89	3.34	.84	1.59	.111
Overall SILL	3.27	.66	3.30	.59	−.702	.483

Academic Major

An independent-samples *t*-test was conducted to examine the impact of the students' academic majors (Technical/Engineering or Business/Management/Other) on their general use of language learning strategies. As seen in Table 19, the results revealed no statistically significant difference between the students majoring in technical or engineering fields ($M = 3.28$, $SD = .64$) and those studying business, management or other non-technical disciplines ($M = 3.28$, $SD = .64$) in using language learning strategy, $t(665) = -.003$, $p = .988$.

In addition, students' academic majors did not seem to have an impact on their choice or their frequency of use for a particular learning strategy. An independent-samples *t*-test, examining the students' differences in using the memory strategies according to their academic majors, was found to be statistically non-significant, $t(665) = .015$, $p = .988$. An examination of the group means showed no significant difference in employing memory strategies between students in technical and engineering fields and those in business, management or other disciplines ($M = 3.09$, $SD = .70$) and ($M = 3.09$, $SD = .73$), respectively. Also, no statistically significant difference, $t(665) = .444$, $p = .657$, was found between technical and engineering students ($M = 3.22$, $SD = .75$) and business, management and other fields students ($M = 3.19$, $SD = .74$) in employing the cognitive strategies. Also, the data analysis results did not reach the statistical difference, $t(665) = 1.28$, $p = .199$, between technical and engineering students ($M = 3.38$, $SD = .78$) and students in business, management and other fields ($M = 3.30$, $SD = .82$) in employing the compensation strategies. Likewise, no statistically significant difference, $t(665) = -1.46$, $p = .144$ was detected between technical and engineering students ($M = 3.53$, $SD = .82$) and students in business, management and other fields ($M = 3.62$, $SD = .83$) in using metacognitive strategies. Technical and engineering students ($M = 3.08$, $SD = .81$) and business,

management and other academic disciplines students ($M = 3.07$, $SD = .90$) did not differ significantly from each other when using the affective strategies, $t(665) = .078$, $p = .938$. In evaluating students' usage of social strategies, the independent sample t -test yielded a statistically non-significant difference between participants of different academic disciplines, $t(665) = -.687$, $p = .493$. Technical and engineering students and students studying in business, management and other academic disciplines reported, on average, a similar use for social strategies ($M = 3.42$, $SD = .87$) and ($M = 3.42$, $SD = .87$), respectively.

Table 19

Descriptive Statistics and T-Tests for Strategies Use by Academic Major

Strategy	Academic Major				<i>t</i>	<i>p</i>
	Technical (<i>n</i> = 365)		None-technical (<i>n</i> = 302)			
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>		
Memory	3.09	.70	3.09	.73	.015	.988
Cognitive	3.22	.75	3.19	.74	.444	.657
Compensation	3.38	.78	3.30	.82	1.28	.199
Metacognitive	3.53	.82	3.62	.83	−1.46	.144
Affective	3.08	.81	3.07	.90	.078	.938
Social	3.42	.87	3.42	.87	−.113	.910
Overall SILL	3.28	.64	3.28	.64	−.003	.998

Proficiency Level in English

To examine the effect of the students' proficiency levels in English (English I & English II) on their use of each language learning strategy, independent t -tests were conducted, as seen in Table 20. The test revealed a statistically significant difference in using language learning strategies, $t(665) = 1.99$, $p = .046$ between elementary level students studying English I ($M = 3.33$, $SD = .69$) and pre-intermediate students who were in English II ($M = 3.23$, $SD = .59$). Further investigation was performed and identified a significant difference between students of

different levels of proficiency in using the affective strategies. No statistically significant difference, however, was found between the elementary and the pre-intermediate students on other language learning strategies (i.e., memory, cognitive, compensation and metacognitive).

An independent sample *t*-test showed that the difference in using the memory strategies between the elementary level students studying in English I ($M = 3.16$, $SD = .74$) and the pre-intermediate level students in English II ($M = 3.03$, $SD = .69$) was not statistically significant, $t(665) = 2.34$, $p = .019$. In addition, the results indicated that students' proficiency levels in English did not have an effect on their use of the cognitive strategies. Given a violation of Levene's test for the homogeneity of variances, $F(1, 665) = 6.35$, $p = .012$, a *t*-test statistic not assuming homogeneous variances was calculated. On average, the elementary level students taking English I ($M = 3.24$, $SD = .80$) and the pre-intermediate students in English II ($M = 3.18$, $SD = .69$) did not differ significantly when employing the cognitive strategies, $t(665) = 1.04$, $p = .354$. Similarly, the elementary level ($M = 3.37$, $SD = .81$) and the pre-intermediate level students ($M = 3.32$, $SD = .78$), on average, did not differ significantly in employing the compensation strategies, $t(665) = .927$, $p = .296$. In using the metacognitive strategies, the results of Levene's test for homogeneity of variances, $F(1, 665) = 8.52$, $p = .004$, indicated that the variance of the two groups was unequal. Owing to this violated assumption, a *t* statistic not assuming homogeneity of variance was computed. The results indicated that the students' proficiency levels in English did not have an effect on their use of the cognitive strategies, $t(665) = 1.43$, $p = .150$. There was no statistically significant difference between the average scores of students in the elementary level taking English I ($M = 3.62$, $SD = .89$) and the average scores of the pre-intermediate students studying in English II ($M = 3.53$, $SD = .75$). In using the affective strategies, the results of the independent sample *t*-test revealed a statistically significant

difference, $t(665) = 2.71$, $p = .007$, $d = .211$. This suggests that the students, on average, who were in the elementary level ($M = 3.17$, $SD = .89$) employed the affective strategies in their learning more frequently than the students who were in the pre-intermediate ($M = 2.99$, $SD = .81$). The measure of the effect size for this analysis was small ($d = .211$), as indexed by Cohen (1988). The students' use of the social strategies did not differ significantly, $t(665) = 1.66$, $p = .096$ as a function of whether students were in the elementary level taking English I ($M = 3.48$, $SD = .90$) or in the pre-intermediate level in English II ($M = 3.36$, $SD = .84$).

Table 20

Descriptive Statistics and T-Tests Strategy Use by English Proficiency Levels

	English Level				<i>t</i>	<i>p</i>
	English I (<i>n</i> = 320)		English II (<i>n</i> = 347)			
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>		
Memory	3.16	.74	3.03	.69	2.34	.019
Cognitive	3.24	.80	3.18	.69	1.04	.296
Compensation	3.37	.81	3.32	.78	.927	.354
Metacognitive	3.62	.89	3.53	.75	1.43	.150
Affective	3.17	.89	2.99	.81	2.71	.007*
Social	3.48	.90	3.36	.84	1.66	.096
Overall SILL	3.33	.69	3.23	.59	1.98	.048**

* $p < .008$

** $p < .05$

Chapter Summary

This chapter presented the analyses of data and the results of the study providing in-depth insight about Saudi EFL students' use of language learning strategies and perceptual learning styles. The results showed that the Saudi EFL students appeared to moderately employ language learning strategies in following order: metacognitive, social, compensation, cognitive, memory and affective strategies. The results also indicated that Saudi EFL students tend to prefer using

perceptual styles in the following order: auditory, group, kinesthetic, visual, tactile and individual style. Chapter 4 investigated the relationship between students' strategy use and perceptual styles. Findings revealed a positive, small to medium, relationship between perceptual learning styles and language learning strategies. The chapter also presented the data analyses and the related results examining the effect of genders, academic majors and proficiency levels on the students' use of language learning strategy. There were no differences in using strategies between students, based on their genders or academic majors. However, statistically significant differences were found between students having different language proficiency levels in using the affective strategies. Chapter 5 will present a summary of the research study, discussion, implications of the study, and recommendations for further research.

CHAPTER 5

DISCUSSION, IMPLICATIONS AND RECOMMENDATIONS

Introduction

The final chapter of the dissertation offers a brief summary of the current research and the findings from the data analyses. The chapter also presents and discusses the conclusions drawn from the findings and results of the data analyses. Additionally, it provides suggestions for pedagogical implications and recommendations for future research.

Summary of the Study

This section provides a brief overview of the whole study giving a synopsis of the purpose of the study, the research questions, the methodology and the major findings.

The purpose of this study was to identify the preferred language learning strategies that are most frequently employed by Saudi EFL college students in the preparatory English program at Yanbu English Language Institute (YELI). Additionally, this study was designed to examine the most common perceptual learning style preferences among Saudi EFL students, and the possible relationship between the students' learning styles and their strategy use. The study also sought to explore the students' use of specific language learning strategies in relation to their genders, levels of proficiency in English and academic majors. Specifically, the following research questions guided the study:

1. What language learning strategies do Saudi EFL students in the preparatory English program at Yanbu English Language Institute (YELI) use and which ones do they use more frequently when learning the English language?

2. What are the perceptual language learning styles preferences amongst Saudi EFL students in the preparatory English program at Yanbu English Language Institute (YELI)?
3. To what extent is there a relationship between Saudi EFL students' perceptual language learning styles and their language learning strategy use?
4. What are the differences in language learning strategies use between Saudi EFL students studying in the preparatory English program at Yanbu English Language Institute (YELI), based on their genders, academic majors and language proficiency levels?

The population included all Saudi college students studying in the preparatory English year program at Yanbu English Language Institute (YELI). The final sample of the 667 participants included 440 male (about 66%) and 227 female students (Nearly 34%). There were 320 students (nearly 48%) in English level one and 347 students (about 52%) in English level two. Three hundred sixty-five students (nearly 55%) studied in technical and engineering fields compared with 302 (nearly 45%) in business, managements and other non-engineering academic disciplines.

The instrument employed to collect data included two self-report questionnaires and a student demographic information section. The questionnaire was translated into the students' native language, Arabic, and was pilot-tested prior to conducting the full-scale study. The first part of the instrument used Oxford's (1990) Strategy Inventory for Language Learning (SILL) to explore language learning strategies employed by the participants. The second part used Reid's (1995) Perceptual Learning Style Preference Questionnaire (PLSPQ) to determine students' preferred perceptual learning styles. The last section gathered students' individual demographic

information including gender, academic fields of study and their current levels of proficiency in English.

