

TOPIC FAMILIARITY AND LEXICAL INFERENTIAL STRATEGIES IN
ADVANCED EMIRATI ESL LEARNERS

A THESIS IN TEACHING ENGLISH TO SPEAKERS OF OTHER LANGUAGES

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ABSTRACT

The present study investigated the effect of background knowledge on lexical inferencing and which strategies advanced Emirati ESL learners used to help them infer the meanings of unfamiliar vocabulary items in context. The participants of the study were 30 advanced Emirati students of English aged between 14 and 15 years old at Al Ittihad Private School, Dubai, UAE. The data were quantitatively analyzed to examine the correct and incorrect number of inferences in two expository passages, one of which pertained to a more familiar topic and another to a less familiar topic. The post vocabulary questionnaire that included the students' self-reports was used to determine which strategies were used by the students to successfully infer the words.

The findings supported the hypothesis that the topic familiarity would have a positive impact on lexical inferencing. There were substantially more correct inferences when reading about a more familiar topic compared to a less familiar topic. Having appropriate background knowledge may have helped learners to more efficiently direct attention to input while reading the more familiar story. The local and global context cues that activated the readers' syntactic, semantic, and pragmatic knowledge in constructing the meaning of the text were held in working memory and must have constrained ongoing textual interpretations, and in turn, form-meaning

research paradigms, or that studied effects of topic familiarity and semantic richness on discrete sentence processing.

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CHAPTER ONE

INTRODUCTION

The common view of how languages are learnt is that you substitute the words in your first language for the corresponding words in the second language. Words are perceived as the building blocks upon which knowledge can be built. There was a period not so long ago when too much vocabulary learning was considered as a positively dangerous thing. However, emerging from this period, there are signs that a new era is upon us, in which the place of vocabulary in the language learning process is being restored to respectability. In the early decades of this century, vocabulary – teaching and research - were eminently respectable. At that time the leading language teaching methodologies involved a great deal of direct vocabulary teaching and learning. Teachers have become aware that students are disadvantaged in their academic studies, on account of the small size of their second language vocabularies. So the newly placed emphasis on communication and perceived needs of students have had the effect on elevating the importance of vocabulary in recent years.

L2 vocabulary development through reading is complex. It takes place through various component processes involved in text processing and comprehension. For example, it involves noticing that particular words are unfamiliar. Then, in the absence of dictionaries or human assistance, it requires inferring meaning, using context cues and linguistic and extra-linguistic knowledge (Faerch, Haastrup, & Phillipson, 1984). Readers must also attend to the connections between new lexical forms and their meanings and integrate the new linguistic information into their developing language system. This involves some unspecified degree of “elaborative rehearsal” - forming connections between the new lexical form and meaning and associating these with previous background knowledge (Baddeley, 1998).

Teaching vocabulary in second and foreign language classes has always been a challenge, even for brilliant teachers (Allen, 1983). Allen (1983) makes the astute point that although students and teachers alike often think of vocabulary words as something that can be simply translated and memorized, this is not always the case. Learning vocabulary, Allen insists, requires more than a dictionary. Vocabulary is a cultural phenomenon as well as a linguistic one, and she points out that students must

learn the social meanings of words in a second or foreign language, not just the equivalent word in their native language. Students' success in learning vocabulary depends to a certain extent on the number of senses used in the classroom. According to Allen (1983), one reason that students need encouragement through various sensory activities is that in most cases, second and foreign language students already have "satisfactory" words in their own language for the vocabulary they are trying to learn in class; therefore, ESL/EFL students need some sort of motivation to make them want to learn foreign words.

The importance of vocabulary proficiency in academic settings at high school level has gained momentum during the last few decades. It is widely recognized that scholastic success in many disciplines depends largely upon learners' vocabulary skills, making them one of the essential, determining factors in predicting learners' achievement. However despite its critical role, students often lack sufficient vocabulary to fulfill the rigorous demand of university study because they have not been well prepared in high school (Simpson & Rush, 2003). From my observation as a teacher in high school in the United Arab Emirates the challenges confronting high school students who learn English as a second language (ESL) seem to transcend those who are learning English as a foreign language (EFL). For these students, sufficient vocabulary skills in the second language become an indispensable matter for three reasons. For one thing, they begin to be introduced to content materials written in English, occasionally as early as grade 9. Second, they are expected to not only comprehend concepts in these materials literally as they used to in secondary school but also apply critical thinking while reading. Critical reading is definitely essential to ensure optimum intellectual development among this community of learners in high school, but their effort to construct content knowledge by reading critically is frequently hindered by insufficient vocabulary in the second language. Last but not least, adequate vocabulary knowledge is crucial in helping these students to successfully perform in their iBT TOEFL exam in grade 12 which will allow them to obtain the high school diploma and enter universities both locally and abroad.

Teaching Emirati students in high school for the past ten years, I've noticed that it is quite difficult for many of them to engage enthusiastically in the detailed discussions about complex concepts in various topics that arise in language classes

because of their limited vocabulary knowledge. This often leads to students' failure to follow along in the reading material at the required speed, or to achieve acceptable grades in exams, or to produce a well-written research paper. As a result, many are discouraged to continue learning and question the usefulness of studying in a second language when they encounter obstacles that arise from language deficiencies despite their intelligence, motivation, and efforts they expended in scholastic achievement.

Many researchers (Al-Hazemi, 2000; Amer, 2002; Mahmoud, 2002; Rababah, 2003; Simpson & Rush, 2003; Wahba, 1998; Zughoul, 1987; Zughoul & Taminian, 1984) agree that lack of vocabulary does not allow Arab students to communicate, read, and write effectively in English. They point out several reasons why most Arab students fail to achieve an appropriate level of proficiency in English. Some of them include lack of reading culture at home, in school, and in the wider community; poor standards in L1; lack of general as well as cultural schemata; low learner interest, attitude, and motivation; and outdated methods of teaching. Very frequently, it is the negative impact of these factors that is stressed. The present study focuses on one of the most problematic areas by looking at some factors involved in vocabulary development.

In the new TOEFL test, there is no longer a separate vocabulary test but a good command of vocabulary is generally deemed to underpin the ability to do well on all sections of TOEFL, including reading. Informally interviewing the students, I found that vocabulary caused the most problems for them.

My personal reports from the high school students that I've been teaching indicate that encountering unfamiliar words is still one of the significant obstacles in reading comprehension, probably due to insufficient vocabulary knowledge. This problem is not limited to Emirati students, however. For example, Nurweni and Read (1999) estimated Indonesian freshmen's English vocabulary size as merely 1226 words, which was much below the expected one of 4000 words. Such a lexical problem deserves considerable attention from educators because it has been a widely common understanding nowadays that the difficulty levels of vocabulary substantially affect the readability of reading texts and comprehension (Alderson, 2000a; Coady, 1993; Nation, 2001; Stoller & Grabe, 1993; Williams & Dallas, 1984), and abundant

research has also provided empirical support to this (Calvo, Estevez, & Dowens, 2003; Kusumarasyati, 1992; Lotto & de Groot, 1998; Martino & Hoffman, 2002;).

By informally interviewing my students to probe further their preferred solution to the vocabulary difficulties, I found that most of them usually resort to a dictionary to get the most appropriate meaning. Although a reasonable use of a dictionary may effectively aid word attack during reading (Summers, 1988), it is necessary to caution against the drawbacks of excessive reliance on it, such as decrease of motivation on the part of the learners and the inadequate, inaccurate or inappropriate meaning supplied in the dictionary. In addition to dictionary use, other vocabulary strategies can be employed, such as inferring the meaning of the unfamiliar words from surrounding context in the reading materials. However, this strategy does not seem to be used effectively. For example, a study that has been conducted in an Indonesian university (Kusumarasyati, 2004) demonstrated a significant lack of the EFL undergraduates' ability in intelligent guessing. Given 40 unfamiliar English words presented in context-rich reading passages, on average they failed to deduce the meaning of 50.15% of these words. They seemed hardly aware that pluralistic strategies—apart from seeking meaning in a dictionary—did exist to help them in coping with unfamiliar lexical units.

All readers are faced with unfamiliar lexical items to various extents. To overcome this lexical challenge, they perform a series of deliberate, conscious problem-solving actions called strategies (Paris, Lipson, & Wixson, 1983; Wenden & Rubin, 1987). Various types of lexical processing strategies have been identified up to the present. Goodman (1996), for instance, approaches this issue from the linguistic point of view. He divides language into three levels: graphophonics, lexico-grammar, and meaning/pragmatics. Consequently, the cues at these linguistic levels—graphophonic, syntactic, and semantic—are available to assist the readers in relating the letters (graphemes) and sounds (phones), and usually take the form of sounding out words. Syntactic cues entail the use of grammar and sentence structure to deduce the meaning of a particular unfamiliar word, whereas semantic cues means making use of the meaning of the words surrounding it.

Another problem that the students in my classes encounter while working on reading comprehension is lack of knowledge about the topic of the texts. The students

claimed that it was impossible for them to guess the meaning of the unknown words because they didn't understand what the passage was about. Even though many of them were able to locate context clues, they had trouble to interpret them due to the lack of background knowledge about the topic of the passage. They also mentioned that when they were not familiar with the topic of the passage they needed more time to answer the questions. Research reports that greater levels of background knowledge contribute to efficiency of attentional allocation to input during reading, enabling richer textual interpretations, and, in turn, superior memory performance (Ellis, 2001; Graesser, Singer, & Trabasso, 1994; Kintsch, 1998; Nassaji, 2002; Robinson, 2003; Rumelhart, 1983; Schank & Abelson, 1977). Research within a lexical inferencing paradigm has observed strategies and knowledge sources that L2 learners use to infer word meanings. Studies with advanced and intermediate ESL (Chern, 1993; Nassaji, 2003) and beginning EFL learners (Haastrup, 1989) illustrated that learners of all levels relied on background knowledge to guess word meanings during think-aloud protocols. However, Rott (2000), also using a think-aloud task, found that few intermediate learners of German used background knowledge during inferencing. Similarly, De Bot, Paribakht, & Wesche (1997) and Paribakht and Wesche (1999) reported that intermediate ESL learners appealed less frequently to background knowledge than to grammatical knowledge during a retrospective think-aloud task. In a cross-sectional study, Lee and Wolf (1997) observed that native Spanish speakers used background knowledge the most to infer meaning, followed by the advanced, intermediate, and then beginning learners of Spanish during a retrospective think-aloud task.

In the present study, it is hypothesized that problems facing ESL Emirati learners regarding lexical inferencing involve lack of background knowledge about the topic of the passages and guessing strategies that Emirati students employ. To test this hypothesis, the study investigates two research questions:

1. What is the effect of topic familiarity on lexical inferencing?
2. What inferential strategies do Emirati students use to guess meanings of unfamiliar words?

Statement of the Problem

Most students in my class realize the crucial role of vocabulary in learning a second language since it is one element that links the four skills of speaking, listening, reading, and writing all together. Through informal discussion I learnt that they strongly believed that vocabulary “would help them get a good score on the TOEFL.” However, my observations suggest that most Emirati students learn vocabulary passively due to several factors. First, they consider the teacher's explanation of meaning or definition, pronunciation, spelling, and grammatical functions boring because as language learners they are usually passive receivers. The students believe they have nothing to do in a vocabulary learning session but to listen to their teacher. Second, students only think of vocabulary learning as knowing the primary meaning of new words. Therefore, they ignore all other functions of words. Third, students usually only acquire new vocabulary through new words in their textbooks or when given by teachers during classroom lessons. For example, learners find many new words in a text and then ask the teacher to explain the meanings and usages. Fourth, many Emirati learners do not want to take risks in applying what they have learnt. Students may recognize a word in a written or spoken form and think that they already "know the word," but they may not be able to use that word properly in different contexts or pronounce it correctly.

Despite such a grave picture, there is always hope. In each class, I find an exception of a small group of outstanding students who adopt patience and perseverance to improve and master English. However, very often these students get discouraged by their low performance in major school exams.

An area of weakness that affects local ESL students' performance in comprehension examinations is in their inability to deal with unfamiliar vocabulary in the reading comprehension section of the exam. This is a particular cause for concern in Al Ittihad School, as continual assessment marks and semester marks are vital for progression to the next academic year level. It is therefore crucial that students perform and score well in the comprehension section of the test. It is in the area of vocabulary that students often have a real problem in working out the meaning of a particular word and this can have a negative impact on understating the passage. The students complain that they are not able to infer properly the meaning of the

unfamiliar words even though they managed to answer the comprehension questions correctly.

Although these students have a good understanding of English since their overall performance in English ranges from 80% to 95 %, they still can't guess the unfamiliar words in the context correctly. Based on my experience and observation as a teacher, I believe that one aspect that might prevent advanced Emirati learners from inferring the meaning of vocabulary items is lack of background knowledge about the topic of the text they are reading, since the textbooks used in the classroom by and large represent Western culture, traditions, habits, and life experiences. Emirati students simply do not have enough general knowledge or similar life experiences to help them to build necessary schemata.