The data collected from the returned online questionnaires were cleaned, analyzed, interpreted and reported. Research Question One was answered using descriptive statistics including mean scores, standard deviations and frequency for each category and items. Similar statistical procedures, descriptive statistics, were used to answer Research Question Two. In addition, paired sample *t*-tests were used for Research Question Two. Pearson product-moment correlations were used to answer Research Question Three and independent sample *t*-tests were used for answering Research Question Four.

Summary of Major Findings

The results of the statistical data analyses revealed the following major findings for the current study:

1. The overall use of the six categories of language learning strategies for Saudi EFL students was in the medium frequency of use ($M = 3.28$, $SD = 0.64$), according to Oxford's (1990) scale for judging the degree of strategy use. Approximately, 35% ($n = 235$) of the students employed language strategies in a high frequency manner, nearly 56% ($n = 372$) in a moderate way and only about 9% ($n = 5$) in a low frequency use.
2. Metacognitive strategies, in general, were employed with a high frequency of use. Social, compensation, cognitive, memory and affective strategies were moderately used by Saudi EFL students. In this study, no strategies, in general, reported to be used with a low frequency of use.
3. Metacognitive strategies were the most frequently used among all the six categories of language learning strategies ($M = 3.57$, $SD = 0.82$), followed by social strategies ($M =$

3.42, SD = 0.87), compensation strategies (M = 3.34, SD = 0.80) and cognitive strategies (M=3.21, SD = 0.75). Memory and affective strategies had a relatively slight difference in frequency of use (M = 3.09, SD = 0.72) and (M = 3.08, SD = 0.86), respectively, and were considered the least frequently used strategies.

4. Saudi EFL college students reported minor preferences tendencies toward using auditory, visual, kinesthetic, tactile, group and individual learning styles, according to Reid's (1995) scale of preference for perceptual learning styles.
5. Auditory style (M = 36.20, SD = 8.00) was the most preferred perceptual language learning style among Saudi EFL students, followed by group style (M = 36.00, SD = 10.19), kinesthetic style (M = 35.23, SD = 8.39), visual style (M = 34.31, SD = 7.52), tactile style (M = 33.28, SD = 8.53) and individual style (M = 33.03, SD = 33.03).
6. There were statistically significant differences in students' preferences for most of the sensory learning styles, except for group and kinesthetic, group and visual, group and tactile, and tactile and individual styles. The size of the differences between styles was very slight; thus, statistically significant results might not be practically significant.
7. There were statistically significant positive correlations between the students' perceptual language learning styles and their use of all categories of language learning strategies, $p > .001$. Visual ($r = .43$), auditory ($r = .43$), tactile ($r = .40$) and kinesthetic ($r = .42$) correlated to all the overall language learning strategies relatively higher than the group ($r = .24$) and the individual learning styles ($r = .34$). For the correlations between the categories of language strategies and the six perceptual styles, the strongest correlations ($r = .40$) were found between the visual, the auditory, the kinesthetic styles and the

metacognitive strategies, accounting for nearly 16% of the variance among participants in using the metacognitive learning strategies.

8. Visual, auditory, tactile and kinesthetic learning styles significantly and moderately correlated to each category of language learning strategies. Group learning styles correlated significantly to each category of language learning strategies yet with a small effect size that did not exceed ($r = .05$). Individual learning styles correlated significantly with a medium effect size to cognitive ($r = .31$) and metacognitive strategies ($r = .33$), and correlated significantly in small size to memory ($r = .25$), compensation ($r = .22$), affective ($r = .23$) and social strategies ($r = .25$).
9. There was statistically no significant difference between males ($M = 3.27$, $SD = .66$) and females ($M = 3.30$, $SD = .59$) in employing language learning strategies as whole, $t(665) = -.702$, $p = .483$, 95% CI $[-.140, .066]$. Female students, however, tended to use language learning strategies, though not statistically significant, more frequently than male students. Females employed memory, cognitive, metacognitive and affective strategies slightly more often than their counterparts. Males, on the other hand, scored relatively higher than females on compensation and social strategies.
10. There was no statistically significant difference between students majoring in technical or engineering fields ($M = 3.28$, $SD = .64$) and those studying business, management or other nontechnical disciplines ($M = 3.28$, $SD = .64$) in using language learning strategy as whole, $t(665) = -.003$, $p = .988$, 95% CI $[-.098, .098]$. Nonetheless, students majoring in technical or engineering fields used cognitive, compensation and affective strategies slightly more often than students in business, management or other nontechnical fields. Both groups, however, reported similar scores similar on memory and social strategies.

11. Comparing students with different levels of English proficiency, a statistically significant difference was found only between students on an elementary English level ($M = 3.17$, $SD = .89$) and students in pre-intermediate English levels ($M = 2.99$, $SD = .81$) in the overall use of language learning strategy, $t(665) = 2.71$, $p = .007$, $d = .211$. In the use of six categories of language learning strategies, a statistically significant difference was found only in affective strategies, with students on an elementary level taking English I seeming to employ more affective strategies than pre-intermediate students in English II. There were no statistically significant differences in memory, cognitive, compensation, metacognitive and social strategies between elementary and pre-intermediate students.

Conclusion

The following conclusions were drawn from the results of this research study.

1. Based on the findings of this study, the general pattern of frequency for language learning strategy used by Saudi EFL college students was somewhat similar to the patterns used by other Arab-speaking learners. Yet, the findings of this study regarding the patterns of perceptual language learning style preferences of Saudi EFL students was inconsistent with previous research studies conducted in Saudi EFL context.
2. This study confirms the assumption that there would be a relationship between the learners' learning styles and their choice of language learning strategies. The findings suggested a positive relationship between the students' perceptual learning styles and their use of specific language learning strategies.
3. The findings of this study did not support the hypothesis of gender differences in using language learning strategies. Most of the research in ESL context reported

that female learners significantly use more strategies than males. However, no significant difference was found based on gender in this study.

4. The findings of this study did not confirm the assumption of the influence of academic major on the students' choice of language learning strategies. Saudi EFL college students in different academic disciplines did not differ significantly in their use of language strategies.
5. However, the findings of the present research study confirm the assumption that the students' level of proficiency in language would affect their use of strategies. In this study, proficiency levels in English appeared to have a statistically significant effect on the overall use of language learning strategies. Yet, the result was contradictory to the common belief and published research that experienced language learners would use more strategies. In this study, less proficient students seemed to employ learning strategies more frequently than more proficient students.

Discussion of the Findings

The following sections discuss the major findings of the research study and are organized into the following sections: language learning strategies employed by all participants, perceptual language learning styles preferences for Saudi EFL students, the relationship between the participants' perceptual language learning style preferences and language learning strategy use, and the effects of genders, academic majors and language proficiency levels on the strategy use.

Language Learning Strategies

In response to Research Question One, the results from this study indicated that Saudi EFL students, in general, were moderate users of language learning strategies. This finding was

congruent with previous studies carried out to investigate the use of language learning strategies in Saudi EFL contexts (Alhaisoni, 2012; Al-Otaibi, 2004; McMullen, 2009) and in other Arabic-speaking countries (Shmais, 2003; Ismail & AlKhatib, 2013; Khalil, 2005; Radwan, 2011; Riazi, 2007) and in other EFL contexts including Green (1991) in Puerto Rico, Park (1997) in Korea, Peacock and Ho (2003) in Hong Kong and Wharton (2000) in Singapore which reported an overall use of language learning strategies in the medium range of frequency level, based on holistic mean score for participants. The overall average score for participants in this research study was somewhat higher than studies obtained by Alhaisoni (2012) and Al-Otaibi (2004) with Saudi EFL students yet similar to most of the other parallel research studies conducted on Arab-speaking EFL learners.

According to Oxford (1990), an overall average score on the SILL that falls within the medium range means that strategies are somewhat or occasionally used by participants. A possible explanation for the medium range use of strategies among Arab EFL students might be due to the learning context “Learning English in a foreign language setting offer them very little exposure to authentic, real-life communication activities which seems to limit their opportunities to use a variety of LLSs” (Khalil, 2005, p. 111). Since many of the language learning strategies measured by SILL questionnaire involve using language in authentic or real-life situations, students may rate their use of these strategies moderately.

With regards to each category of the language learning strategies, the findings revealed that the most frequently used strategy consisted of metacognitive strategies, followed by social, compensation, cognitive, memory and affective strategies. All these strategies were employed by Saudi EFL students at a medium level of frequency except the metacognitive strategies, which fell within the high strategy level of use. This pattern of strategy preference was somewhat in

line with Javid, Althubaiti and Uthman's (2013) and McMullen's (2009) findings that reported that Saudi EFL students often favored using metacognitive or social strategies. This finding was also consistent with parallel studies conducted with Arab EFL students (Al-Buainain, 2010; Ismail & AlKhatib, 2013; Khalil, 2005; Radwan, 2011; Shmais, 2003) that all reported high preferences among Arab EFL students to employ metacognitive and social strategies.

Memory and affective strategies were reported as the least frequently used strategies confirming the findings of previous research studies in Saudi EFL contexts (Alhaisoni, 2012; Javid, et al., 2013; McMullen, 2009) and with other Arabic-speaking EFL learners (Al-Buainain, 2010; Ismail & AlKhatib, 2013; Khalil, 2005; Radwan, 2011; Riazi, 2007). In this study, Saudi EFL students in the YELI appeared to recognize the importance of managing, planning and monitoring their learning process as well as communicating and cooperating with others.

The high preference of metacognitive strategies among Saudi EFL students might be due to the educational system and the formal learning environment at Yanbu English Language Institute (YELI) where students are held accountable for their own progress in language learning. Students enrolled in the preparatory English program at YELI seek college admission upon the completion of the EFL program. Adhering to classroom requirements and achieving high grades in English courses are essential aspects for passing the intensive English program and choosing a major of study in college. The threat of failure in the preparatory English program could possibly prompt students to prioritize strategies that are related more to academic achievement. As Williams and Burden (1997) explained,

Many learners develop strategies which are merely concerned with coping with the demands of the school curriculum, of finding ways to meet the requirements imposed by

teachers, strategies which will pay off in the classroom situation but serve no useful purpose in later life. (p. 147)

Metacognitive strategies allow learners to gain greater control over their own learning through planning, organizing, seeking practice and evaluating their own learning process (Oxford,1990).

In addition, in an EFL learning context, the lack of opportunity to learn language in real-life situation is another conceivable explanation for why metacognitive strategies were the most frequently used strategies among Saudi EFL students. The fact that Saudi Arabia is a non-speaking English country and learners have limited opportunity to learn English outside the classroom might trigger students to depend heavily on metacognitive strategies that offer them ample opportunities to be active, initiative and responsible for their own learning. In the present study, findings from individual metacognitive strategies revealed strong preferences among learners to find ways to be better in English, find as many ways as possible to use English, pay attention when someone is speaking English, look for people to speak English and notice mistakes they made in English to improve.

Another plausible explanation for the high frequency use of metacognitive strategies might be due the fact that EFL students who participated in the study were all adult, mature learners who are aware of their learning. Chamot (1998) suggested that awareness of strategies is closely related to metacognitive strategies. Adults, especially in a formal learning situation, understand the importance of controlling, planning, organizing and monitoring their learning if they are to be successful language learners. As Lee and Oxford (2008) indicated, this finding seemed to be common in many research studies in that “adult learners have shown high use of metacognitive strategies for planning, organizing and evaluating their L2 learning” (p. 9).

Social strategies were rated as the second most frequently used strategies among Saudi EFL students. As social strategies involve interaction, communication and cooperation with other people, it was quite unpredictable that the participants in this study would report a high use of social strategies compare to other strategies. The lack of exposure to the target language (i.e., English) makes the learning context in Saudi Arabia a poor environment to utilize social strategies, yet students showed a high tendency to ask questions, ask for help from English speakers, ask others to slow down or repeat in order for them to understand, and ask English speakers for corrections. A possible explanation for the relative high use of social strategies among Saudi students could be attributed to the students' use of social multimedia and networking technologies as social venues for communicating and interacting with native speakers of English.

Another possible explanation for the students' preferences of social strategies might be attributed to the current teaching method at the YELI. Instructors may adopt new teaching methods that encourage and give students access to interact and communicate with others. The traditional approaches of teaching English (e.g., Grammar Translation and Audiolingual methods) that have been dominant and purported to be superior to other methods among Saudi EFL instructors for many years underwent much criticism for their inefficiency in teaching English. Students taught with these classical methods were found to be communicatively incompetent and, therefore, many language institutes and instructors have been recently moving toward other communicative teaching approaches that encourage and support students to seek an opportunity to speak, ask, communicate, cooperate and interact in the classroom. The high use of social strategies of Saudi EFL students could possibly be an outcome of the communicative teaching method and classroom activities followed in the YELI.

Memory and affective strategies were rated as the least frequently used strategies among Saudi EFL students. Although they ranked as the least frequently favored strategies, memory and affective strategies were both used in a medium frequency use. A parallel finding exists in other research studies conducted with Saudi EFL learners (Alhaisoni, 2012; Javid, et al., 2013; McMullen, 2009), Arab EFL learners (Al-Buainain, 2010; Ismail & AlKhatib, 2013; Khalil, 2005; Radwan, 2011) and in other EFL contexts (Green, 1991; Peacock and Ho, 2003; Riazi, 2007) which reported memory and affective strategies as the least employed strategies in the hierarchy.

Concerning the use of memory strategies, findings from this study conform to Al-Otaibi's (2004), Alhaisoni's (2012) and Javid, et al.'s (2013) studies that reported that Saudi EFL students employed memory strategies with the least frequency. However, this finding seems to be inconsistent with the common belief that memory strategies are popular and widely used among Saudi EFL students. Research conducted with Arab EFL learners (Al-Buainain, 2010; Al-Otaibi, 2004; Alhaisoni, 2012) connects the infrequent use of memory strategies with a validity issue in the SILL instrument. Some individual items in the memory construct might not accurately elicit or represent the actual types of memory strategy used by Arab-speaking EFL learners. As explained by Al-Otaibi (2004) "the rote memorization strategies, that Saudi students are believed to prefer, may differ from the specific memory techniques reported in the SILL" (p. 205). In this study, it is possible that students were not familiar with some of the memory-related items such as using flashcards to remember new words, physically act out new English words and using rhymes to remember new words; therefore, they reported employing fewer memory strategies compared with other strategies.

Another possible reason for the infrequent use of memory strategies might be related to the teaching approaches in the EFL classrooms that have shifted from memorization and drilling activities to techniques that encourage authentic communication, creative thinking and independent learning. According to Riazi (2007),

Recently instructors and students in non-Western countries have been departing from rote learning requiring memorization of factual knowledge and moving more toward deep approaches to learning requiring higher levels of learning such as analysis, synthesis, and evaluation of the instructional materials. (p. 439)

It is likely that students have recognized that memorizing words, sentences or grammatical rules may not be the best way for learning and excelling in a foreign language, and thus they utilized fewer memory strategies while learning.

Affective strategies in this study were reported at the bottom of the hierarchy preference for Saudi EFL students. The infrequent use of affective strategies might be attributed to a cultural factor within the Arab-speaking EFL learners who are thought to be more conservative in expressing their feelings and emotions than other culture groups. Saudi EFL students might not feel comfortable sharing their feelings with others or discussing their emotions in public “while keeping diaries is very common in Western countries, it is rarely done in Arab countries, specially with regards to feelings and emotions and when expressed to an instructor” (Riazi, 2007, p. 437). Findings from this study justify this likely claim as the strategy of “writing down my feelings in a learning diary” was rated as the least employed strategies in SILL instrument.

Another plausible reason that affective strategies were ranked as the least frequently used strategies is that Saudi EFL students may consider learning a language as an academic or an intellectual process only. They may not be aware of the power of affective strategies such as

increasing motivation, lowering anxiety and having positive attitudes in learning a foreign language, and, therefore, ranked them as the least favored strategies.

Perceptual Language Learning Style Preference

In this study, participants' responses to Research Question Two revealed the general pattern for the students' perceptual language learning style. Saudi EFL students expressed their preference to use perceptual learning styles in the following order: auditory, group, kinesthetic, visual, tactile and individual styles. The findings from this study suggested that Saudi EFL students at YELI favored all styles and showed minor preferences in using all perceptual language learning styles. Although Saudi students did not, as a group, indicate any single strong (i.e., major) perceptual learning style, they rated most styles at the high-end of the minor preference scale.

In reviewing the literature, research in this discipline has yielded incongruent results showing that EFL learners differed in their patterns of language learning styles. In this study, the pattern for learning styles preference is inconsistent with research conducted in Saudi EFL context such as that conducted by Alkhatani (2011) who reported that Saudi university students preferred a tactile learning style followed by auditory, visual, group, kinesthetic and individual learning styles. More recently, Alkubaidi (2014) reported a different pattern for learning style among Saudi EFL students (group style followed by visual, individual, auditory, kinesthetic and tactile), which is different from the findings of the current study. It is possible that differences of learning environments and teaching methods could have an influence on the preference of learners learning styles. The findings, however, seemed to be in line with those reported by Alkhatani (2011) and Reid (1987) which stated individual learning style as the least preferred style by Arab EFL students.

In the current study, the results showed statistically significant differences in the Saudi EFL students' preferences of various perceptual learning styles. However, the differences between mean scores were all small, suggesting that Saudi EFL students who are studying at the preparatory English program of Yanbu English Language Institute (YELI) did not have or favor a particular learning style. One possible explanation is that with a large sample size of (N = 667) the power to detect differences is relatively high and, therefore, one should be careful not to equate statistical significance with practical significance. As sample size get large, very tiny differences may become detectable (Tabachnick & Fidell, 2013).

The Relationship between Perceptual Learning Style and Strategy Use

In response to Research Question Three, findings from this study revealed that there was a statistically positive correlation between the students' perceptual language learning styles and their use of all categories of language learning strategy. Students who scored high in the perceptual learning styles seemed to score high also in language learning strategies. This finding conforms to other studies (e.g., Ehrman & Oxford, 1990; Green & Oxford, 1995; Rossi-Le, 1989) that have found a statistically significant link between the underlying learning style for language learners and their use of language learning strategies.

In this study, visually-oriented, auditory, tactile, kinesthetic and individual students seemed to employ all language learning strategies more frequently than students who preferred group learning styles. Visual, auditory, tactile, kinesthetic or individual learning styles seemed to influence the students' choice of language strategies in a moderate manner while group style had a small impact on their overall choice of strategies. In addition, the findings from this study revealed that metacognitive strategies such as planning, arranging and evaluating learning were found to be the most popular learning strategies among visual, auditory, tactile, kinesthetic and

individual learners. Compensation strategies (i.e., overcoming speaking and writing limitations and guessing intelligently) were most popular among students who preferred group styles.

Effects of Gender, Academic Major and Language Proficiency on Strategy Use

Findings from this study suggested that, in response to Research Question Four, gender and academic major did not have statistically significant impact on the students' choice of language learning strategies. The results, however, revealed that the students' levels of proficiency in English had significantly impacted their use of language learning strategies.

Gender. In this study, no significant difference was found between male and female students studying at the YELI in the frequency use of language strategies, although female students reported using more strategies than male students. Parallel findings existed in other studies conducted with Saudi EFL students (Alhaisoni, 2012; Al-Otaibi, 2004; McMullen, 2009) that agreed with the results of the current study. The results were also consistent with some of the research studies conducted with Arab EFL students such as those subjects in research studies of Ismail and AlKhatib (2013), Radwan (2011) and Shmais (2003) who reported no significant difference between male and female EFL Arab learners in using language learning strategies.