Thesis Outline

The thesis is organized into five parts. Chapter 1 introduces the research area in its context, the characteristics and lexical needs of advanced Arab ESL learners at Al Ittihad Private School, Dubai, UAE, the problem, and the objectives of the study, as well as organization of the thesis. Chapter 2 describes different approaches to vocabulary strategies, lexical inferencing, and factors affecting successful guesses in context. A detailed overview of contemporary approaches to lexical inferencing are discussed. Furthermore, the strong correlation between background knowledge, topic familiarity in particular, and successful inferencing is highlighted. Chapter 3 identifies the research methodology and the proposed framework for data analysis. Chapter 4 provides samples of data analyses and discusses the findings. Chapter 5 highlights and discusses the pedagogical implications drawn from the study, the conclusion of the research findings, a summary of the limitations, and suggestions for further research . Detailed samples and tables pertaining to the findings are given in the appendices.

CHAPTER TWO

REVIEW OF THE LITERATURE

The Importance of Vocabulary Teaching and Learning

Despite the fact that vocabulary is central to language and crucially important for second language learners, lexis has been until recently the Cinderella of the field of Second Language Acquisition (SLA) research. This stands in sharp contrast to the fact that lexical errors are the most common among second language (L2) learners, as evidence from large error corpora suggests (Meara, 1984). Moreover, not only do vocabulary errors seem to be the most serious ones for students, but the most disruptive ones for native speakers in terms of interpretation. As Gass (1988) observes, grammatical errors still result in understandable structures, whereas vocabulary errors may interfere with communication. The centrality of the lexicon to both acquisition and use is expressed in the following quote by Hatch (1983):

:...it is the lexical level that adult second language learners claim is most important. When our first goal is communication, when we have little of the new language at our command, it is the lexicon that is crucial...The words...will make basic communication possible (p. 74).

Vocabulary learning is central to language acquisition, whether first, second or foreign, and as such in recent years vocabulary acquisition has become a significant issue in L2 research. Vocabulary learning is seen as an integral area of language teaching by linguistic researchers. "Words are the basic building blocks of language, the units of meaning from which larger structures such as sentences, paragraphs, and whole texts are formed" (Read, 2000). Effective vocabulary acquisition is particularly important for foreign language (EFL) and second language (ESL) learners of English who frequently possess impoverished lexicons despite years of formal study (Hunt & Beglar, 2005). Today's language teachers and researchers have realized the important role of vocabulary in different pedagogical tasks. There is no doubt that virtually all second language learners and their teachers are well aware of the fact that learning a second language involves the learning of large numbers of words (Avila & Sadoski, 1996; Laufer & Hulstijn, 2001), but how to accomplish this task is often of considerable concern to them (Ott, Blake, & Butler, 1976), and how vocabulary is acquired and what the most efficient means are to promote effective acquisition have

been of great significance in second language acquisition research (De La Fuente, 2002).

Although researchers and language teachers are becoming more and more convinced that vocabulary knowledge constitutes an essential part of competence in a second or foreign language, no comprehensive theories have been proposed up to now that try to explain foreign language growth in terms of lexical development (Bogaards, 2001). Although the amount of empirical research on vocabulary acquisition is increasing, consensus is lacking over issues such as the conceptualization of the process by which vocabulary acquisition occurs, the importance of context use for acquiring vocabulary, and the extent to which students develop specific strategies for vocabulary learning during their language studies. According to Newton (2001), encounters with unfamiliar vocabulary are among the obvious and inevitable challenges faced by language learners using the target language in communication outside the classroom, whether for work; travel, or recreation, when using the media, or in academic contexts. Lexical acquisition is also of paramount importance in the educational domain, where studies such as Anderson and Freebody (1981) have demonstrated that lexical development and reading comprehension are strongly related.

The nature of lexical knowledge, that is the question of what it actually means for a language learner to “know” a word, lies at the very heart of L2 vocabulary acquisition. As Laufer and Paribakht (1998, p. 366) observe, “no clear and unequivocal consensus exists as to the nature of lexical knowledge”, apart from the general agreement that it should be construed as some sort of continuum of several levels/dimensions rather than an all-or-nothing phenomenon. The common distinction between knowledge and usage (or competence and performance) is a potential source for terminological confusion. For example, Meara (1978; 1982), focusing on language use, describes this knowledge in behavioural terms as the ability to react to a word, whereas Henriksen (1999, p. 306) argues for a competence-based description.

The following sections attempt to shed some light on the issues involved in vocabulary ability and word knowledge. It should be kept in mind, however, that most of the literature below is of a mainly descriptive nature that does not tell us much about how such knowledge is acquired.

Breadth and Depth of Vocabulary Knowledge

Lexical knowledge can be looked at from various dimensions, notably a quantitative and qualitative angle. In the former, breadth of knowledge is concerned with the question “How much vocabulary does a second language learner need?” (Nation, 2001, 2006; Nation & Waring, 1997, 2004; Waring & Takaki, 2003). However, “knowing a word requires more than just familiarity with its meaning and form” (Schmitt & McCarthy, 1997, p. 4), and these kinds of lexical knowledge that are deemed necessary to master a word is the topic of the latter, depth of knowledge.

Breadth of Vocabulary Knowledge

Research in this area attempts to answer the question how many words an L2 learner needs? It will come as no great surprise that the expectation is definitely less than the number of words a native speaker knows. (Nation, 2001, 2006; Nation & Waring, 1997). It is also clear that answers to these questions can only be rough estimates which belie considerable individual differences. Addressing the last question first, *Webster's Third* has around 54,000 word families; Nagy and Anderson (1984) found that printed school English contains about 88,500 word families (wf) with more than 100,000 distinct meanings. This is obviously a learning goal unattainable for L2 learners (and even most native speakers, for that matter). As regards the number of words native speakers know, there are several studies of vocabulary size giving quite diverse results. A conservative rule of thumb given by Nation (2001) and Nation and Waring (1997, 2004) states that university graduates master ca. 20,000 wfs, having added about 1,000 wfs per year up to that point. Taking frequency into account, Francis and Kucera (1982) have shown that with a vocabulary size of about 2,000, a learner knows 80% in a text. Researchers such as Laufer (1988b) and Liu and Nation (1985) have demonstrated that this ratio is insufficient for successful guessing of unknown words or reasonable text comprehension, identifying 95% as the minimum ratio to achieve good comprehension of a text.

A number of research studies in L2 learning (Koda, 1989; Laufer, 1989, 1992, 1996; West, Stanovich, & Mitchell, 1993) have investigated the relationship between vocabulary size and academic reading comprehension. The results revealed that there

is a strong relationship between the learner's breadth of vocabulary knowledge and his or her level of reading comprehension. Laufer (1989, 1992), Liu and Nation (1985), and Waring and Nation (2004) have shown that unless there is at least 95% or higher coverage rate (the percentage of the vocabulary that is known by the reader) of the running words in a text, the probability of successful guessing of unknown words will be severely reduced. Hu and Nation (2000) suggest it should be at least 98%. This was determined by using several texts with different unknown word rates and by measuring adequate comprehension.

With these results in mind, Nation proposes to focus on the ca. 3,000 high frequency words as an immediate priority. The classic list of high frequency words is the 2,000 *General Service List* (West, 1953), whose usefulness for modern-day language teaching purposes has been doubted because of its age (Richards, 1974) and non-optimal selection (Engels, 1968).

Depth of Vocabulary Knowledge

More interesting from an L2 vocabulary acquisition research point of view than mere quantitative aspects of lexical knowledge is the concept of depth of word knowledge, described by Read (1993) as “the quality of the learner’s vocabulary knowledge” (p. 357). Many researchers have stressed the complex and dynamic nature of this knowledge; Gass (1988) describes various distinctions to be taken into account, for example reception vs production and knowledge vs control.

The first and oft-cited attempt to list the various types of lexical knowledge is usually attributed to Richards (1976), who was more concerned with applicability to pedagogical practice than the underlying theoretical issues per se. The main assumptions of Richards’s “Vocabulary Knowledge Framework” are as follows:

Frequency: Knowledge about the degree of probability of encountering that word in speech or print

Register: Knowledge on limitations on use according to function and situation

Position: Knowledge about syntactic behaviour associated with the word

Form: Knowledge about underlying form and derivatives (morphological processes)

Associations: Knowledge about network of associations between that word

and other words in the language

Meaning-Concept: Knowledge about the semantic value of a word

Meaning-Associations: Knowledge about the different meanings associated with the word

Nation (1990) elaborated on Richards's list by adding a receptive/productive distinction. His main categories are form (spoken/written), position (grammatical patterns/collocations), function (frequency/appropriateness), and meaning (concept/associations), each of which is described in terms of receptive and productive aspects. The taxonomy proposed by Laufer (1990a), while by and large similar, is slightly different from Richards's in that she dispenses with "frequency," conflates Richards's three meaning-related components (including "register") into a single "meaning" component (referential, affective and pragmatic), and adds components about morphological knowledge ("word structure") and common collocations. Given that the thrust of Richards's paper was explicitly pedagogical, it didn't provide a theoretical model of lexical competence, or even systematic account of word knowledge. It is clear that both Richards's and Nation's list are purely descriptive, falling far short of yielding a theoretical construct, or model, of lexical competence.

According to Schmitt and Meara (1997), what is needed (and lacking from these lists) is an exploration of links and interrelationships between the different kinds of word knowledge. In a similar vein, Henriksen's (1999) main criticism is that lists such as Richards's lack the necessary precision and tend to lump together knowledge components and learning processes, failing to address the "nature of and interrelationships among various aspects of lexical competence"(p. 304). Meara (1996) draws attention to various shortcomings of Richards's list, arguing that it boils down to "a short review of current themes in linguistics which might be relevant to vocabulary teaching", focusing merely on descriptive linguistic concerns while neglecting psycholinguistic or pedagogical ones. First, Meara notes the "odd ordering" of Richards's knowledge components, where frequency appears high but associated meanings low in the list. More importantly, he identifies various gaps, such as the problem of active vs. passive vocabulary, vocabulary growth/attrition, and the conditions of acquisition. Finally, Meara notes that each assumption actually contains

quite a few hidden problems because the “real” assumptions are not acknowledged as such by Richards.

On a more fundamental level, Meara questions the word-centered nature of Richards’s approach, noting that “if we are dealing with a ‘word’ which has many different meanings, then the number of basic questions gets very large very quickly.” Schmitt and Meara (1997), noting the impossibility “to design a study that could capture all of the word knowledge categories”, call for an exploration and better understanding of links and interrelationships between different kinds of word knowledge, which they see as missing from traditional accounts.

Receptive vs. Productive Vocabulary

The validity of the receptive/productive distinction as a way of distinguishing types of knowledge in most cases depends on its resemblance to the distinction between the “receptive” skills of listening and reading and the “productive” skills of speaking and writing (Crow, 1986). Receptive carries the idea that we receive language input from others through listening or reading and try to comprehend it. Productive knowledge is needed when we produce language forms by speaking and writing to convey messages to others. Like most terminology, receptive and productive knowledge are not completely suitable because there are productive features in the receptive skills – when listening and reading we produce meaning. The terms “passive” (for listening and reading) and “active” (for speaking and writing) are sometimes used as synonyms for receptive and productive (Corson, 1995; Laufer, 1998; Meara, 1990). However, some object to these terms as they do not see listening and reading as having some of the other characteristics which can be attached to the term passive (Crow, 1986). Nation (1990; 2001) sees receptive as including productive plus “unmotivated” vocabulary, which consists of (a) words not known well enough to be used productively, and (b) words not needed in daily communication.

Corson (1995) uses the terms active and passive to refer to productive and receptive vocabularies. Passive vocabulary, according to Corson, includes the active vocabulary and three other kinds of vocabulary – words that are only partly known, low-frequency words not readily available for use, and words that are avoided in

active use. These three kinds of vocabulary overlap to some degree. Corson's description of active and passive vocabulary is strongly based on the idea of use and not solely on degrees of knowledge. Some passive vocabulary may be very well known but never used and therefore never active. Some people may be able to curse and swear but never do. From Corson's viewpoint, the terms active and passive are more suitable than receptive and productive. He occasionally uses the term unmotivated to refer to some of the passive vocabulary.

Corson (1995) argues that for some people the Graeco-Latin vocabulary of English may be passive for several reasons. Firstly, Graeco-Latin words are generally low-frequency words and thus require more mental activation for use. Secondly, the morphological structure of Graeco-Latin words may be opaque for some learners, thus reducing the number of points of activation for each of these words. Thirdly, some learners because of their social background get little opportunity to become familiar with the rules of use of the words. Corson's idea of the lexical bar (barrier) is thus important for the receptive/productive distinction. The lexical bar represents a gulf between the everyday meaning systems and the high status meaning systems created by the introduction of an academic culture of literacy. This is a barrier that everyone has to cross at some stage in their lives, if they are to become "successful candidates" in conventional forms of education. The barrier is the result of lack of access to the academic meaning systems strongly reinforced by the morphological strangeness of Graeco-Latin words. For some learners much vocabulary remains at best receptive because of the lexical bar.