Findings, however, disagreed with the results of the research studies conducted with international ESL students studying in English-speaking countries (Dreyer & Oxford, 1996; Ehrman & Oxford, 1989; Green & Oxford, 1995; Oxford & Nyikos, 1989; Oxford, Nyikos & Ehrman, 1988) which reported that female learners deploy all types of strategies more frequently than male learners. Considering previous studies, social strategies were reported to be the most common strategies employed by female learners than by male students.

A plausible explanation for the lack of differences between male and female Saudi EFL students might due to the homogeneity among the students who participated in this study. Saudi

EFL male and female students shared the same cultural background and almost the same teaching and educational context. Although male and female students are segregated, as stipulated by religious and educational policy in Saudi Arabia (Wiseman, 2010), they are still exposed to the same textbooks, and same teaching and evaluation methods (Alrashidi & Phan, 2015). This situation could possibly minimize any potential differences in strategy use between male and female Saudi students.

The learning environment is another conceivable reason for the absence of gender effect on learning strategies among Saudi EFL students. Many research studies on language learning (Ehrman & Oxford, 1989; Green & Oxford, 1995; Nyikos, 1989; Politzer, 1983) reported that females seemed to almost always surpass male learners, particularly in social strategies. The outperformance of females in social strategies might be attributed to what Oxford, et al., (1988) referred to as female overall social orientation in which “females generally display greater social orientation than males” (p. 322). Females are generally more interested than males in social, cooperative, communicative learning activities. However, English is considered a foreign language in Saudi Arabia that it is not used in everyday life communication. Saudi EFL students may have few or no opportunities to communicate in English. Females, in particular, may have less opportunity to utilize social strategies due to the conservative nature of the Saudi culture that prevents females from socializing and establishing relationships outside their immediate family circles. Therefore, it stands to reason that the results in this study did not reveal a significant difference in social strategies based on gender because Saudi students, especially females, could not use the social strategies reported in the SILL, specially if it is known that half of the social strategies in the SILL involve communicating with native speakers.

Academic major. Just as no statistically significant differences were found based on

gender, the study also found no statistically significant difference between students of different academic disciplines in using language learning strategies. The findings of this study provide an empirical support to McMullen's (2009) study that reported no significant effect of academic major on the students' use of strategies across three Saudi universities. This finding, however, disagreed with findings from some other research studies (Oxford & Nyikos, 1989; Peacock, 2001; Peacock & Ho, 2003; Politzer & McGroarty, 1985) that reported sharp differences between students majoring in arts and human sciences and students in science and engineering. In this study, students majoring in technical and engineering, and those in other non-technical fields, studied in the same preparatory English program at the YELI. They had the same kind of English language courses, curriculum and instruction though they had different academic disciplines. It is not surprising then if statistical analyses showed no significant difference based on academic majors.

Language proficiency. The students' proficiency levels in English appeared to have a statistically significant effect on the students' overall use of language learning strategies. In this study, the only statistically significant result was found in affective strategies. Students who were less proficient in the target language (i.e., English) seemed to employ affective strategies more frequently than more proficient students. In addition, students with a lower level of English deployed the other remaining strategies more frequently, though not statistically significant, than students in upper levels, contradicting the findings of several research studies that have reported experienced language learners using more strategies (Green & Oxford, 1995; Griffiths, 2008; Lee & Oxford, 2008; Park, 1997). Yet, similar results obtained by Radwan (2011) and Riazi (2007) suggested that less proficient students had a greater tendency toward using language learning strategies. Radwan (2011), in particular, reported a significant difference in using

affective strategies in favor of lower level students. In the present study, it might be the case that elementary level students in the first semester of intensive English program encountered many challenges in learning English language for the first time. Their fear of failure in the program and being expelled for their low performance could possibly put them under pressure and with an increased level of anxiety. As Oxford explained “The affective side of the learner is probably one of the very biggest influences on language learning success or failure” (p. 140). Thus, students may exercise a considerable number of affective strategies to control their emotions, lower their anxiety and increase their motivation.

Theoretical and Practical Implications

The following implications are drawn from the data analyses and the findings of the study and suggest several theoretical and practical implications. This study suggests several theoretical implications. The first theoretical implication for this study is related to the relationship between perceptual learning style preferences and the use of language learning strategies. As the findings report, EFL students vary in their approaches to language learning according to their preferred learning styles. This finding supports the theoretical viewpoint in this field that considers differences in approaching language learning as being partly due to the diversity of individual characteristics such as learners’ perceptual learning styles (Ehrman & Oxford, 1995; Green & Oxford, 1995; Rossi-Le, 1989).

Second, the results of this research study reveal a positive relationship between perceptual learn styles and the language learning strategy use. The more the students involve their various sensory channels in language learning, the wider repertoire of language learning strategy they tend to use. This finding supports the theoretical assumption suggested by Ehrman et al., (2003) who indicated that “Learning styles and learning strategies are often seen as

interrelated. Styles are made manifest by learning strategies” (p. 315). This finding is particularly important as many researchers (e.g., Bremner, 1999; Chamot et al., 1988; Green & Oxford, 1995; Griffiths, 2003a; O’Malley and Chamot, 1990) have repeatedly underscored the importance of learning strategies and styles on language learning and proficiency.

Third, the study highlights the importance of considering the complex system of different variables that may have an effect on student choice of strategies. These variables, however, were examined from a specific educational and cultural context which may have a different influence on learning strategies depending on the learning context.

Based on the findings from the present study, several practical implications are suggested for EFL students, teachers, program administrators and curriculum designers. First, the results from this study indicated that Saudi EFL students at YELI were moderate users of language learning strategies. This finding suggests that students may not be aware of all the possible strategies available for them and, therefore, they were not completely applying all the strategies. The results from this study would benefit Saudi EFL students at YELI by raising their awareness to their own strategies and to other available effective strategies, but not employed, that can empower them to be more autonomous and self-directed learners. Nyikos (1996) stressed the importance of strategy awareness for students in that “learners must gain awareness in order to exert the metacognitive control necessary to manage learning” (p. 111). The results from this study will be available to public through the library system in the college. However, teachers are advised to encourage students to explore their strategy and style preferences patterns using SILL and PLSPQ, or any other similar instruments.

Second, an important implication for this study in EFL classroom is to inform teachers on how to practically assess learning styles and strategies used by their students. As Oxford (2001)

indicated “assessment leads to greater understanding of styles and strategies” (p.365). If the teachers are not aware of what language learning strategies their students actually apply in their learning, they may not be able to help them properly (Oxford, 2001). One of the ways to investigate student strategies and styles preference may be for teachers to administrate any valid and reliable instrument such as the questionnaires used in this study, Oxford’s (1990) SILL and Reid’s (1995) PLSPQ. Teachers may also observe students’ behavior in classroom while learning or conduct short interview with students as alternative methods to assess their style and strategy preferences.

Third, another suggested implication that could inform the teaching of EFL is to encourage teachers to evaluate their own styles and strategies, and reflect on their own teaching methods. Very often, teachers may find themselves inclined to teach specific strategies or use a certain style in teaching based on their own favorite learning strategy or style, but which may not be the most effective strategies that their students really need. Teachers should be aware of their own styles and strategy preferences, and any possible biases that could influence their language instruction. In sum, teachers are encouraged to reflect on their actual use of style and strategy using reliable questionnaires, teaching diaries or reflecting journals.

Fourth, an important implication is to encourage EFL teachers to analyze their teaching materials and activities used in their classrooms to find out whether or not these materials include a variety of tasks and activities that accommodate individual differences in styles and strategies. In order to help students develop their competence in strategy use, EFL teachers must first “be aware of the types of productive and ineffective strategies certain tasks may evoke; and second, they must tailor these tasks so that students can profit from linguistic input and simultaneously receive guidance in appropriate, task-related use” (Nyikos, 1996, p.111).

Fifth, another application for EFL teachers is to incorporate strategy training in EFL classroom instructions. EFL students should receive proper training as needed on how to use strategies efficiently as a way to improve their language learning and performance. Thus, teachers are advised to integrate explicit instructions about language learning strategies on a regular basis and for a sustain period of time in the classroom because “explicitly describing, discussing, and reinforcing strategies in the classroom can have a direct payoff on student outcomes” (Cohen, Weaver & Li, 1995, p. 29). Research on learning strategies (e.g., Green & Oxford, 1995; O’Malley & Chamot, 1990; Oxford, 1990; Oxford & Nyikos, 1989) supports the teachability component of language learning strategies. As indicated by Chamot (1999) “learning strategies can be integrated through every program to help students develop awareness of their own learning process” (p. 1).

In this respect, the literature provides many strategy instructional models or frameworks (Chamot & O’Malley, 1994; Grenfell and Harris, 1999; Oxford et al., 1990 and Pearson & Dole, 1987) to help EFL teachers make decisions on the best approaches for strategy training that suit their learners. EFL teachers, for example, may make use of Pearson and Dole’s (1988) framework for strategy training which includes explicit modeling, explanation of the benefits of applying a specific strategy, practice with the strategy, and creating opportunities to transfer the strategy to new learning contexts. Another example of a suggested framework for strategy training by Chamot (1998) included five stages “Preparation (eliciting students’ prior knowledge about and use of learning strategies); Presentation (introducing new strategies); Practice (active applications of new strategies to language learning tasks); Evaluation (student self-evaluation of the strategies practiced); and Expansion (connecting strategies taught to new tasks and contexts)” (p. 7). Although there are many different strategy instructional models, most of these models

share the following components in implementation: (1) raise the students' awareness about the purpose and the rational of strategy use, (2) teach students to identify, practice and evaluate strategies that have been learned and (3) train them to extend strategy use to new learning context (Cohen, 2003).

It is also worth noting that there is no single strategy instructional methodology that could fit all students. As Oxford (2001) explained, "It is foolhardy to think that a single L2 methodology could possibly fit an entire class filled with students who have a range of stylistic and strategic preferences" (p. 365). One possible way to successfully facilitate the students' language learning is for EFL teachers to understand individual learning styles, strategies and goal for their students. In so doing, teachers can then plan lessons and fine-tune teaching to the most appropriate and effective strategies that suit their students.