A commonly held notion is that productive knowledge is "more elusive, more difficult to learn, and possibly more fragile" (Waring, 1997). Another typical assumption is that receptive knowledge always precedes productive knowledge, and that accordingly a word is either receptively or receptively and productively known. However, there is agreement in the literature that this picture is rather too simplistic: the boundaries between receptive knowledge and productive knowledge are not fixed, and each of the different types of word knowledge is arguably known to different receptive and productive degrees. This led many researchers to invoke the notion of a bi-polar continuum of word knowledge ranging from receptive to productive.

No clear picture emerges from the literature as regards the distance, precedence and passage between receptive and productive, and their respective sizes. It seems clear that (a) the passage from receptive to productive involves some overlapping phases, (b) the relationship between receptive and productive is not static, (c) productive requires a “more complete set of information” (Melka, 1997), (d) receptive usually precedes productive, and (e) the distance in size between receptive and productive diminishes over learning time but receptive remains larger. Melka (1997) suggests that the distance between receptive and productive should be interpreted as numerous degrees of word familiarity (which she regards as closely related to word knowledge). Of course, the crucial question here would be: at what point is familiarity such that knowledge is no longer receptive but productive?

As for the possible shape of the continuum, Melka tentatively proposes the following stages:

1. Imitation (or reproduction without assimilation)
2. Comprehension
3. Reproduction with assimilation
4. Production

In a similar vein, Laufer (1991) suggests the ability to understand what a word means in a given context and the free use of a word in an expression as the respective polar points. This concept of a continuum, although the majority view in the literature, is not unchallenged.

Melka (1997) argues that the continuum basically involves the following assumptions: (a) receptive usually precedes productive, (b) the gap between receptive and productive is not large and subject to variation, and (c) receptive and productive are not qualitatively different and rely on the same underlying base. Assumption (c) in particular, i.e., the notion of a unique underlying system used in two different ways, remains disputed. A minority view (Clark, 1993; Meara, 1990) argues for two dependent, but separate and qualitatively different receptive and productive systems. In this view, receptive necessarily precedes productive, the gap between receptive and productive is large and a principled one, and receptive and productive do not rely on identical information but are asymmetrical, different systems depending on different mental processes. Meara (1990) only accepts the notion of a continuum for

productive, while insisting that receptive is qualitatively different. He illustrates his point with a hypothetical graph structure (see Figure 1), where each word is represented as a node, and each (directed) association between words as an arc.

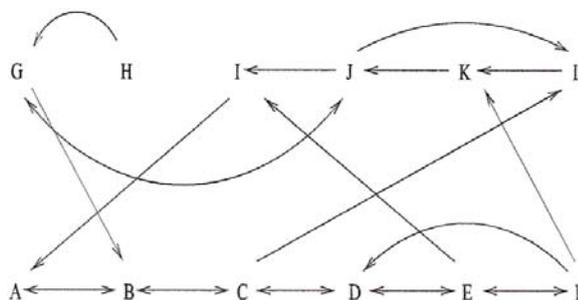


Figure 1: Meara's hypothetical association network (adapted from Meara, 1990).

Meara points out that in this illustration, node H, while clearly part of the overall network, is qualitatively different from all the other nodes in that it only has arcs pointing away from it, i.e., is inaccessible from anywhere else. Thus H would correspond to a receptive item, which only responds to external stimuli, whereas productive words can be activated by other words. Meara notes an interesting implication of this for teaching methodology: instead of trying to practice receptive items as much as possible, which may only serve to reinforce already existing links, a more effective strategy would be to stress associations from already (productively) known words to new or receptive items.

To sum up, there is no complete, universally agreed upon description of receptive and productive as yet, but it seems clear that it would have to account for the apparent lack of a neat divide between receptive and productive aspects of word knowledge.

Processes of Vocabulary Acquisition - Implicit vs. Explicit Learning

Far from being uniform and monolithic, L2 vocabulary acquisition is a very complex phenomenon involving several different learning processes (Ellis, 1995). The most commonly drawn and pervasive distinction is that between implicit and explicit learning. Implicit (or incidental) learning is often defined in negative terms, e.g., as “accidental learning of information without the intention of remembering that information” (Hulstijn, Hollande, & Greidanus, 1996). It would be dangerous to infer

from this, however, that incidental learning is a completely “subconscious” process. Huckin and Coady (1999), for example, point out that implicit learning cannot be totally incidental as at least some attention must be paid to the input by the learner. Explicit learning, on the other hand, refers to the application of vocabulary learning strategies on the part of the learner, which are discussed in greater detail below.

The extreme positions regarding vocabulary acquisition processes are expressed by the Implicit Vocabulary Learning Hypothesis and Explicit Vocabulary Learning Hypothesis, respectively. The former has its roots in Krashen’s (1989) seminal Input Hypothesis and states that meanings of new words are acquired subconsciously as a result of repeated exposures in a range of contexts, where the conscious focus is not on form, but on the message. The latter holds that the employment of a range of vocabulary learning strategies can greatly facilitate and enhance vocabulary acquisition. In this view, learners are seen as active processors of information.

Ellis (1995) contends that both hypotheses are true, but apply to different aspects of vocabulary acquisition. According to him, the Implicit Vocabulary Learning Hypothesis holds true for simple pattern recognition of surface forms, i.e., “shallow processing” of input/output. Explicit learning, on the other hand, is necessary for the mapping of those surface input/output forms to their corresponding semantic/conceptual representation - in other words, the recognition of word meanings via “deep processing”.

Input, Interaction, and Negotiation of Meaning

Krashen’s Input Hypothesis has been extended in the form of the Interaction Hypothesis. Input refers to the linguistic forms used, interaction to the function served by those forms (Long, 1981). The basic claim of the Interaction Hypothesis is that L2 acquisition is promoted if learners have to solve communication problems by means of conversational modification (Ellis, Tanaka & Yamazaki, 1994). Similar to the Implicit and Explicit Vocabulary Learning Hypotheses, the Interaction Hypothesis comes in a strong and a weak version: the former claims that interactional adjustments are necessary and sufficient for acquisition to occur, the latter just postulates they are necessary.

Strictly speaking, the Interaction Hypothesis consists of two different parts (see Figure 2). Part (a) claims that modifying conversational structure while negotiating solutions to communication problems helps make input comprehensible to learners. Part (b) has its roots in the Input Hypothesis: in addition to simplified input and contextual support, negotiated interaction has been found to be equally important (Long, 1981).

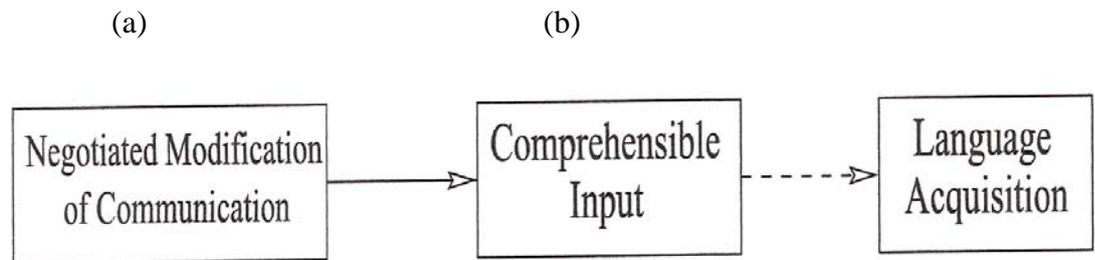


Figure 2: Model of Interactive Hypothesis (adapted from Ellis et al., 1994)

Part (a), i.e. the claim that meaning negotiation promotes comprehension, is strongly supported by empirical evidence. As reported by Ellis et al. (1994) in two studies that have challenged the purported relationship between negotiated interaction and comprehension on the grounds that is quantity rather than quality of input that is important, therefore elaborate input may not always aid comprehension; part (b) is much less secure without direct empirical support. One of the few studies addressing this gap is (Ellis et al., 1994), who have been able to show that interactionally modified input facilitates vocabulary acquisition at least in the area of concrete nouns. A confirmation of this finding for other parts of vocabulary acquisition, as well as clarifications as to what exactly makes this type of input beneficial for acquisition, remain as questions to be tackled by further research.

Depth-of-Processing (DOP) Hypothesis

As mentioned earlier, incidental and explicit learning are connected to notions of “deep” and “shallow” processing, terms that are rooted in memory research in cognitive psychology. The DOP hypothesis (DOPH) was proposed by Craik and Lockhart (1972) to question the then prevailing notion of multi-store memory models. In view of the numerous modifications that the DOPH has undergone since its introduction in 1972, one has to keep in mind that Craik and Lockhart (1972) never

intended it as a full-blown memory theory, but as a conceptual framework in need of fleshing out. The central idea of the DOPH is that “deeper” analysis of a stimulus leads to a more persistent memory trace, with “depth” referring to a greater degree of semantic involvement. For instance, the task of copying words or answering questions about their typescript constitutes a very shallow type of processing. The task of crossing out vowels, or comparing words in terms of rhymes, requires a slightly deeper level of processing. The task of judging the degree to which a word is an instance of a given concept is an example of “deep” semantic processing. In a later article, Craik (1979) acknowledges that the term “depth” allows for quite a few different, only loosely related interpretations, such as: greater expertise, more effort or processing capacity expended, and order of processing or conscious access.

Since its introduction the DOPH has proved to be extremely influential, despite being subjected to various criticisms and modifications. Subsequent research (Craik & Tulving, 1975) has shown that the kind and amount of elaboration, as well as distinctiveness of processing, are important too. Depth, elaboration, and distinctiveness are related, but not synonymous notions. Both depth and elaboration refer to processing (operations during encoding), distinctiveness refers to the result of these operations. Depth differs from elaboration in that it refers to qualitative changes in processing, elaboration to greater processing of the same type (Craik, 1979). Whether the notion of depth is rendered superfluous by the two other terms or complemented or explicated by them, is still debated.

One of the main criticisms leveled at the DOPH has been that DOP is such a loose and general concept that operationalising it, and ultimately falsifying DOPH, is well-nigh impossible. In particular, there seems to be a danger of circularity which arises from the purported lack of an independent index of DOP: well-remembered events must have been deeply processed because they are well-remembered (Craik & Tulving, 1975, Lockhart & Craik, 1990). In response to these criticisms, Lockhart and Craik (1990) contend that the “danger of circularity” - argument is only partly justified as it arises only in relation to within-domain differences of phonemic and semantic encoding. By the same token, they concede that their original notion of DOP is too simple a term when further processing within a given domain is involved. As regards the lack of an independent DOP index, Johnson-Laird, Gibbs, & De Mowbray

(1978) have attempted to operationalise the term as the number of components a word has in common with a target category that have to be checked by the subject, i.e., the number of decisions that have to be made. On the other hand, Laufer and Hill (2000), investigating the relationship between look-up patterns in a CALL dictionary and retention, found that the number of look-up selections of the learners did not correlate well with retention. Accessing a greater variety of information, i.e. the quality of attention, seemed to be more important than the number (quantity) of look-ups. Laufer and Hill (2000) discovered a beneficial effect of a combined L1 and L2 lookup, but remain on the fence whether this is due to (a) richness in semantic encoding, (b) prolonged attention, or (c) both.

Another reservation against Craik and Lockhart's original proposal concerns the implied claim that minimal semantic analysis is necessarily superior to maximal structural analysis. Laufer and Hill (2000), for instance, note that just one encounter with a new word - however deep it may be - is not likely to lead to long-term memory retention, yet it remains unclear just how many encounters are necessary. There is substantial empirical evidence (Kolers & Ostry, 1974) to demonstrate that repeated "shallow" operations can have quite impressive facilitative memory effects. Craik himself admits that the relationship between DOP and subsequent memory performance is more complex than he had originally envisaged, and concedes that "extensive 'sensory' analysis can lead to higher levels of retention than minimal semantic analysis" (Craik, 1979, p. 458).

The DOPH can provide a potential framework for comparing different strategies of (explicit) vocabulary learning (Brown & Perry, 1991). As examples of deep processing strategies, Ellis (1995) mentions imagery mediation, semantic mediation and metalinguistic strategies for inferencing. The question whether DOP also affects implicit/incidental learning is answered differently in the literature; a closer look reveals those differences to be due to divergent notions of the term incidental learning. To wit, Ellis (1995) claims that incidental learning is unaffected by DOP, whereas Hulstijn et al. (1996) take the finding that inferred meanings are remembered slightly better than given ones to imply that deep elaboration positively affects incidental learning. This apparent contradiction resolves itself when one considers that Ellis restricts incidental learning to refer to the shallow activity of

pattern recognition of surface forms, as opposed to Hulstijn's view of inferring meanings (this would fall under "explicit learning" in Ellis's terms).