Recommendations for Future Research

This dissertation study investigated the language learning strategy use and the perceptual learning style preferences, and the effect of gender, academic major and level of proficiency on the choice of strategies for Saudi EFL students at Yanbu English Language Institute (YELI). This study suggests the following needs for further research in this field.

1. The current research study was conducted on Saudi EFL college students learning English at Yanbu English Language Institute (YELI). Future research studies may involve a replication of the study on a variety of subjects across different educational settings. Including participants from other educational settings in Saudi Arabia and probably even other Arabic-speaking countries would allow the findings to be more generalizable to a wider population of Arab-speaking EFL learners. Oxford (1994) suggested the replication of research on language learning strategies so that more

consistent and verified information may become available within and across diverse groups of learners.

2. Future research may explore other variables including the variables investigated in the present study and other variables that have not been investigated including the educational context, students' motivation, anxiety, length of study and teaching methods utilized.
3. The current study was carried out exclusively with college students. Future research may involve a longitudinal study that tracks the development of Saudi students' learning strategies and styles, and the influence of different factors on the students' choice of strategies throughout their academic study. Carrying out such a longitudinal study would provide researchers with comprehensive and detailed information about the development of strategy and style preferences among students, and would help to determine whether the changes in learning strategy and style preferences are permanent or merely situational.
4. This study was purely quantitative in nature, based on analyzing data obtained from self-reported questionnaires, Oxford's (1990) SILL and Reid's (1987) PLSPQ. Future research studies need to incorporate some qualitative approaches along with the quantitative research methods such as interviews, observation, think-aloud protocol, and diaries in order to obtain more comprehensive information. Woodrow (2005) suggested that a more situated approach, utilizing in-depth qualitative methods, would be more appropriate in assessing language learning strategies use "In the area of LLS research, there is a need for richer rather than more generalizable descriptions of LLS use. This can

be achieved by using more qualitative methods such as case studies and, particularly, action research” (p. 96).

5. Further studies can be conducted to explore teaching strategies and styles used by EFL teachers and how their styles and strategies match the preferred learning styles and strategies of students.
6. Another area of future research would be to conduct an experimental study to investigate the influence of learning strategy instructions on the students’ use of language learning strategies. In general, the majority of the studies that have been conducted in EFL contexts about language learning strategies are descriptive in nature. This research recommends an experimental research design method, with a control and an experiment group, in which one group receives strategy-based instructions whereas the control group does not. Such a study would inform instructors if their efforts in strategies training would have an impact on the students’ strategy use.
7. Technology and social media change rapidly and bring changes to the way students learn. New technology and social multimedia create new ways and opened a new door for foreign language learners to learn and use their language. This might be a possible avenue for future research to investigate the role of new technology and social media on changing students’ learning style preferences and strategies patterns.

Chapter Summary

This chapter presented a summary, conclusions and a discussion of the present research study. It also suggested some theoretical and practical implications for its reported findings, and provide some recommendations for further research to be conducted on the topic.

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APPENDICES

Appendix A

Strategy Inventory for Language Learning SILL

Version for Speakers of Other Languages Learning English
® R. Oxford, 1990

Directions

This form of the STRATEGY INVENTORY FOR LANGUAGE LEARNING (SILL) is for students of English as a second or foreign language. For each of the following statements, indicate your response by selecting the appropriate number in the box (1, 2, 3, 4 or 5) that tells HOW TRUE OF YOU THE STATEMENT IS.

1. Never or almost never true of me
2. Usually not true of me
3. Somewhat true of me
4. Usually true of me
5. Always or almost always true of me

NEVER OR ALMOST NEVER TRUE OF ME means that the statement is very rarely true of you.

USUALLY NOT TRUE OF ME means that the statement is true less than half the time.

SOMEWHAT TRUE OF ME means that the statement is true of you about half the time.

USUALLY TRUE OF ME means that the statement is true more than half the time.

ALWAYS OR ALMOST ALWAYS TRUE OF ME means that the statement is true of you almost always.

Answer in terms of how well the statement describes YOU. Do not answer how you think you should be, or what other people do. There are no right or wrong answers to these statements. Please make no marks on the items and do not mark more than one response per question. Work as quickly as you can without being careless. This usually takes about 20-30 minutes to complete. If you have any questions, let the teacher know immediately.

EXAMPLE

1. Never or almost never true of me.
2. Usually not true of me.
3. Somewhat true of me.
4. Usually true of me.
5. Always or almost always true of me.

Read the item, and choose a response (1 through 5, as above), and write it in the space after the item.

I actively seek out opportunities to talk with native speakers of English.

You have just completed the example item. Answer the rest of the items on the Worksheet.

Strategy Inventory for Language Learning
Version for Speakers of Other Languages Learning English
Version 7.0 (ESL/EFL) © R. L. Oxford, 1990

1. Never or almost never true of me.
 2. Usually not true of me.
 3. Somewhat true of me.
 4. Usually true of me.
 5. Always or almost always true of me.
- (Write Answers on worksheet)

Part: A

1. I think of relationships between what I already know and new things I learn in English.
2. I use new English words in a sentence so I can remember them.
3. I connect the sound of a new English word and an image or picture of the word to help remember the word.
4. I remember a new English word by making a mental picture of a situation in which the word might be used.
5. I use rhymes to remember new English words.
6. I use flashcards to remember new English words.
7. I physically act out new English words.
8. I review English lessons often.
9. I remember new English words or phrases by remembering their location on the page, on the board, or on a street sign.

Part: B

10. I say or write new English words several times.
11. I try to talk like native English speakers.
12. I practice the sounds of English.
13. I use the English words I know in different ways.
14. I start conversations in English.
15. I watch English language TV shows spoken in English or go to movies spoken in English.
16. I read for pleasure in English.
17. I write notes, messages, letters, or reports in English.
18. I first skim an English passage (read over the passage quickly) then go back and read carefully.
19. I look for words in my own language that are similar to new words in English.
20. I try to find patterns in English.
21. I find the meaning of an English word by dividing it into parts that I understand.
22. I try not to translate word-for-word.
23. I make summaries of information that I hear or read in English.

Part: C

- 24. To understand unfamiliar English words, I make guesses.
- 25. When I can't think of a word during a conversation in English, I use gestures.
- 26. I make up new words if I do not know the right ones in English.
- 27. I read English without looking up every new word.
- 28. I try to guess what the other person will say next in English.
- 29. If I can't think of an English word, I use a word or phrase that means the same thing.

Part: D

- 30. I try to find as many ways as I can to use my English.
- 31. I notice my English mistakes and use that information to help me do better.
- 32. I pay attention when someone is speaking English.
- 33. I try to find out how to be a better learner of English.
- 34. I plan my schedule so I will have enough time to study English.
- 35. I look for people I can talk to in English.
- 36. I look for opportunities to read as much as possible in English.
- 37. I have clear goals for improving my English skills.
- 38. I think about my progress in learning English.

Part: E

- 39. I try to relax whenever I feel afraid of using English.
- 40. I encourage myself to speak English even when I am afraid of making a mistake.
- 41. I give myself a reward or treat when I do well in English.
- 42. I notice if I am tense or nervous when I am studying or using English.
- 43. I write down my feelings in a language learning diary.
- 44. I talk to someone else about how I feel when I am learning English.

Part: F

- 45. If I do not understand something in English, I ask the other person to slow down or say it again.
- 46. I ask English speakers to correct me when I talk.
- 47. I practice English with other students.
- 48. I ask for help from English speakers.
- 49. I ask questions in English.
- 50. I try to learn about the culture of English speakers.

Worksheet for Answering and Scoring the (SILL)

1. The blanks (____) are numbered for each item on the SILL.
2. Write your response to each item (that is, write 1, 2, 3, 4, or 5) in each of the blanks.
3. Add up each column. Put the result on the line marked SUM.
4. Divide by the number under SUM to get the average for each column. Round this average off to the nearest tenth, as in 3.4
5. Figure out your overall average. To do this, add up all the SUMS for the different parts of the SILL. Then divide by 50.
6. When you have finished, your teacher will give you the Profile of Results. Copy your averages (for each part and for the whole SILL) from the Worksheet to the Profile.

SILL Worksheet (Continued)
Version 7.0 (ESL/EFL)
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Name: _____ Date: _____

Part A	Part B	Part C	Part D	Part E	Part F	Whole SILL
1. _____	10. _____	24. _____	30. _____	39. _____	45. _____	SUM A _____
2. _____	11. _____	25. _____	31. _____	40. _____	46. _____	SUM B _____
3. _____	12. _____	26. _____	32. _____	41. _____	47. _____	SUM C _____
4. _____	13. _____	27. _____	33. _____	42. _____	48. _____	SUM D _____
5. _____	14. _____	28. _____	34. _____	43. _____	49. _____	SUM E _____
6. _____	15. _____	29. _____	35. _____	44. _____	50. _____	SUM F _____
7. _____	16. _____		36. _____			
8. _____	17. _____		37. _____			
9. _____	18. _____		38. _____			
	19. _____					
	20. _____					
	21. _____					
	22. _____					
	23. _____					

Other strategies used:

SUM _____	SUM _____	SUM _____	SUM _____	SUM _____	SUM _____	SUM _____
÷9= _____	÷14= _____	÷6= _____	÷9= _____	÷6= _____	÷6= _____	÷50= _____
						(Overall Average)

Profile of Results on the Strategy Inventory for Language Learning (SILL)
Version 7.0 (ESL/EFL)
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You will receive this profile after you have completed the worksheet. This profile will show your SILL results. These results will tell you the kinds of strategies you use in learning English. There are no right or wrong answers.

To complete this profile, transfer your averages for each part of the SILL, and your overall average for the whole SILL. These averages are found on the worksheet.