There have not been many attempts to verify the DOPH using empirical evidence for L2 vocabulary acquisition. This may be due to the above mentioned difficulties tied to operationalising DOP. One of the most notable attempts in this direction was made by Hulstijn (1992), who found that inferred word meanings are retained better than those obtained through the use of marginal glosses. Of course, a full-scale verification attempt of the DOPH for L2 vocabulary acquisition would have to be much more extensive, consider a broad range of different vocabulary learning strategies, and address the problem of finding an independent index for DOP.

To summarize, although there are numerous problems regarding Craik and Lockhart's (1979) original DOPH, it should be noted, however, that many ideas have evolved and changed over the years, some even proved untenable or at least questionable, such as the crucial issue of an independent DOP index. Overall, their proposal has proved to be widely influential. It is still cited in the majority of papers on vocabulary learning strategies/L2 vocabulary acquisition up to the present day. In particular, the idea that the nature of mental processing is crucial for long-term memory retention and memory performance is generally agreed upon today.

Incidental Vocabulary Learning

There is widespread agreement in the literature that much of L2 vocabulary acquisition occurs incidentally, epitomized by the pithy title of Sternberg's (1987) article "Most Vocabulary Is Learned from Context." An oft-cited argument in favour of this view is also the default explanation for learning from context in L1 vocabulary acquisition (Laufer, 1991). The belief is that there are many more words in a native speaker's language (especially low-frequency ones) than a child could ever possibly learn through direct instruction. It follows that the large number of words that are at the command of native speakers can only be accounted for by implicit means (learning from context). Since L2 learners are basically in the same situation (possibly in an even worse one, since their opportunities for direct instruction are usually much more limited), the same reasoning would apply for L2 vocabulary acquisition since it is much harder for L2 learners to glean relevant vocabulary information from the

speech streams of their (native) interlocutors than it is for (children) L1 learners. Therefore, it can be safely assumed that the bulk of incidentally acquired vocabulary in L2 stems from reading when the learner's exposure to L2 is limited.

Even though there is empirical evidence that incidental learning occurs through reading (Zimmerman, 1997), it seems improbable that this type of learning occurs to a significant degree (Hague, 1987). Groot (2000) points out that, apart from the high-frequency words which tend to be known to most learners anyway, "there is not enough repetition for an incremental learning process in which the various features of the words are picked up from the contexts, resulting in a solid embedding in the mental lexicon, as in L1 acquisition." In a similar vein, Meara (1997) denies that substantial gains in L2 vocabulary acquisition can be made from mere exposure to texts, calling the experimental evidence in favour of this "weak" (p. 112). As a case in point, Hulstijn (1992) found retention of word meanings in incidental learning tasks (where the goal is reading comprehension) to be low. On the other hand, Chun and Plass (1996) discovered a higher incidental learning rate than expected (25% accuracy on production, 77% on recognition tests); in Rott's (1999) study, only two exposures to an unknown word resulted in modest receptive as well as productive word gain. Perhaps not surprisingly, both Rott and Knight's study indicate that incidental learning has a stronger effect on receptive than on productive vocabulary knowledge.

One of the main problems for incidental vocabulary acquisition is that word meanings are often not inferable from context. Often context leads learners to make wrong inferences, as not all contexts are equally conducive to making informed guesses (Duquette, Reni'e, & Laurier, 1998). Hulstijn et al. (1996) found evidence that the 'frequency effect' is more pronounced when external information (marginal glosses, dictionaries, etc.) about unknown words is available, than in the 'pure' incidental learning condition. The following conditions seem to be prerequisites for successful incidental acquisition to occur (Groot, 2000; Schmitt & McCarthy, 1997):

- Level of language proficiency (ability to accurately decode orthographic form of new words)
- Sufficient level of L2 vocabulary knowledge (deducing the meaning of an unknown word requires a thorough understanding of the context, which in turn presupposes a large vocabulary)

- Strategic knowledge of inferencing process
- Richness of the context (context must be rich enough with cues)

Furthermore, a single encounter with a new word, even if it is correctly inferred from context and therefore comprehended at the time of encounter, does not guarantee acquisition, and the degree of exposure (how many and what kinds) necessary for acquisition to occur remains unclear (Huckin & Coady, 2003). This has led researchers such as Duquette et al. (1998) and Lawson and Hogben (1996) to conclude that lexical inferencing is basically a comprehension procedure that only has potential for learning/vocabulary acquisition. Laufer and Shmueli (1997) point out that “incidental vocabulary acquisition will not occur if unfamiliar words are not attended to: not noticed or not processed deeply.”

In sum, it seems safe to arrive at the conclusion that incidental learning in L2 to any great extent is rather limited and only occurs incrementally and in small quantities (Hague, 1987; Hulstijn et al., 1996).

Vocabulary Learning Strategies

Most research on vocabulary learning strategies has focused on various methods of vocabulary presentation, and their effects on retention (Gu & Johnson, 1996). The great majority of learners seem to favour some form of mechanical strategy such as repetition over deeper, more complex ones (Lawson & Hogben, 1996, Schmitt & McCarthy, 1997), a finding that is disappointing in light of the DOPH predictions which have been borne out by several studies. For instance, Gu and Johnson (1996) investigated the vocabulary learning strategies used by L2 Chinese learners of English and the relationship between vocabulary learning strategies use and learning outcomes as measured in terms of vocabulary size and general language proficiency. They found the “shallow” strategy of visual repetition to be the strongest negative predictor of learning outcome, as opposed to “deeper” strategies such as contextual guessing, dictionary use, note-taking, and metacognitive strategies. In the same vein, Lawson and Hogben (1996) discovered that vocabulary learning strategies involving elaborate processing are more useful than repetition based ones.

Individual learner differences are a crucial aspect in vocabulary learning strategies, as good learners in particular vary enormously in their choice of strategies

and tend to use a wide variety of strategies in combination (Ahmed, 1989, Gu and Johnson, 1996, Ridley and Singleton, 1995). Which particular strategies are used depends heavily on the learner type and individual differences in learning style (Heimbach, 1993).

A more promising research agenda than investigating effects of individual strategies is therefore the following questions (Gu and Johnson, 1996; Schmitt & McCarthy, 1997):

1. Do strategies which are good for vocabulary retention also foster the development of general L2 proficiency?
2. How do patterns of strategy usage and their respective helpfulness evolve and change over time as learners mature?

The relationship between L2 proficiency and strategy use is raised in the first question, it is observed that overall frequency of strategy use is associated with higher levels of L2 proficiency (Halbach, 2000). This seems to hold for a variety of learning contexts (Harley & Hart, 2000), but not necessarily for all strategies - “some ‘bedrock strategies’ may be common across proficiency levels” (Green & Oxford, 1995). In a study investigating the strategy use of Japanese university students, Mochizuki (1999) found that more proficient students use cognitive and metacognitive strategies more frequently than less proficient students. Green and Oxford (1995) suggest a causal relationship between strategy use and L2 proficiency but see it as an indirect “ascending spiral” rather than a straight arrow, i.e. active use of strategies lead to higher proficiency which in turn makes it more likely that students will choose these strategies. The finding that the use of a wide variety of strategies is characteristic of good learners means that learners should be aware of different vocabulary learning strategies and how to use them. However, the question remains as to whether strategies can be taught in the first place, as well as whether some strategies are primarily short-term ones (as the DOPH would suggest).

Taxonomies of Vocabulary Learning Strategies

Vocabulary learning strategies (VLS) are a subcategory of language learning strategies (which in turn are a subcategory of learning strategies in general). If 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, 1990, p.8), vocabulary learning strategies constitute knowledge about what students do to find out the meaning of new words, retain them in long-term memory, recall them when needed in comprehension, and use them in language production (Catalan 2003).

To date, several VLS taxonomies have been proposed (Gu & Johnson, 1996; Nation, 2001; Schmitt, 1997). Several advantages of Schmitt’s taxonomy over others have been determined, namely that it can be standardized as a test, can be used to collect the answers from students easily, is based on the theory of learning strategies as well as on theories of memory, is technologically simple, can be used with learners of different educational backgrounds and target languages, is rich and sensitive to the variety of learning strategies, and allows comparison with other studies, among them Schmitt’s own survey.

As mentioned earlier, Schmitt’s (1997) taxonomy of VLS is based on Oxford’s (1990) division of language learning strategies into direct (memory, cognitive, and compensation) and indirect (metacognitive, affective, and social) strategies. In order to cover cases where meanings of new words are discovered without other people’s assistance, Schmitt introduced another category – determination strategies. However, he excluded affective and compensation strategies as categories and shifted some of the strategies to other groups (e.g., guessing, as is discussed below). Schmitt’s taxonomy is two-dimensional. The dimension that reflects the different processes necessary for working out a new word’s usage and meaning (discovery strategies) and for consolidating it in memory for future use (consolidation strategies), was borrowed from Nation (1990). Schmitt’s taxonomy with sample VLS is presented in Table 1.

| | Discovery | Consolidation |
|---------------|----------------------------------|-------------------------------------|
| Determination | e.g., guess from textual context | |
| Social | e.g., ask classmates for meaning | e.g., interact with native speakers |
| Memory | | e.g., use semantic maps |
| Cognitive | | e.g., keep vocabulary notebook |
| Metacognitive | | e.g., use L2 media |

Table 1: Schmitt’s taxonomy (adapted from Segler, Pain, & Sorace, 2002)

In relation to language learning strategies in general Ehrman and Leaver (2003) talk about surface, achievement, and deep strategies. Surface strategies are used for a specific task and entail minimum cognitive or emotional investment, the aim of achievement strategies is good interpersonal relationship, while deep strategies make elaborations and associate between previous and new knowledge, most directly resulting in long-term retention of information.

One of the shortcomings of all VLS taxonomies as identified by Segler et al. (2002) is that none of the proposed taxonomies includes the depth-of- processing (DOP) factor. Although the DOP hypothesis proposed by Craik and Lockhart (1972) as a whole remains controversial, its central idea is generally agreed upon – that deeper analysis, involving more cognitive effort or semantic involvement, leads to a more persistent memory trace.

In addition, several studies have confirmed that among language learners low DOP strategies prevail. Lawson and Hogben (1998) point out that 75% of the reported strategies did not involve any elaboration that anchors knowledge into existing schemata. Schmitt (1997) argues that written repetition was the main strategy among Japanese learners, while O'Malley and Chamot (1990) state that the most popular language learning strategies require little cognitive processing of learning materials. This is particularly interesting in light of the fact that Gu and Johnson (1996) found that the “shallow” (also surface or mechanical) strategy of visual repetition was the strongest negative predictor of learning outcome, as opposed to deeper strategies.

It is essential to have a look at the results of some research studies examining other aspects inherent to VLS. In order to be effective, strategy use has to be conscious and language users active processors of information. As recorded by Gu (2005), successful learners intentionally select, consciously monitor and evaluate the strategy while less successful learners employ similar strategies yet are not aware of them and do not have a learning aim. The implication for VLS training is that making the learners aware of the strategies they might employ is not enough.

Moreover, Schmitt's study (1997) confirmed that vocabulary learning strategies change as learners mature and that the general trend entails moving away from mechanical repetition to deeper strategies as learners begin to understand their value. Other researchers concentrated on the different strategies appropriate for highly

proficient learners and their less proficient peers, which is an aspect related to contextualized or decontextualized vocabulary learning. While according to the lexical approach (Lewis, 1993) contextualized learning is preferable because learning vocabulary means more than memorization of lexical phrases, other authors claim that greater amounts of decontextualized vocabulary instruction should be given to beginner-level learners, gradually increasing toward more context-based vocabulary learning as their language ability develops (Meara, 1997). The third approach combines decontextualized vocabulary discovery and consolidation through contextualized activities, or vice versa.

Guessing (Inferencing) from Context

Of all the vocabulary strategies commonly recognized today in both L1 and L2 reading, arguably the most widely studied and encouraged is the guessing of the meaning of unknown words from context (in this paper inferencing is used synonymously with guessing). It has a long history of research relative to L1 reading in English (Johnson & Bauman, 1984) with the great majority of studies demonstrating its value. Justification for applying it to L2 reading has come from cognitive science models of reading and schema theory, which are now widely accepted in ESL/EFL circles. This is especially true of models that emphasize top-down processing, with Goodman's (1967) famous characterization of "reading as a psycholinguistic guessing game" as probably the most influential.

The numerous studies which indicate that the strategy is effective provide validation for a strategy that is in itself intuitively appealing and appears to offer many advantages over laborious, time-consuming, methodical instruction in vocabulary and collocation. Another claim in support of the guessing strategy is that it involves generalizable skills of interpreting surrounding text, predicting, and testing predictions while reading, which enhance reading skills as a whole (Liu & Nation, 1985; Nation & Coady, 1988). In addition, guessing has been advocated instead of dictionary use because stopping to use a dictionary interrupts the flow of reading (Brown, 1972).

Inferencing is defined as the cognitive process a reader goes through to obtain the implicit meaning of a written text (Chikalanga, 1993). Inferencing, as a reception

process, is considered an essential task in language use in the real world as well as inside the foreign language classroom. Learners engage in lexical inferencing when, for example, a new word appears in the text under discussion. It is considered to be a compensation strategy essential for skilled first language (L1) as well as second language (L2) reading comprehension (Bialystok, 1983). Furthermore, it is recognized as an essential component of the process of reading comprehension according to psycholinguistic models of reading comprehension (Anderson & Pearson, 1984; Graesser & Bower, 1990; Kintsch, 1988, 1998; Monzo & Calvo, 2002; Nassaji, 2002, 2003a, 2003b; Whitney, 1987), which postulate that reading involves an interaction between textual information and prior knowledge of the reader. Inferencing has been defined as the connections that people establish when they try to interpret texts (Brown & Yule, 1983). It occurs at all levels of the reading comprehension process, ranging from integrating the text with background knowledge (Kintsch, 1988), to connecting the different parts of the text together (Garrod & Sanford, 1990; Kintsch, 1988, 1998), to linking known to unknown elements in the text in order to arrive at a coherent structure of the information in the text (Garrod & Sanford, 1990; Graesser & Bower, 1990; Graesser & Zwaan, 1995). Such processes are assumed to involve prediction and interpretation of the text for meaning; hence, they are considered important processes by theories in cognitive psychology that conceptualize reading as an active meaning-construction process and a creation of a mental representation of the text (Kintsch, 1988, 1998).

Lexical inferencing means "making informed guessing as to the meaning of a word in light of all available linguistic cues in combinations with the learner's general knowledge of the world, her awareness of the context and her relevant linguistic knowledge" (Paribakht & Wesche, 1999). Lexical inferencing has been found to be widely used by second language (L2) learners when dealing with unknown words in their reading (De Bot et al, 1997; Frantzen, 2003; Fraser, 1999; Huckin & Bloch, 1993; Morrison, 1996; Paribakht & Wesche, 1999; Parry, 1993). Lexical inferencing has also been found to be closely associated with incidental vocabulary learning, that is, learning vocabulary through reading natural texts (Huckin & Coady, 2003; Nagy, 1997).

In a sense, guessing or inferencing from context is the mirror image of incidental acquisition on the strategy side, so much of what was said in that section is relevant here as well. For instance, the fact that guessing from context is classified in Schmitt's taxonomy in the discovery-determination group reflects the fact that it is not so much retention as a comprehension strategy. The probability that a word will be learned successfully via guessing from context depends mainly on two factors: word frequency, and, even more importantly, its usefulness for understanding the text (Paribakht & Wesche, 1999). Kelly (1990) distinguishes two types of guessing: formal guessing and contextual guessing. The former is based on formal (morphological) word features and relies in its simplest form on assessing word resemblance. Although this can be dangerous in the case of "false friends," it is usually a promising strategy as true cognates outnumber false ones by a considerable margin. On the other hand, contextual guessing, i.e., guessing from context in its purest form that relies solely on context, stands a poor chance of succeeding when unaided by formal clues (Kelly, 1990). Nation (2001) has championed guessing from context as the "undoubtedly most important vocabulary learning strategy" and recommends it especially for low-frequency words as their rarity does not deserve the learning effort.

There are several factors that affect lexical inferencing. Nassaji (2003) explains that the nature of the written text in which words have been used, the learner's level of proficiency, and learners' prior knowledge, and the strategies that learners use play a crucial role in lexical inferencing from context.

Effects of Language Proficiency on Lexical Inferencing

Earlier studies have shown that ESL learners are generally not good at inferring meaning from context (Barnett, 1988; Haynes, 1993; Stein, 1993). Barnett states that usable context varies from rich to poor, and is affected by the proportion of known to unknown words. Readers with larger active vocabularies can use available context better than those with smaller vocabularies. Beginning readers and advanced readers have been shown to use guessing strategies more than middle level readers. In particular, while L2 readers seem reasonably effective at using local contexts (provided by intrasentential and sentential information) to guess words, they are much

poorer than native speakers in using global contexts (provided by intersentential to discourse level information and world knowledge) to obtain meaning (Haynes, 1993). Laufer (1997) points out three pitfalls for L2 readers inferring unknown words from context: a lack of proficiency causing an inability to use textual clues that would otherwise be available; the occurrence of words with “deceptive transparency” (including misleading morphology and words with multiple but unrelated meanings); and the fact that there are frequently insufficient context clues to enable a reasonable guess.

Haastrup’s (1990) analyses of the characteristic differences between high-proficiency and low-proficiency learners revealed that L2 proficiency is “a decisive factor in lexical inferencing procedures and that there definitely seems to be a threshold level of L2 proficiency that learners have to reach first before they are able to use effective inferencing procedures” (p. 130). Morrison’s (1996) examination of the lexical inferencing procedures of university-level French as second language (FSL) learners supported Haastrup’s (1991) observations that there was a clear and significant difference between the high-proficiency (HP) and low-proficiency (LP) groups in that the HP group used better inferential strategies and made more successful inferences than the LP group.

Zwaan and Brown (1996) collected data from skilled and less skilled readers as they comprehended a story. They found that the two groups differed in the extent to which they made certain classes of inferences. Skilled readers reported more explanatory inferences and constructed stronger situation models than less skilled readers. Whitney, Ritchie & Clark (1991) and Whitney and Budd (1996) also used verbal protocols to investigate individual differences in readers’ comprehension processes. They classified readers according to their working memory span and collected think-aloud data as the readers comprehended ambiguous stories. Whitney and Budd (1996) found differences in the specific elaborations produced in response to story sentences. Low-span readers reported more specific elaborations than high-span readers did. Furthermore, they observed more variability in the number of different thematic inferences among low than high-span readers.

Adams (1980; 1990) argues that advanced readers automatically recognize most of the words they read because automatic lexical recognition decreases

processing load and allows learners to construct meaning from text supports. Thus, good readers are good decoders of words and their meanings. These findings have important implications. First, they support Bialystock's (1983) proposition that context is created by the L2 reader in proportion to preexisting knowledge. They also show that vocabulary is an important part of that knowledge. Second, they make it clear that a critical level of vocabulary and general language mastery is essential for successful use of the guessing strategy (Laufer, 1997). Third, the seemingly paradoxical fact that low- and high-level L2 readers use the guessing strategy more than middle-level readers is, in fact, another indication that level of linguistic development plays an important part in lexical inferencing.

In brief, inferring meaning of unfamiliar words from context entails the use of linguistic knowledge, and language proficiency is a crucial aspect that provides a basis for how well learners are able to infer the words from context.. With efficient decoding skills and large sight vocabularies, readers can allocate various resources to the construction and integration of ideas from context, and the access and use of information from long-term memory. This results in a greater likelihood of successful lexical inferencing. Without such processing skills and proficiency, L2 learners are more apt to experience a short-circuit of the lexical inferencing and integration process, and fewer chances for vocabulary development (Koda 2005; Laufer 1997). Thus, learners with insufficient lexical proficiency often achieve less than their potential and may be discouraged from making use of the language opportunities around them.

Effects of Richness of the Context on Lexical Inferencing

Another factor that affects the likelihood of success in inferencing is context. A rich enough context provides adequate clues to guess a word's meaning (Celce-Murcia, 2001) because the unknown word to be guessed has to have plenty of comprehensible supporting context (Nation & Meara, 2002). Some researchers suggest that most words are learned from the context (Lawson & Hogben, 1996; Nagy, 1997; Sternberg, 1987) and it is generally accepted as a very useful and productive way to learn words. Moreover, activities and reading materials that present words in meaningful contexts may contribute to vocabulary gains and are valued

highly by students (Prince, 1996; Zimmerman, 1997). So, what is exactly understood by context?

One difficulty in this area of research is that there is no standard definition of what is meant by context. According to Gu (2003), it is necessary to distinguish between two types of context. First, learning context refers to the “learning environment and includes the teachers, the peers, the classroom climate or ethos, the family support, the social, cultural tradition of learning, the curriculum, and the availability of input and output opportunities” Second, language context refers to the textual place in which a particular word or structure can be found. The latter has been accorded great importance by researchers and is the focus of this study.

Traditionally, context was seen as a given, existing fully and completely in any properly written text, and the key to using it was linguistic knowledge. Today's cognitive theories claim that this view places too much emphasis on linear, bottom-up processing. In response, various definitions of context have been proposed that include language knowledge but emphasize the role played by high-level knowledge sources and personal experiences. The commonly used general distinction between local context or global context is useful to this discussion, especially regarding the guessing strategy and L2 readers. As will be shown below, successful use of the guessing strategy often depends on which of these contexts is available and how it is used, if at all.

Of the many theoretical descriptions of the elements and nature of context, Bialystok's (1983) has important implications for any discussion of context and the guessing strategy. She proposes that context exists in relation and proportion to the reader's implicit knowledge (intuitive and unanalyzed knowledge of the L2), other knowledge (knowledge of other languages and world knowledge), and context linguistic and physical aspects, in this case, of a text which provide clues to meaning. From this perspective, context is not an absolute presence in a text, but is instead created by the reader, and is therefore influenced by the reader's linguistic and world knowledge.

According to Gough (1984), context can be seen as information. Information, in turn, is that which reduces uncertainty. In reading, context can be defined as information that reduces uncertainty about the elements of a text, their meanings, and

the meanings of the text as a whole. In its broadest sense, of course, context may be said to comprise all the perceived phenomena that accompany the process of a given stimulus, including the physical surroundings in which learning takes place (Prince, 1996). Using the meanings of words together within the whole meaning of the sentence is the deepest level of processing and ensures the best memory (Cook, 1991). Basic to inferring meaning from context is the degree to which context discloses word meaning. This degree is restricted by the student's own background knowledge and constraints in the text itself. Hence, both teachers and students must be aware that context functions to restrict meaning as well as to disclose it. Some contexts do not provide a lot of information about a word, but some others provide some information that may help students to learn the word. Shu, Anderson, and Zhang (1995) suggest that significant learning from context is evident only when unfamiliar words appear repeatedly. When a context is rich enough, it will be sufficient to allow a learner to infer the full word meaning. On the other hand, if a context is too easy to understand, then no vocabulary acquisition takes place. For example, at superior levels of proficiency, and when reading for comprehension - rather than to explicitly learn the meaning of unfamiliar words - the context may be easily understood without having to determine the meaning of every unfamiliar word. Pulido (2003; 2004a) also states that words that may be easily guessed in the course of reading may not be better retained because of the lack of a need to allocate sufficient attention to the connection between the new word form and its meaning. To sum up, the richness of context plays a significant role in helping L2 learners to infer the meanings of unfamiliar words in context.

Vocabulary Inferencing, Background Knowledge, and Topic Familiarity

Research has demonstrated that background knowledge and vocabulary inferencing are closely related. In schema theory (Rumelhart, 1980; Widdowson, 1983), word inference can be seen as a process of search for, and use of, relevant schemata to identify unfamiliar verbal stimuli. Schemata can be seen as frames of reference which provide a basis for prediction and allow for the organization of information in long-term memory. The amount and quality of contextual cues can determine the outcome of such processes. From her early research with schema theory

and reading, Carrell (1983) distinguishes three forms of schemata: linguistic (language knowledge), content (knowledge of topic), and formal (background knowledge of the rhetorical structures of different types of texts). Each of the three plays a part in the interaction among the writer, the text, and the reader. Schema-based inferencing, however, can be difficult for poor readers (Winne, Graham, & Prock, 1993). They may fail to stimulate relevant prior knowledge because of a production deficiency for making use of past experiences when reading and they may lack relevant prior knowledge needed as input to inference-making processes.

Contextual cues are often used to make successful inferences from context. When using contextual cues, learners draw on their knowledge of the world and from the co-text. Knowledge of the world is “viewed as part of language user’s and language learner’s general socio-cultural knowledge” (Haastrup, 1991, p. 47). The role of co-text, on the other hand, refers to the way in which the interpretation of a lexical item is influenced by the particular linguistic context in which it is placed.

However, for contextual cues to be of real help for word inference, Li (1988) indicated that they must (a) be perceptually and conceptually familiar to the text-receiver and (b) contain the information available for the text-receiver to find the relevant schemata in order to account for the incoming input in the text and identify unfamiliar stimuli in context. Without such cues, inferencing may lead to misguesses (Bensoussan & Laufer, 1984). Bensoussan and Laufer (1984) concluded that

...lexical guessing is a very difficult task either because of the complexity of the text or because of the limitations of the reader, or both. Some words do not have clues in the text in which they appear; when there are clues for such words foreign language learners will not necessarily look for them; and when readers do look for these clues very often they cannot locate or understand them (p. 27).