Part	What Strategies are Covered	Your Average on This Part
A	Remembering more effectively	_____
B	Using all your mental processes	_____
C	Compensating for missing knowledge	_____
D	Organizing and evaluating your learning	_____
E	Managing your emotions	_____
F	Learning with others	_____
YOUR OVERALL AVERAGE		_____

SILL Profile of Results

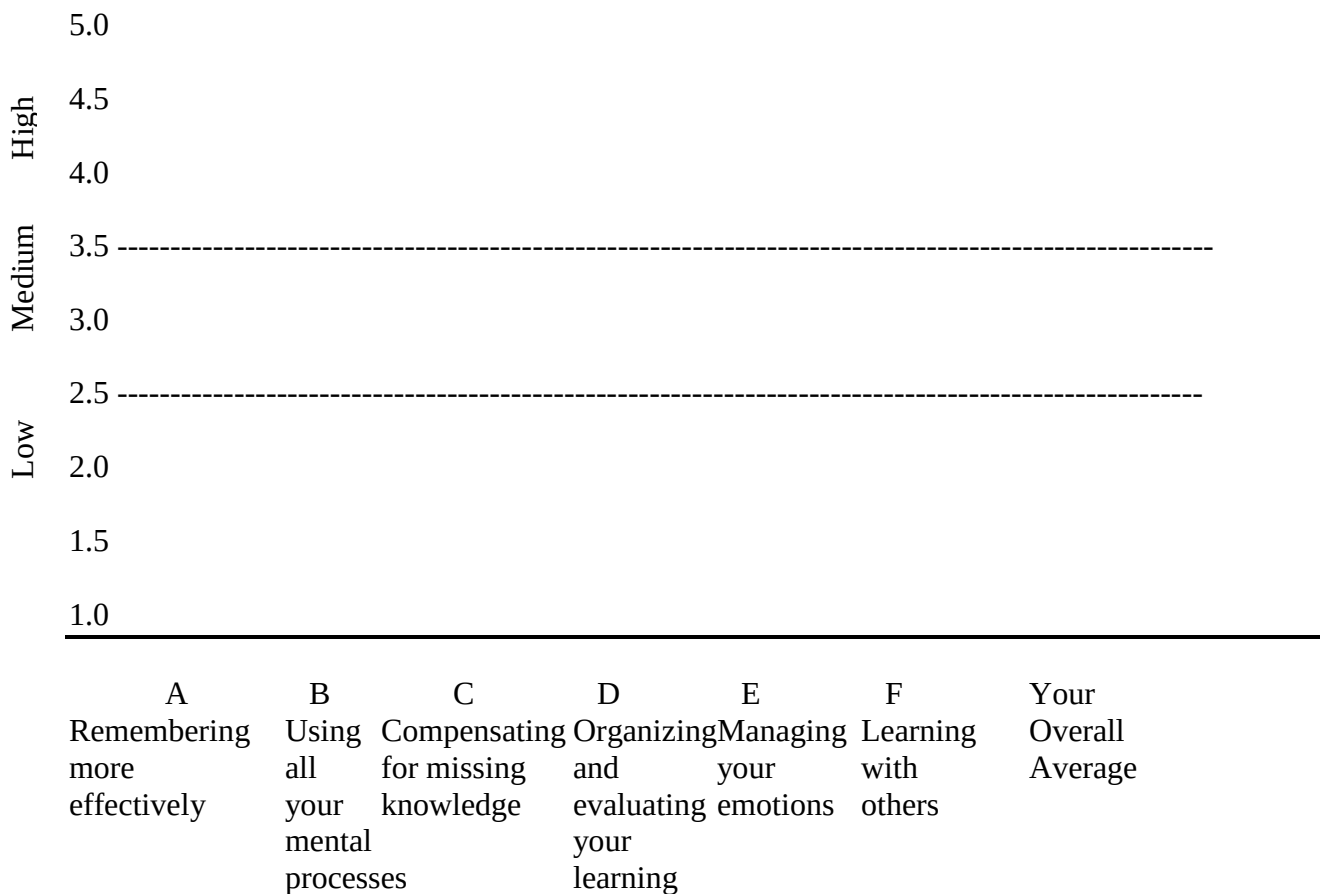
Version 7.0 (ESL/EFL)

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Key to Understanding Your Averages

High	Always or almost always used	4.5 to 5.0
	Usually used	3.5 to 4.4
Medium	Sometimes used	2.5 to 3.4
Low	Generally not used	1.5 to 2.4
	Never or almost never used	1.0 to 1.4

If you want, you can make a graph of your SILL averages. What does this graph tell you? Are you very high or very low on any part?



What These Averages Mean to You

The overall average tells how often you use strategies for learning English. Each part of the SILL represents a group of learning strategies. The averages for each part of the SILL show which groups of strategies you use the most for learning English.

The best use of strategies depends on your age, personality, and purpose for learning. If you have a very low average on one or more parts of the SILL, there may be some new strategies in these groups that you might want to use. Ask your teacher about these.

Appendix B

Arabic Version of SILL

إستبيان حول إستراتيجيات تعلم اللغة الإنجليزية
نموذج خاص لدارسي اللغة الإنجليزية للناطقين باللغات الأخرى

التعليمات:

هذا النموذج مخصص لدارسي اللغة الإنجليزية كلغة ثانية أو اجنبية. ستعرض عليك عبارات تتعلق بتعلم اللغة الإنجليزية يتعين عليك قراءتها ومن ثم إختار الرقم المناسب (١،٢،٣،٤،٥) الذي يعبر عن مدى تطابق هذه العبارة على حالتك.

١. لا تنطبق، أو نادر جداً ما تنطبق على حالتي.

٢. أحياناً، تنطبق على حالتي (أقل من نصف الأوقات)

٣. إلى حدٍ ما تنطبق على حالتي (تقريباً نصف الأوقات)

٤. غالباً، تنطبق على حالتي، (أكثر من نصف الأوقات)

٥. دائماً تنطبق على حالتي.

لا تنطبق، أو نادر جداً ما تنطبق على حالتي، تعني أن العبارة نادراً ما تكون صحيحة.

أحياناً، تنطبق على حالتي، تعني أن العبارة صحيحة أقل من نصف الأوقات

إلى حدٍ ما تنطبق على حالتي، تعني أن العبارة صحيحة تقريباً نصف الأوقات

غالباً، تنطبق على حالتي، تعني أن العبارة صحيحة أكثر من نصف الأوقات

دائماً تنطبق على حالتي، تعني أن العبارة صحيحة تقريباً بشكل دائم

أجب الى أي مدى تنطبق هذه العبارات على حالتك. تذكر أنه لا توجد هناك إجابة صحيحة أو خاطئة بين هذه العبارات، فلا تقم

بإختيار إجابة تعتقد بأنها الإجابة المثالية، ولا تختار إجابة تعكس مايفعله الآخرون. حاول الإجابة بسرعة وبعناية، سوف

يستغرق إكمال الإستبيان ما بين ٢٠ إلى -٣٠ دقيقة. إذا كان لديك إستفسارات، إسأل المدرس في الحال.

إستراتيجيات تعلم اللغة الإنجليزية

الجزء (أ)

١. أفكر في العلاقات بين ما أعرفه مسبقاً والأمور الجديدة التي أتعلّمها في اللغة الإنجليزية.
٢. استعمل الكلمات الإنجليزية الجديدة في جملة حتى أستطيع تذكرها.
٣. أربط ما بين طريقة نطق الكلمة الإنجليزية الجديدة مع صورة أو شكل الكلمة لتساعدني على تذكرها.
٤. أتذكر الكلمة الإنجليزية الجديدة من خلال تخيل صورة ذهنية لموقف يمكن أن تستخدم فيه هذه الكلمة.
٥. أستخدم التشابه الصوتي للكلمات (السجع) لتذكر الكلمات الإنجليزية الجديدة.
٦. أستخدم بطاقات لكتابة المفردات لكي أتذكر الكلمات الإنجليزية الجديدة.
٧. أقوم بتمثيل الكلمات الإنجليزية بشكل حركي.
٨. أراجع دروس اللغة الإنجليزية بكثرة.
٩. أتذكر الكلمات أو العبارات الإنجليزية الجديدة عن طريق تذكر موقعها في الصفحة أو على السبورة أو على اللافتات في الشارع.

الجزء (ب)

١٠. أقوم بتدوين أو كتابة الكلمات الإنجليزية الجديدة عدة مرات.
١١. أحاول أن أتحدث مثلما يتحدث أهل اللغة الإنجليزية الأصليين.
١٢. أتمرّن على نطق أصوات اللغة الإنجليزية.
١٣. أستخدم الكلمات الإنجليزية التي أعرفها في صيغ متنوعة.
١٤. أبادر بإجراء محادثات باللغة الإنجليزية.
١٥. أشاهد البرامج التلفزيونية أو الأفلام السينمائية باللغة الإنجليزية.
١٦. أقرأ الكتب الإنجليزية من أجل المتعة.
١٧. أكتب الملاحظات والرسائل والخطابات والتقارير باللغة الإنجليزية.
١٨. عند قراءتي لنص باللغة الإنجليزية، أقرأه للمرة الأولى بسرعة والثانية بتمعن وعناية.
١٩. أبحث عن كلمات في اللغة العربية مشابهة لتلك الكلمات الجديدة التي تعلمتها في اللغة الإنجليزية.
٢٠. أحاول البحث عن أنماط متشابهة في اللغة الإنجليزية.
٢١. أجد معنى الكلمة الإنجليزية عن طريق تقسيمها إلى أجزاء ليسهل عليّ فهمها.
٢٢. أحاول أن أتجنب ترجمة كل كلمة بكلمة.
٢٣. أقوم بتلخيص المعلومات التي أسمعها أو أقرأها باللغة الإنجليزية.

الجزء (ج)

٢٤. أحاول فهم الكلمات الإنجليزية التي لا أعرفها عن طريق تخمين معانيها.

٢٥. عندما لأجد الكلمة المناسبة أثناء التحدث باللغة الإنجليزية أستعيض عنها بالإشارة.
٢٦. أقوم بإستحداث كلمات جديدة إذا لم أكن أعرف الكلمات الصحيحة لذلك في اللغة الإنجليزية.
٢٧. أقوم بالقرأة باللغة الإنجليزية دون البحث عن معاني جميع الكلمات الجديدة.
٢٨. أحاول أن أخمن ماسيقوله الشخص الآخر أثناء الحديث باللغة الإنجليزية.
٢٩. إذا لم أستطع تذكر كلمة إنجليزية ما، أستخدام كلمة أو عبارة أخرى تحمل نفس المعنى.

الجزء (د)

٣٠. أحاول قدر الإمكان إيجاد طرق عدة لإستخدام لغتي الإنجليزية.
٣١. أحاول أن ألاحظ أخطائي في اللغة الإنجليزية، كي أتداركها وأحسن مستواي.
٣٢. أصغي بإنتباه عندما يتحدث شخص ما باللغة الإنجليزية.
٣٣. أحاول أن أجد مايجعلني متعلماً أفضل للغة الإنجليزية.
٣٤. أنظم جدولي ليكون لدي الوقت الكافي لدراسة اللغة الإنجليزية.
٣٥. أبحث عن أشخاص يُمكنني التحدث إليهم باللغة الإنجليزية.
٣٦. أبحث عن فرص للقرأة باللغة الإنجليزية قدر الإمكان.
٣٧. لدي أهداف واضحة لتحسين مهاراتي في اللغة الإنجليزية.
٣٨. أفكر بالتقدم الذي أحرزته في تعلم اللغة الإنجليزية.

الجزء (هـ)

٣٩. أحاول تهدئة نفسي كلما شعرت بالخوف من إستخدام اللغة الإنجليزية.
٤٠. أشجع نفسي على التحدث باللغة الإنجليزية حتى لو كنت خائفاً من أن أخطئ.
٤١. أكافئ نفسي كلما أحرزت تقدماً في اللغة الإنجليزية.
٤٢. ألاحظ نفسي عندما أتوتر أو أقلق خلال دراستي أو إستخدامي للغة الإنجليزية.
٤٣. أكون مشاعري في مذكرتي اليومية الخاصة بتعلم اللغة الإنجليزية.
٤٤. أتحدث إلى شخص آخر عن مشاعري عندما أتعلم اللغة الإنجليزية.

الجزء (و)

٤٥. إذا لم أفهم شيء ما قد قيل لي باللغة الإنجليزية، أطلب من الشخص الآخر أن يتحدث ببطء أو يعيد ماقاله ثانيةً.
٤٦. أطلب من متحدثي اللغة الإنجليزية الأصليين تصحيحي عندما أتحدث.
٤٧. أمارس اللغة الإنجليزية مع الطلاب الآخرين.
٤٨. أطلب المساعدة من متحدثي اللغة الإنجليزية الأصليين.
٤٩. أ طرح الأسئلة باللغة الإنجليزية.
٥٠. أحاول أن أتعلم عن ثقافة متحدثي اللغة الإنجليزية الأصليين.

Appendix C

Perceptual Learning Style Preference Questionnaire PLSPQ

Directions:

People learn in many different ways. For example, some people learn primarily with their eyes (visual learners) or with their ears (auditory learners); some people prefer to learn by experience and /or by “hands-on” tasks (kinesthetic or tactile learners); some people learn better when they work alone while others prefer to learn in groups.

This questionnaire has been designed to help you identify the way(s) you learn best – the way(s) you prefer to learn.

Read each statement on the following pages. Please respond to the statements AS THEY APPLY TO YOUR STUDY OF ENGLISH. Decide whether you agree or disagree with each statement. For example, if you strongly agree, mark:

Strongly agree	Agree	Undecided	Disagree	Strongly Disagree
X				

Please respond to each statement quickly, without too much thought. Try not to change your responses after you choose them. Please answer all the questions.

Perceptual Learning Style Preference Questionnaire

	SA	A	U	D	SD
1. When the teacher tells me the instructions I understand better.					
2. I prefer to learn by doing something in class.					
3. I get more work done when I work with others.					
4. I learn more when I study with a group.					
5. In class, I learn best when I work with others.					
6. I learn better by reading what the teacher writes on the chalkboard.					
7. When someone tells me how to do something in class, I learn it better.					
8. When I do things in class, I learn better.					
9. I remember things I have heard in class better than things I have read.					
10. When I read instructions, I remember them better.					
11. I learn more when I can make a model of something.					
12. I understand better when I read instructions.					
13. When I study alone, I remember things better.					
14. I learn more when I make something for a class project.					
15. I enjoy learning in class by doing experiments.					
16. I learn better when I make drawings as I study.					

	SA	A	U	D	SD
17. I learn better in class when the teacher gives a lecture.					
18. When I work alone, I learn better.					
19. I understand things better in class when I participate in role-playing.					
20. I learn better in class when I listen to someone.					
21. I enjoy working on an assignment with two or three classmates.					
22. When I build something, I remember what I have learned better.					
23. I prefer to study with others.					
24. I learn better by reading than by listening to someone.					
25. I enjoy making something for a class project.					
26. I learn best in class when I can participate in related activities.					
27. In class, I work better when I work alone.					
28. I prefer working on projects by myself.					
29. I learn more by reading textbooks than by listening to lectures.					
30. I prefer to work by myself.					

Self-Scoring Sheet for Perceptual Learning Style Preference Questionnaire

Instructions:

There are 5 questions for each learning category in this questionnaire. The questions are grouped below according to each learning style. Each question you answer has a numerical value:

SA	A	U	D	SD
5	4	3	2	1

Fill in the blanks below with the numerical value of each answer. For example, if you answered **Strongly Agree (SA)** for question 6 (a visual question), write a number 5 (SA) on the blank next to question 6 below.

Visual

6 - 5

When you have completed all the numerical values for **Visual**, add the numbers. Multiply the answer by 2, and put the total in the appropriate blank.

Follow this process for each of the learning style categories. When you are finished, look at the scale at the bottom of the page; it will help you determine your major learning style preference(s), your minor learning style preference(s), and those learning style(s) that are negligible.

Self-Scoring Sheet

VISUAL

6 - _____

10 - _____

12 - _____

24 - _____

29 - _____

Total _____ x 2 = _____(Score)

TACTILE

11 - _____

14 - _____

16 - _____

22 - _____

25 - _____

Total _____ x 2 = _____(Score)

AUDITORY

1 - _____

7 - _____

9 - _____

17 - _____

20 - _____

Total _____ x 2 = _____(Score)

GROUP

3 - _____

4 - _____

5 - _____

21 - _____

23 - _____

Total _____ x 2 = _____(Score)

KINESTHETIC

2 - _____

8 - _____

15 - _____

19 - _____

26 - _____

Total _____ x 2 = _____(Score)

INDIVIDUAL

13 - _____

18 - _____

27 - _____

28 - _____

30 - _____

Total _____ x 2 = _____(Score)

Major Learning Style Preference	38-50
Minor Learning Style Preference	25-37
Negligible	0-24

Explanation of Learning Style Preferences

Students learn in many different ways. The questionnaire you completed and scored showed which ways you prefer to learn English. In many cases, students' learning style preferences show how well students learn material in different situations.

The explanations of major learning style preferences below describe the characteristics of those learners. The descriptions will give you some information about ways in which you learn best.

VISUAL MAJOR LEARNING STYLE PREFERENCE

You learn well from *seeing words* in books, on the chalkboard, and in workbooks. You remember and understand information and instructions better if you read them. You don't need as much oral explanation as an auditory learner, and you can often learn alone, with a book. You should take notes of lectures and oral directions if you want to remember the information.

AUDITORY MAJOR LEARNING STYLE PREFERENCE

You learn from hearing words spoken and from oral explanations. You may remember information by reading aloud or moving your lips as you read, especially when you are learning new material. You benefit from hearing audio tapes, lectures, and class discussion. You benefit from making tapes to listen to, by teaching other students, and by conversing with your teacher.

KINESTHETIC MAJOR LEARNING STYLE PREFERENCE

You learn best by experience, by being involved physically in classroom experiences. You remember information well when you actively participate in activities, field trips, and role-playing in the classroom. A combination of stimuli—for example, an audio tape combined with an activity—will help you understand new material.

TACTILE MAJOR LEARNING STYLE PREFERENCE

You learn best when you have the opportunity to do “hands-on” experiences with materials. That is, working on experiments in a laboratory, handling and building models, and touching and working with materials provide you with the most successful learning situation. Writing notes or instructions can help you remember information, and physical involvement in class related activities may help you understand new information.

GROUP MAJOR LEARNING STYLE PREFERENCE

You learn more easily when you study with at least one other student, and you will be more successful completing work well when you work with others. You value group interaction and class work with other students, and you remember information better when you work with two or three classmates. The stimulation you receive from group work helps you learn and understand new information.

INDIVIDUAL MAJOR LEARNING STYLE PREFERENCE

You learn best when you work alone. You think better when you study alone, and you remember information you learn by yourself. You understand new material best when you learn it alone, and you make better progress in learning when you work by yourself.

MINOR LEARNING STYLES

In most case, minor learning styles indicate areas where you can function well as a learner. Usually a very successful learner can learn in several different ways.

NEGLECTIBLE LEARNING STYLES

Often, a negligible score indicates that you may have difficulty learning in that way. One solution may be to direct your learning to your stronger style. Another solution might be to try to work on some of the skills to strengthen your learning style in the negligible area.

(Reid, 1995, pp. 162-167)

(Adapted from the C.I.T.E. Learning Styles Instrument, Murdoch Teacher Center, Wichita, Kansas 67208. Used with permission.)

Appendix D

Arabic Version of PLSPQ

إستبيان حول الأنماط الحسية لتعلم اللغة الإنجليزية

التعليمات:

يتعلم الناس بطرق عديدة ومختلفة. فعلى سبيل المثال، يعتمد بعض الناس في تعلمهم بشكلٍ أساسي على عيونهم (حاسة الابصار) أو على آذانهم (حاسة السمع)، و بعض الناس يفضلون التعلم بالتجربة أو عند القيام بالمهام اليدوية المحسوسة، والبعض يفضل التعلم منفرداً لوحده بينما يفضل آخريين التعلم في مجموعات.