Since learners are expected to infer meaning from context, Droop and Verhoeven (2003) state that texts must be related to the learners’ experiences and background knowledge to motivate the readers to infer the meaning of unfamiliar words instead of skipping them. Several studies with participants from various L1 backgrounds found that L2 learners of all levels used background knowledge to infer the meaning of unfamiliar words they encountered in reading texts. Sasaki (2000)

investigated how schemata activated by culturally familiar words might have influenced students' cloze test-taking processes. Sixty Japanese EFL students were divided into two groups with equivalent English reading proficiency. They completed either a culturally familiar or an unfamiliar version of a cloze test. Several unfamiliar words in the original cloze test passage were changed to more familiar ones in the modified version; however, students were asked to give verbal reports of their test-taking processes, and to recall the passage after they had completed the tests. Thus, the two groups' test-taking activities were compared in terms of item performance expressing correct understanding of the key terms while solving the items and recalling, the amount of text information they used to complete the items, and the quantities and qualities of the final recalls. Results demonstrated that those who read the culturally familiar cloze text tried to solve more items and generally understood the text better, which resulted in better performances than those of the students who read the original text.

Similarly, in a discussion of what is involved in successful vocabulary guessing, Pressley, Borkowski, and Schneider (1987) propose a framework that distinguishes between a cognitive strategic component, which includes a repertoire of general as well as domain-specific strategies learners have, and a knowledge-base component, including various knowledge bases constructed from learners' various experiences with the world. These knowledge bases range from well-established and integrated pieces of information about particular phenomena or situations, to knowledge about specific strategies and skills, to knowledge about when and how to apply these in a particular situation. Knowledge strategy user needs to evaluate the causes of his or her failure and the relationship between his efforts and achievement also fall into this category.

Pulido (2004b) investigated incidental vocabulary gains through reading. The effects of cultural background knowledge on immediate incidental vocabulary gain of nonsense words were examined through reading brief narratives that depicted either culturally familiar or culturally unfamiliar versions of everyday scenarios. Results revealed that L2 learners were more successful at lexical inferencing when they were aware of the topic. In another study, Pulido (2000, 2003) found that vocabulary gains

were greater when participants read narratives depicting more familiar topics in comparison to less familiar topics.

Adams (1980, cited in Carter & McCarthy, 1988) carried out an experiment on the facilitating effect of previous knowledge, and found that learners who had information about the topic of a passage before they read it achieved significantly higher scores on guessing the meanings of nonsense words in texts. He argues that a reader won't always be right. He/she might not be able to guess the exact meaning of a word, but it may be close enough to get the meaning of the sentence it is in. The present study aimed to investigate whether topic familiarity would have any effect on successful inferencing of unfamiliar vocabulary items in context.

Factors Affecting Learner's Success in Lexical Inferencing

Many factors have been shown to affect success in lexical inferencing, including the nature of the word and the text that contains the word (Paribakht & Wesche, 1999; Parry, 1993); the degree of textual information available in the surrounding context (Dubin & Olshtain, 1993); the learner's ability to make use of extra-textual cues (De Bot et al., 1997; Haastrup, 1991); the importance of the word to comprehension of the text (Brown, 1993); the degree of cognitive and mental effort involved in the task (Fraser, 1999; Joe, 1995); and the learner's attention to the details in the text as well as his or her preconceptions about the possible meaning of the word (Frantzen, 2003).

The factors that may affect lexical inferencing in context are usually categorized as intralexical factors (intrinsic properties related to the word's form and meaning) and interlexical factors (pertaining to the relationship between the word and familiar words either in L2 or other languages.). However, Swan (1997, p. 161) and Singleton and Little (1991, p. 74) point out that this deceptively straightforward distinction suffers from the so-called "attribution problem", that is certain error types resist simple classification in either/or terms. For example, a given L2 failure in guessing the vocabulary item may be due to either cross-lingual interference, an intralingual cause such as overgeneralisation of an L2 rule, or both. Another aspect of this classification problem is that many intralexical factors, such as pronounceability,

are not necessarily intrinsically difficult except in relation to the corresponding L1 factor.

Intralexical Factors

The following is a summary of comprehensive surveys on intralexical factors, which can be found in Laufer, (1990b ;1997) and Ellis and Beaton (1995). The first intralexical factor mentioned is phonological factors or pronounceability. These seem to particularly affect less-than-advanced learners who tend to experience acoustic coding interference (Hennig, 1973). However, pronounceability is hardly a purely intralexical factor. Ellis and Beaton (1995) point out that the degree of difficulty is determined by the overlap between the articulate feature set of L1 and L2. As Laufer (1990a) notes, research evidence points to the conclusion that phonological difficulty not only affects production, but comprehension as well. A second intralexical factor is orthographic factors which include sequential letter probabilities and sound-script incongruence. Again, it has to be noted that in a sense these are not really intrinsic factors as difficulty arises only by comparison with corresponding L1 values.

The other two factors are morphological and grammatical factors. Morphological factors include inflectional and derivational complexity, notably “deceptive transparency” or words that look as if they were combined of meaningful morphemes, e.g. discourse, without direction. Grammatical factors relate to different parts-of-speech. Research evidence seems to suggest the order of difficulty is nouns and verbs, adjectives and adverbs (Ellis and Beaton, 1995). However, Laufer (1997) cautions that results of most studies may have been influenced by confusion with other factors, and suggests to regard grammar (part-of-speech) as a factor with no clear effect. However, ample research shows that cues based on the learner’s knowledge of the target language can be of great help in inferencing words from context. For example, learners of English may infer the meaning of words by making use of their knowledge that suffixes –er and –or express notion of agency (Carton, 1971). Yet, the ability to exploit such cues presupposes that the learners already have some knowledge of the foreign language they are expected to make lexical inferences about. Finally, word knowledge cues are judgments made by learners about the identity of similarity of structures in two languages. For example, second language

learners may derive word meanings on the basis of cognates and regularities of phonological transformations from one language to another.

Paribakht and Wesche (1999) state that word frequency, usefulness, and the presence of sufficient and clear semantic and linguistic clues enable readers to reach correct lexical inferencing. Bernhardt (1998) further points out that content words with clear referents such as nouns, verbs, and adjectives tend to be easily inferred more than function words such as prepositions and articles. This means that the appropriate use of linguistic background knowledge in L1 and L2 and word knowledge are also important factors that lead to successful inferencing.

The last factor in this category is semantic factors. According to Laufer (1997), the main factors affecting word guessing and learning in this area are specificity and register restriction, idiomaticity and multiple meaning. Specificity and register restriction refer to the fact that general words are less problematic than register-specific ones, as the high frequency of register-related L2 mistakes attests. Idiomatic expressions, being both frequent and opaque by nature, place a considerable learning burden on the L2 speaker. They present a difficulty even for closely related L1 and L2 with similar use of idiom and may negatively affect the process of inferencing. Kellerman (1978) found that Dutch learners only transferred idioms involving core meanings into English, even when the transfer of peripheral meanings would have yielded a correct L2 expression. Multiple meaning refers to the phenomenon of homonymy and polysemy, for example, the problem of “discriminating between the different senses of the same form and using each sense correctly” (Laufer, 1997, p. 152). Abstract words are often claimed to be more difficult than concrete words because of their intrinsic complexity. However, as Laufer (1997) points out, learning of many abstract words simply requires relabeling of familiar concepts, whereas concrete words may be rendered difficult by other factors.

Interlexical Factors

It is worth pointing out that lexical transfer is not always negative or direct. In fact, it is generally more beneficial than transfer at the level of phonology or syntax. Ringbom (1983) notes that cognates can be extremely helpful to L2 learners, leading

to positive transfer which affects reception in particular. Transfer can also manifest itself in indirect forms such as avoidance and underrepresentation of lexical expressions.

Many factors pertaining to interlingual influence have already been noted above. Apart from these, the important factors to take into account are language distance, cognate status and conceptual classification/semantic boundaries. The factor of language distance relates not only to actual but also to perceived distance. Singleton and Little (1991) cite evidence such as Kellerman (1977, 1979), Ringbom (1987) indicating that the perceived degree of similarity between L1 and L2 will strongly influence the extent of transfer. Kellerman (1978) showed that in addition to perceived overall distance, perceived uniqueness is another influence on transferability. The more peripheral and non-salient a cognate is in the L1, the more it is perceived as unique to L1, and the less likely it becomes as a candidate for transfer. In short, “learners do not generally adopt a strategy of wholesale borrowing” (Lightbown & Libben, 1984, p. 407).

In a similar vein, Ijaz (1986) argues for the principle of prototypicality to be “influencing the degree of difficulty in acquiring or guessing word meanings.” She found that “noncentral members of semantic categories were classified differently across languages, whereas typical members were not.” She showed that, at least for seemingly corresponding words, L2 learners tend to rely on a “semantic equivalence hypothesis” which ignores crosslinguistic differences in conceptual classification and semantic boundaries. The results of Ijaz’s study supported her hypothesis that advanced ESL learners differ from native speakers in the semantic boundaries they ascribe to English words, and that these boundaries are influenced by L1 conceptual patterns and constraints. The factors that affect L2 word meanings seems to be determined by the amount of conceptual restructuring required. Ijaz found meanings involving a different linguistic categorization in L2 to be particularly difficult, while similarly categorised meanings with higher differentiation in L2 proved also difficult but to a lesser degree. It is therefore not surprising that in her study, learners experienced the greatest difficulty with figurative meanings and idioms. Ijaz hypothesized that “the conceptual restructuring required in such instances is closely

akin to the acquisition of an entirely new concept”, which seems to be harder than restructuring an existing one.

Conclusion

To sum up, this chapter reviewed the historical development of vocabulary teaching and learning in ESL/EFL research. Quantitative and qualitative aspects of lexical knowledge and processes involved in vocabulary acquisition were briefly discussed, though it was not the main focus of the present study to give an overall view of the knowledge that learners need to acquire vocabulary. It also addressed the role of schematic knowledge of L2 vocabulary and the relationship between L2 learners’ language proficiency and their lexical and syntactic development, as well as schematic knowledge.

This chapter also reviewed the literature dealing with strategies in L2 vocabulary acquisition during recent years. The role of context, learners’ proficiency and background knowledge on L2 vocabulary inferencing from the context were investigated thoroughly. The literature emphasized that lexical competence, background knowledge, and richness of the context are essential to successful guessing of the unfamiliar vocabulary items in context. Moreover, it was also stressed that lexical inferencing is the word-learning strategy that the learners should encouraged to acquire.

The current study focuses on the effects of topic familiarity on lexical inferencing and inferential strategies that advanced L2 Emirati learners use to help them guess the meaning of unfamiliar words in context. The following chapters discuss the methodology and findings of the present study.

CHAPTER THREE

METHODOLOGY

The purpose of the present study was to determine whether topic familiarity had any effect on inferencing of unfamiliar words in the texts, and what strategies advanced Emirati learners of English in high school used to help them guess the meaning of vocabulary items in the passages. It was hypothesized that familiarity with the text topic would help the learners to infer the meanings of unknown vocabulary words, and that they would use more than just one strategy to infer the meanings of unfamiliar vocabulary items from the passage. The responses to vocabulary questions were analyzed quantitatively to identify the correct number of answers to multiple-choice questions. The qualitative analyses were used to determine what strategies Emirati students used to infer unfamiliar words from the passage.

Participants and Setting

The study involved 30 Emirati students (18 females and 12 males) between the ages of 14 and 15 years old attending Al Ittihad Private School in Dubai (Mamzar Campus), UAE. The gender factor was not taken into consideration. All participants were Emirati nationals who had Arabic as their L1 and at least nine years of English instruction in school. The subjects were chosen according to their proficiency level. Only students who have high or high intermediate level of language proficiency took part in the study. They have an A, B+, or B- grade in English and scored 80% and above in their midyear before starting the research.

At Al Ittihad Private School, Dubai (Mamzar Campus) belongs to a group of Al Ittihad Private Schools established in 1975 by the Al Arabia for Educational Development Group. They have two campuses in Dubai, one campus in Al Ain, and one campus in Abu Dhabi, UAE. At Al Ittihad Private School, Dubai (Mamzar Campus), 98.8% of the students are UAE nationals. The school follows an American curriculum from Pre-Kindergarten to grade12, which is authorized by the United Arab Emirates Ministry of Education. Al Ittihad Private School is accredited by the Commission of International and Trans-Regional Accreditation (CITA) which is the most rapidly growing accrediting agency in the world and has provided standards for education systems and developed customized accreditation protocols. All students of

Al Ittihad Schools must take a TOEFL iBT exam at the end of Grade 11 or 12 and achieve a minimum score of 71 to have their school certificates approved. Moreover, to be accepted to the universities in the UAE, the students have to receive a minimum score of 500 (with the exception of American University of Sharjah where the acceptable score is 530) on the TOEFL PBT exam, or 71 on the TOEFL iBT exam.

Materials

In the present study, two expository reading passages were used. One passage entitled *Palace Under the Nile Mud* pertained to a more familiar topic (see Appendix A), and another passage entitled *Purple Spicy Fields of Kozani* pertained to a less familiar topic (see Appendix B). Using MS Office Readability Statistics, it was ensured that the passages were about the same length and approximately the same level of difficulty. The passages were reproduced without any illustrations.

The students' familiarity with the topics of the selected passages was assessed through a topic familiarity questionnaire (see Appendix C) that requested the participants to answer five general questions about the topic of each text.

In the next stage of the study, 40 vocabulary items from the text were selected. To ensure that the participants had no prior knowledge of the selected vocabulary items, the students were asked to fill in a vocabulary pretest (see Appendix D) in which they marked the selected words as *known* if they knew the word, or *unknown* if they didn't know the word. The students were also requested to provide a brief explanation or meaning of the word that they had marked as *known*. Based on the results, from the marked *unknown* words, 15 words from each passage were selected as the targeted vocabulary for the inferencing study.

In the main part of the study, the students were given a multiple-choice test of the targeted vocabulary from both more familiar (see Appendix E) and less familiar (see Appendix F) texts to measure their ability to guess meanings. The multiple-choice questions (MCQs) contained choices that offer the appropriate meaning and three distracters. The distracters consisted of concise definitions of words semantically similar to the target word or of the same part of speech. No distracters were meant to be tricky or extremely difficult.

In the final stage of the study, the participants were given a post vocabulary questionnaire (see Appendix G) to determine what strategies they used to guess the unfamiliar words from the passages. The students were requested to fill in the table that included such choices as context clues, knowledge of the topic, grammatical structure, spelling/pronunciation, or other techniques. The participants ticked the choice that had helped them to infer the meaning of an unfamiliar vocabulary item. Then, they provided a brief written explanation in English of the process of guessing that particular word.

Procedure

There were four separate data-gathering phases. Prior to administering any measure involved in the present study, 30 participants from four sections of grade 9 were selected for the present study. The students who scored 80% and above in the midyear exam were chosen to take part in the study. As a next step, the researcher who teach two sections of grade 9 and two parallel teachers who teach another two sections chose two expository reading passages: one was considered to pertain to a more familiar topic, while the other was considered to pertain to a less familiar topic. First, to determine familiarity, the students filled out a topic familiarity questionnaire (see Appendix C) which elicited how much they knew about the topic of each passage. The participants were requested to provide explicit answers to five general questions related to each selected passage. Once the students' responses were analyzed, the teachers agreed that both passages were appropriate for the present study. Then, the teachers selected 20 vocabulary items from each passage and used them in the vocabulary pretest. The participants were asked to mark the words as *known* and *unknown*, and then they were required to provide the meanings of the words that they had marked as known. After a thorough analyses, 15 targeted vocabulary words that were marked as *unknown* from each passage were selected. One week later, during the regular 50 minute class, all students in each class read the first expository comprehension passage and completed the measures in the following order: (a) multiple-choice questions followed by (b) post vocabulary questionnaire. The students were given twenty minutes to answer multiple-choice questions since in the actual TOEFL iBT exam the participants are given 20 minutes per passage to

answer all comprehension questions. The next day, the same procedure was administered for the second passage. Before reading each passage all participants were oriented by their teachers to the task of reading for the purpose of vocabulary practice rather than answering comprehension questions about the stories. Only the answers of the students who were selected to take part in the study were analyzed.

CHAPTER FOUR

DATA ANALYSES AND DISCUSSION

The purpose of this present study was to determine whether topic familiarity would be a useful tool during lexical inferencing. It also investigated strategies that students used to help them infer the meanings of unfamiliar words in context. The results of the study supported the hypothesis of the present study that topic familiarity had a positive effect on lexical inferencing since the students produced more correct guesses while reading the passage that pertained to a more familiar topic. Topic familiarity appears to have helped students activate their various syntactic and semantic knowledge which led to more successful inferences. The results also revealed that advanced Emirati learners used different kinds of knowledge to help them infer successfully the meanings of unknown words in context. Moreover, the results of the present study that Emirati learners of English used a variety of inferential strategies, such as context clues, grammatical and morphological knowledge, background knowledge, spelling, and pronunciation to help them infer the meanings of the unfamiliar words in context.

Results and Analyses

Findings are presented in the following order. First, information on the reading passages is presented in terms of word number and level of difficulty of the texts. This section is followed by a discussion on topic familiarity and its effects on lexical inferencing. Next, the strategies that students used to help them infer the meaning of unfamiliar words in context are presented. The results are given for each strategy used and then discussed in detail.

Reading Passages

The passages were approximately of the same length and level of difficulty which was measured using the Flesch - Kincaid Readability score. The Flesch - Kincaid Readability Test is a readability test designed to indicate comprehension difficulty when reading a passage of contemporary academic English. It analyzes and rates texts on a U.S. grade-school level based on the average number of syllables per

word and words per sentence. Table 1 provides a summary of statistics for the content of both more familiar and less familiar passages.

| Readability Statistics | <i>Palace Under the Nile Mud</i> (More Familiar Topic) | <i>Purple Spicy Fields of Kozani</i> (Less Familiar Topic) |
|----------------------------|---|---|
| Words | 466 | 544 |
| Characters | 2240 | 2593 |
| Sentences | 27 | 34 |
| Words per sentence | 26 | 35 |
| Characters per word | 4.6 | 4.6 |
| Flesch-Kincaid Grade Level | 9.2 | 9.1 |

Table 2: Summary of readability statistics of the passages

Topic familiarity questionnaire.

In the initial stage of the present study, the students were requested to answer five general questions on the topic of each selected passage to determine how much background information they had about each passage. For this purpose the topic familiarity questionnaire was administered. The results of the topic familiarity questionnaire revealed that the passage *Palace under the Nile Mud* contained more familiar information since the students answered questions about the topic. Answering question one about whether they had been to Egypt and whether they would like to visit it again, 56% of the students provided positive answers; 44% of the students had never been to Egypt; however, they admitted that they had a lot of information about the country. Answering questions two and three, students were asked to name several of Egypt's famous historical sights. All participants were able to provide correct responses. Their answers included such famous names as the Great Sphinx, the Great Pyramid at Giza, the Valley of the Kings, the Temples of Abu Simbel, the tomb of Alexander the Great, and the River Nile. Moreover, they included descriptive details about those places and explained what those sights were famous for. In the last question, the students discussed the important contributions of ancient Egyptians to the development of science, math, and architecture. The students' complete and broad answers indicated that information of *Palace under the Nile Mud* pertained to a more familiar topic to them.

The results of the topic familiarity questionnaire showed that the passage *Purple Spicy Fields of Kozani* contained information that was less familiar to the students. In the first question the students were requested to define saffron. Only 24% of the participants were able to identify it as a herb. The rest of the students didn't know what saffron was or stated that they had heard the word but didn't know what it was exactly. Out of the 24% of those students who had been able to answer the first question correctly, only 9% answered question two about where saffron grew correctly. They mentioned such countries as Iran, India, Greece, and Pakistan. The students provided mixed answers to the third question about the price of saffron. Some of them said that it was cheap, while others believed that it was relatively expensive. Unfortunately, they did not provide any evidence to support their answers. None of the participants knew the answer to question four about what saffron looked like in its original stage. The last question was about the uses of saffron. The only use that some of the students mentioned was adding saffron to food as a colorant. There were two students who related the word *saffron* to the Arabic word *zafaran*. They even mentioned using saffron in milk or sweets, yet they couldn't answer the questions about the origin or nature of saffron. Based on these results, it was clear that most students had little or no information about the main subject of the passage. And even though some students could define saffron, they still had relatively limited information about it. As such it was concluded that the passage *Purple Spicy Fields of Kozani* pertained to a less familiar topic.

Effects of Topic Familiarity on Successful Vocabulary Inferencing

In the second stage of the present study, the students were requested to read the selected passages and answer multiple-choice questions (MCQs) to determine whether topic familiarity had any effect on successful vocabulary inferencing. Only the number of correct guesses was analyzed. The total number of responses was 900 (number of students multiplied by number of words).

Table 3 presents the results of the multiple-choice questions that examined the effects of topic familiarity on vocabulary inferencing in context. The results show that students performed better in more familiar passage in which they successfully guessed

70% of vocabulary items, while in less familiar passage participants guessed only 54 % of unfamiliar vocabulary items.

| <i>Palace Under the Nile mud</i> (More Familiar Topic) | | <i>Purple Spicy Fields of Kozani</i> (Less Familiar Topic) | |
|---|----------------------|---|----------------------|
| The targeted words | # of correct guesses | The targeted words | # of correct guesses |
| 1. sumptuously (adv.) | 30 (100%) | 1. provincial (adj.) | 20 (66%) |
| 2. foreman (n.) | 24 (80%) | 2. promenade (n.) | 13 (43%) |
| 3. cartouche (n.) | 5 (16%) | 3. to seep (v.) | 22 (73%) |
| 4. radiant (adj.) | 13 (40%) | 4. mauve (adj.) | 20 (66%) |
| 5. to stumble (v.) | 23 (76%) | 5. to heap (v.) | 21 (70%) |
| 6. gilded (adj.) | 25 (83%) | 6. to blare (v.) | 12 (40%) |
| 7. pouch (n.) | 24 (80%) | 7. embroidery (n.) | 14 (46%) |
| 8. to generate (v.) | 25 (83%) | 8. arduous (adj.) | 19 (63%) |
| 9. inconceivably (adv.) | 27 (90%) | 9. accuracy (n.) | 10 (33%) |
| 10. exquisitely (adv.) | 27 (90%) | 10. deftly (adv.) | 5 (16%) |
| 11. stucco (n.) | 14 (46%) | 11. to fetch (v.) | 17 (56%) |
| 12. retreat (n.) | 11 (30%) | 12. to diminish (v.) | 25 (83%) |
| 13. copious (adj.) | 23 (76%) | 13. compost (n.) | 7 (23%) |
| 14. patron (n.) | 24 (80%) | 14. novice (n.) | 23 (76%) |
| 15. archive (n.) | 21 (70%) | 15. to stack (v.) | 26 (86%) |
| Total : 450 (100 %) | 316 (70 %) | Total: 450 (100%) | 254 (57 %) |

Table 3: Results of multiple-choice questions.

The findings are compatible with that of other researchers who found that learners can guess the unfamiliar word accurately when the subject matter is familiar (Anderson & Pearson, 1984; Graesser & Bower, 1990; Kintsch, 1988, 1998; Monzo & Calvo, 2002; Nassaji, 2002, 2003a, 2003b; Whitney, 1987). The learners can guess what the word means in the context because they know what is being talked about (Garrod & Sanford, 1990; Kintsch, 1988, 1998). According to schema theory, the text and the reader's previous knowledge interact by often activating information that is relevant to the problem to be solved (Nassaji, 2002; Rumelhart, 1983). Brantmeier (2003) emphasizes that topic familiarity can be an exceedingly significant factor in affecting L2 vocabulary guessing. Verspoor and Lowie (2003) found that learners' ability to infer and retain the meanings of polysemous words from context was related significantly to their knowledge of the world. In the same line, Bransford, Stein, & Shelton, (1986) found that problems in reading comprehension can be attributed to the

readers' not having the required background knowledge or schemata which leads to not being able to fill in the missing gaps, which at the same time prevents the readers from inferring unfamiliar words successfully. These results show that learners infer the meanings of words by grasping the whole meaning of the utterance in the form of a mental situation model.

In the present study, topic familiarity had a positive impact on lexical inferencing. There were substantially more correct inferences when reading about a more familiar topic compared to a less familiar topic. Having appropriate background knowledge may have helped learners to more efficiently direct attention to input while reading the more familiar story. These results expand upon previous research reported above that observed learners using background knowledge during think-aloud tasks in lexical inferencing research paradigms, or that studied effects of topic familiarity and semantic richness on discrete sentence processing. The results also increase our understanding of the strong role of background knowledge in vocabulary development that begins during reading by studying learners' initial meaning assignments to new words.. In sum, from a cross-sectional perspective, the results of the first question illustrated robust findings of topic familiarity on successful inferencing.

As an example of that, the students successfully used their knowledge of the topic while reading the passage *Palace Under the Nile Mud* that pertained to a more familiar topic. For example, the participants were presented with the following four choices to infer the meaning of the word *sumptuously* :

- A. fancy
- B. lavishly
- C. plainly
- D. poorly

All participants (100%) guessed the meaning of the unfamiliar word *sumptuously* in the sentence “*The 3,250-year-old palace of Pharaoh Ramses II has been discovered under 60 centimeters of Nile River mud, and appears to demonstrate that the ancient Egyptians lived even more sumptuously than had previously been believed*” correctly. Since in this sentence there was a reference to *Pharaoh Ramses*, the participants made a successful guess about what the word meant because they understood the situation referred to in the sentence in which *sumptuously* was used.