لقد صُمم هذا الإستبيان لمساعدتك في تحديد نمط وأسلوب التعلم المفضل لديك. من فضلك اقرأ كل فقرة وأجب على فقرات الإستبانة كما تراها في دراستك للغة الإنجليزية. أجب إذا كنت توافق أو لاتوافق على مدى إنطباق هذه العبارات على حالتك. مثال على طريقة الإجابة. إن كنت موافق بشدة على إحدى الأسئلة فضع إشارة X في الخانة التي تدل على ذلك، على النحو التالي:

لا أوافق بشدة	لا أوافق	لا أدري	أوافق	أوافق بشدة
				X

من فضلك، أجب على العبارات التالية بشكلٍ سريع وبدون الإستغراق في التفكير. حاول أن لا تغير إجاباتك بعد اختيارها. وأجب عن جميع الأسئلة.

الأنماط الحسية لتعلم اللغة الإنجليزية

١. عندما يخبرني المدرس بالتعليمات فإنني أفهم بشكل أفضل
٢. أفضل أن أتعلم بالقيام بعمل شيء في الفصل
٣. أنجز عمل أكثر حينما أعمل مع الآخرين
٤. أتعلم بشكل أفضل حينما أدرس مع مجموعة
٥. أتعلم بشكل أفضل حينما أعمل مع آخرين في الفصل
٦. أتعلم بشكل أفضل حينما أقرأ ما يكتبه المدرس على السبورة
٧. أتعلم بشكل أفضل حينما يخبرني أحدهم كيفية عمل الشيء في الفصل
٨. أتعلم بشكل أفضل حينما أعمل الأشياء داخل الفصل
٩. أتذكر الأشياء التي سمعتها في الفصل أفضل من الأشياء التي قرأتها
١٠. حينما أقرأ التعليمات فإنني أتذكرها بشكل أفضل
١١. أتعلم بشكل أفضل حينما أستطيع عمل نموذج للشيء الذي أتعلمه
١٢. أفهم بشكل أفضل حينما أقرأ التعليمات
١٣. حينما أذاكر بمفردي، فإنني أتذكر الأشياء بشكل أفضل
١٤. أتعلم أكثر من خلال عمل مشروع للصف
١٥. أستمتع بالتعلم في الفصل حينما أقوم بعمل تجارب
١٦. أتعلم بشكل أفضل حينما أقوم بعمل رسومات وأنا أدرس
١٧. أتعلم بشكل أفضل في الفصل حينما أستمع إلى المحاضرة
١٨. حينما أعمل بمفردي فإنني أتعلم بشكل أفضل
١٩. أفهم الأشياء بشكل أفضل داخل الصف حينما أشارك بلعب دور ما
٢٠. أتعلم بشكل أفضل في الفصل حينما أستمع لأحد ما
٢١. أستمتع بالعمل في الواجب حينما أشارك مع إثنين أو ثلاثة من زملائي بالصف
٢٢. حينما أقوم بتطبيق شيء ما، فإنني أتذكر ما تعلمته بشكل أفضل
٢٣. أفضل أن أدرس مع الآخرين
٢٤. أتعلم بشكل أفضل بالقراءة أكثر من الإستماع للآخرين
٢٥. أستمتع بعمل مشروع للفصل
٢٦. أفضل طريقة أتعلم بها حينما أشارك بنشاطات صفية متعلقة بدراستي
٢٧. أعمل بشكل أفضل حينما أعمل بمفردي داخل الصف
٢٨. أفضل عمل المشاريع (الواجبات) الدراسية بمفردي
٢٩. حينما أقرأ الكتاب المقرر فإنني أتعلم بصورة أفضل من الاستماع إلى المحاضرة
٣٠. أفضل أن أعمل بمفردي

Appendix E

Permission from Director of Yanbu English Language Institute YELI

Kingdom of Saudi Arabia
Royal Commission for Jubail and Yanbu
Royal Commission at Yanbu
Colleges & Institutes
English Language Center



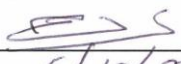
المملكة العربية السعودية
الهيئة الملكية للجبيل وينبع
الهيئة الملكية بنبع
الكلية والمعاهد
مركز اللغة الإنجليزية

To whom it may concern

This is to verify that Mr. Saeed Al-Kahtani has requested to utilize the English Language Center at Yanbu for completing his PhD thesis/research. He needs to use our institution as a site for data collection and to involve our students as research participants.

The management has no objection to Mr. Al-Kahtani's request.

English Language Center, Manager


6/10/2015
Dr. Othman Barnawi

DATE:	REF:	ATTACHMENTS:	المرفقات:	المرجع:	التاريخ:
LOCATION:	English Language Center - Yanbu			مركز اللغة الإنجليزية بنبع	مكان الإصدار:
REPLY TO:	P. O. Box 30436 Yanbu Al-Sinaiyah, Saudi Arabia			ص.ب: 30436 ينبع الصناعية - المملكة العربية السعودية	يعنوان الرد إلى:
TEL:	+966 (0) 4-3946169 / 351 / 189			+ 966 (0) 14 -3946186 \ 351 \ 189	هاتف:
FAX:	+966 (0) 4-3946224			+ 966 (0) 4-3946224	فاكس:
E-MAIL:	elcy@rcyci.edu.sa	PAGE No:	صفحة رقم:	elcy@rcyci.edu.sa	بريد إلكتروني:

Appendix F

Permission Letter from the Developer of SILL Questionnaire

Re: Permission to use SILL

10/6/15 4:02 PM

 Reply all |   Delete Junk |  ... 

Re: Permission to use SILL



Rebecca Oxford <rebeccaoxford@gmail.com>

To:  Alkahtani, Saeed Saleh; 

 Reply all | 

Mon 10/5/2015 7:28 PM

Inbox

 You replied on 10/6/2015 3:59 PM.

Dear Saeed,

You have my permission to use the SILL in your study. I wish you all the best!

Sincerely,
Dr. Oxford

*Rebecca L. Oxford, Ph.D.
Teacher, Author, and Evaluator*

Appendix G

Permission Letter of the Arabic Version of SILL

RE: Permission to use Arabic translation version of SILL



Sadiq Abdulwahed Ismail <ISadiq@uaeu.ac.ae>

To: ■ Alkahtani, Saeed Saleh; □ ism232@yahoo.com; □

□ Reply all | □

Fri 10/23/2015 2:46 PM

From: Sadiq Abdulwahed Ismail <ISadiq@uaeu.ac.ae>

Sent: Fri 10/23/2015 2:46 PM

To: ■ Alkahtani, Saeed Saleh; □ ism232@yahoo.com;

Inbox

You replied on 10/23/2015 2:57 PM.

□ | Action Items



You may use the questionnaire since you are going to give us credit as the owner of that work.
Please acknowledge our work if you want to use it for your research.

Good luck with your study

UAEU

Sadiq Abdulwahed Ahmed Ismail, Ph.D
Elementary Education Program Coordinator
Associate Professor of English Language Education
Department of Curriculum & Instruction
College of Education, UAE University
PO Box 15551, Al-Ain, UAE
T +971 3 7136258
Email: isadiq@uaeu.ac.ae

Appendix H

IRB Approval Letter

THE UNIVERSITY of TENNESSEE 
KNOXVILLE
Office of Research & Engagement
INSTITUTIONAL REVIEW BOARD (IRB)
1534 White Ave.
Knoxville, TN 37996-1529
865-974-7697
fax 865-974-7400

April 08, 2016

Saeed Saleh Alkahtani,
UTK - Educational Leadership & Policy Studies

Re: UTK IRB-15-02688-XM

Study Title: Language Learning Strategies among Saudi EFL College Students and their Relationship to Students' Perceptual Learning Style, Gender, Academic Major and Proficiency Level.

Dear Saeed Saleh Alkahtani:

The Administrative Section of the UTK Institutional Review Board (IRB) reviewed your application for the above referenced project. The IRB determined that your application is eligible for **exempt** review under 45 CFR 46 Category 2. In accord with 45 CFR 46.116(d), informed consent may be altered, with the cover statement used in lieu of an informed consent interview. The requirement to secure a signed consent form is waived under 45 CFR 46.117(c)(2). Willingness of the subject to participate will constitute adequate documentation of consent. Your application has been determined to comply with proper consideration for the rights and welfare of human subjects and the regulatory requirements for the protection of human subjects.

This letter constitutes full approval of your application (version 1.1), Guidelines for Survey Administration v 1.0, plspq v 1.0, sill v 1.0, and 2688 Consent Statement admin rev v 1.0, stamped approved by the IRB on 04/08/2016 for the above referenced study.

In the event that volunteers are to be recruited using solicitation materials, such as brochures, posters, web-based advertisements, etc., these materials must receive prior approval of the IRB.

Any alterations (revisions) in the protocol must be promptly submitted to and approved by the UTK Institutional Review Board prior to implementation of these revisions. You have individual responsibility for reporting to the Board in the event of unanticipated or serious adverse events and subject deaths.

Sincerely,



Colleen P. Gilrane, Ph.D.
Chair

VITA

Saeed Alkahtani comes from Saudi Arabia. He attended King Saud University in Saudi Arabia and received a Bachelor of Arts degree in Applied Linguistics from the English Department. He worked as a teaching assistant for 3 years in the English Department of Teachers College, Saudi Arabia. Saeed received a full scholarship from the Saudi government to pursue his graduate studies. He graduated from the Department of English Department at Ball State University in 2009 with a Master of Art degree in Teaching English to Speakers of Other Language (TESOL). Saeed then completed his Doctor of Philosophy degree in Education majoring in Literacy Studies with a specialization in ESL Education from The University of Tennessee in 2016. He also received a graduate certificate in Evaluation, Statistics and Measurement from the same university. During his doctoral program at The University of Tennessee, he had the opportunity to plan, conduct and present his research at professional conferences in the ESL arena. Saeed is a faculty member at Yanbu English Language Institute in the Royal Commission of Yanbu in Saudi Arabia.