This understanding of the whole context was the basis for guessing the meanings of new words. Some participants wrote:

“The word *sumptuously* was the easiest word to guess. This sentence describes the life style of Pharaoh. Pharaohs were like kings. Kings have a lot of money and buy stuff that other people can’t have. So I think *lavishly* is the best choice.”

“I think *sumptuously* is closest to the meaning of *lavishly* because they talk about pharaoh. They were spending fortunes on building pyramids and palaces. They lived a luxurious life style.”

“I know for sure that *lavishly* means *spending in great amounts*, and pharaoh had a lot of money; they also spent a lot of money. So I think B is the best choice.”

“Since this sentence talks about life style of the Egyptian pharaoh, I think the best choice is B (*lavishly* – spending in great amount).”

Other two lexical items that were guessed successfully using knowledge of topic familiarity were *inconceivably* (90%) and *exquisitely* (90%). The following choices were given.

inconceivably

- A. unbelievably
- B. inconsistently
- C. unlikely
- D. unwisely

exquisitely

- A. terribly
- B. beautifully
- C. selectively
- D. casually

However, the participants were concerned with the fact that there were not enough contextual cues to help them to guess the meaning of those words. They showed some frustration and confusion while trying to infer the meanings of these target words. Still, since many students had sufficient amount of information about ancient Egypt and a number of them had visited Egypt, 27 participants were able to accurately decode the meaning of the above unfamiliar words. Some of the students wrote:

“The words *inconceivably* and *exquisitely* were difficult. There are no context clues to help. But I think *inconceivably* means unbelievably and *exquisitely* means *beautifully* because these words are used to describe the Pharaoh’s

palace so the palace must be built beautifully and must have may be thousands of rooms.”

“I am not sure because I can’t find enough cues but I think *inconceivably* means *unbelievably* because people who have money build palaces with hundreds of rooms, something that other people do not do...and *exquisitely* means *beautifully* because palaces of kings are always beautiful.”

“*Inconceivably* means *unbelievably* because pharaoh built palaces with many rooms like in hotels, sometimes the number was so great that common people couldn’t believe it... The palaces of pharaohs were built with a great precision to give it a special shape, so I think the word *exquisitely* means *beautifully*.”

“I think the word *exquisitely* means *beautifully* because when my parents and I saw the pyramids for the first time, we stood there in awe and were not able to take our eyes away from them, so beautiful they were...*Unbelievably* is the best choice for *inconceivably* because all palaces have such huge number of rooms that it is difficult to believe.”

Some participants tried to analyze the situation as a whole rather than looking at single words while guessing the word *foreman* (80%). They used the local context and their general knowledge to help them to infer the meaning of this vocabulary item. The students were given the following choices:

- A. a supervisor
- B. a worker
- C. a tourist
- D. a thief

Some participants wrote:

“I think a *foreman* must be a person in charge, because they say in the passage the he was the one to report to the head of the team. I think if he was a simple worker, he wouldn’t be able to understand that what they found was unusual.”

“The word *foreman* means a supervisor because other choices don’t make sense in this sentence. And also in the passage, he knows what was found. The workers couldn’t know about it because most of them are not that educated.”

Another successfully guessed word was the word *gilded* (83%). The choices for this word were the following:

- A. covered with mud
- B. covered with gold
- C. covered with diamonds
- D. covered with bones

The participants used their background knowledge of pharaohs' lavish life style to help them to guess the meaning of this word correctly. Some participants justified their selections by stating:

"I think the choice is B (*covered with gold*) because the whole passage talks about wealth of Egyptian pharaohs. And gold is very important even now in Egypt."

"I believe it means *covered with gold*. I read somewhere that in the pharaohs' palaces the floor were usually covered with gold. But I am not sure."

"Maybe it means covered with gold. The pharaohs were very rich and liked to show off. But also later in passage they say something about gold. So I think it's B."

The most difficult word to guess was the word *cartouche*(16%). The participants mentioned that there were not enough context cues to help them infer the meaning of this target word; moreover, 17 participants mentioned that they were not sure how even to read the word. Most of them were confused and frustrated by their inability to make the right choice. The participants wrote that either all choices could be used or that none of the choices made any sense in the context of that sentence.

However, one student using her knowledge of the topic knew the meaning of the word *cartouche*. She had learnt this word while visiting one of the museums in Egypt where she had had an opportunity to see an actual cartouche. In addition to that, after she came back home, she had looked up some information on the Internet to learn more about the origin of this word since it sounded peculiar to her. The following choices were given :

cartouche (n.)

- A. a statuette
- B. a coffin
- C. a panel
- D. a number

This student wrote that

"the word *cartouche* means some kind of a tomb stone or panel with pictures

on it representing the name of the kings, queens, or other rich people. I saw one when I visited the museum in Alexandria.”

The other four students who could guess the meaning of the word *cartouche* used the context to help them guess this word correctly. They stated:

“The word *cartouche* is confusing. I don’t think that it is *a coffin* or *a statuette*, because in the next sentences they say *you can read it*. So it could be a panel or a number. I think a *panel* would be ok.”

“I think a *panel* is a correct choice, because there were some writings on it.”

“I don’t know. Anything could be used. I’ll just circle a *panel*.”

“I don’t know how to read this word and what it means. But I guess it could be a *panel*, because the foreman in the passage removed the dust and could read something on it.”

These particular examples show that classroom practice in other vocabulary strategies is important and expanding the students’ background knowledge is needed to help learners infer some words from the passage. Some inferences that the learner makes when he or she hears or reads a particular word are derived from his or her relevant knowledge about the domain of the topic. Those students who do have relevant background knowledge about the topic will definitely benefit from it in vocabulary guessing exercises. Background knowledge facilitates inferences but other textual clues also help.

Overall, the students had relatively positive feedback on the passage *Palace Under the Nile Mud*. Most of the students categorized the passage as informative and easy to read and understand. They also mentioned that even though in some cases there were not enough context clues to help them infer the targeted vocabulary word, they were able to guess the word successfully by using their knowledge of the topic. In addition to that, most of the participants completed the task before the allotted time was over. Some of the students wrote:

“The passage was easy to read, I used different things to guess the words. But when I couldn’t find good context clues, the knowledge of topic was helpful. I guessed such words as *gilded*, *sumptuously*, *exclusively* using it.”

“It took me less time. The passage was ok. I felt that I knew the passage. It made easier to guess the words (not like in TOEFL, I don’t know the topics).”

“I didn’t have a hard time to guess the words. It was not difficult. Everything was clear.”

“I found the passage interesting and informative. It didn’t take me a long time to complete the task. I mostly used context clues, but sometimes the clues were not there. But I felt that I knew a lot about the topic, so it helped me to get those answers correctly.”

From the students’ comments on the more familiar passage, it is clear that text characteristics that evidently influenced learners in terms of their success in guessing meanings included the topic and informational content. Most of the participants felt comfortable while working on this passage. Topic familiarity gave learners the confidence to tackle the task and infer many of the unfamiliar words in the passage using the general knowledge they had about the topic.

On the other hand, the passage *Purple Spicy Fields of Kozani* that pertains to a less familiar topic was more challenging to the students. As indicated in students’ comments, none of the successfully guessed words in this passages were inferred using knowledge of the topic. Since the students had no or very limited knowledge about the topic of the passage, they used other strategies such as context clues, grammatical structures, spelling, and general background knowledge of science, history and other subjects to help them to infer the meaning of the unknown words.

The results of the present study have also confirmed the findings of other studies that there are high correlations between prior knowledge and speed and accuracy of study behavior (Dochy, Segers, & Buehl, 1999; Strangman & Hall, 2004) as well as student interest in a topic (Tobias, 1994). Most of the participants categorized the passage *Purple Spicy Fields of Kozani* as “informative” and “interesting.” However at the same time, they mentioned that they had to reread some sentences or paragraphs several times to try to guess the meaning of the unfamiliar words. One of the problems that the students encountered while reading this passage was time allotted for the task. Some of the students were not able to complete the task on time and asked for more time to finish answering the questions. They were given five minutes more to compete the task. Even though most of the participants had either no information or very limited information about the topic of the passage, they used other strategies to infer the meaning of unfamiliar words in context. The students

mentioned that when they were able to use the knowledge of the topic to guess the meaning, they heavily relied on local and global context clues such as synonyms, references, summaries, and knowledge of grammar. The participants also added that the passage had a great variety of clues that made it easier for them to guess the meaning of the unfamiliar vocabulary. According to Schouten-Van Parreren (1996), ideally there should be a so-called “pregnant context” to help the reader to infer the meaning of unfamiliar words. This is a context “that offers ample clues for finding the meaning of the new word” (p. 167). Elaborating on this idea, Schouten-Van Parreren (1989) argues that the more “pregnant” (compelling) the context is, the easier it is to guess the word. Beheydt (1987) states that “pregnant” semantic contexts provide sufficient contextual clues to call up the target words. They require the target word and make the meaning inferable. Thus the “pregnancy” of a context is to all intent and purposes the guessability of a word in that context. There are several contextual factors that affect the guessability, like the redundancy of the context, the occurrence of synonyms and antonyms or words that are typically associated with the word concerned.

Some students wrote:

“The passage was interesting. I learnt a lot of new things. But I couldn’t finish it on time. For some words there were no clues. I couldn’t guess. Very confusing.”

“The passage was not that difficult but it took me some time to guess some words. But I learnt what saffron is. I also tried to use the context clues to help me answer questions.”

“I found the passage a little bit difficult. I reread the paragraphs about how they clean the flowers several times. Some of the words were difficult to guess because there were no context clues. The topic of the passage was somehow also new to me.”

“Interesting. Learnt some stuff. But the teachers should give us more time. I couldn’t finish on time. Some words were not clear, no clues, not clear what it was about.”

“The passage was little bit difficult for me. I needed some extra time to finish the task. But the words were not difficult because there were many clues, it

just took me some time to find them.”

The evidence showed since the students possess no or relatively limited knowledge of the main topic of the passage *Purple Spicy Fields of Kozani*, they had some difficulties while trying to infer the meaning of some vocabulary items from the story. They were also slow to understand the information provided in the passage which hindered their chances to make successful guesses.

To sum up, it is true that the extent to which students guess the unfamiliar words in context is dependent on factors such as the skill of the teacher, the interest of the student, and the complexity of the content; however, the present study supports one compelling fact: what students already know about the content could be one of the beneficial indicators of how successfully they will be able to infer unknown vocabulary items from the context.

The present study has also revealed correlation between a person's background knowledge of a given topic and the time that the person takes to complete the task. In the present study, it took students less time to answer the questions about the passage that pertained to a more familiar topic and more time to answer the questions about the passage that pertained to a less familiar topic. Tests are time-sensitive, as reading comprehension itself is, because slowness implies mental overload and mental overload impairs understanding. Familiarity with a given topic allows the students to process the information faster. The mental speed that is bestowed by topic familiarity is important not only for completing the test on time, but also for getting the answers correct.

In the present study, students used some knowledge of the subject to help them use context clues to define unknown words. In other words, reading with understanding required some prior knowledge of the subject matter and structure of a text. Therefore, the results of the present study confirmed that when the participants read about familiar topics, they coped with unknown words in context better and faster. However, when they encountered unfamiliar vocabulary items in a passage, lack of knowledge about the topic may hinder students' ability to grasp the meaning of those words (Nation, 1990).

Inferencial Vocabulary Strategies

The second goal of this study was to determine what inferential strategies these Emirati learners of ESL used to infer the meaning of unfamiliar vocabulary items from the context. The results of the present study showed that participants used a variety of strategies to attack the unknown vocabulary items. After they identified the problematic words, they sometimes tried hard to recall the meaning of the words from their memory, sometimes decoded the components of the words for meaning, and sometimes inferred the meaning from the contexts using a variety of context clues and their own general knowledge. They didn't have the option to use a dictionary.

The results of the study revealed that learners used four different strategies when they sought the meaning of unknown words: context clues, topic familiarity and general background knowledge, knowledge of morphology, spelling and pronunciation of the words (see Appendix G). Further data analysis showed that learners drew on various knowledge and information – sometimes helpful, sometimes misleading – in the inferencing process. The strategies that these Emirati students used when they tried to infer unknown vocabulary in context varied. However, several overall observations could be made about commonalities. First, more contextual clues were used than other types of clues, and readers appeared to make reasonable inferences using these clues. Second, the use of word association clues was more likely to lead to incorrect responses or be unhelpful if it was not motivated by collocational awareness developed by exposure to English texts. Finally, the participants seemed to use fewer morphological clues than any other clues.

Figure 3 provides a summary of how learners dealt with the unfamiliar words they encountered while doing the two comprehension tasks and the number and percentage of successful inferences. Certain knowledge sources were used frequently by most learners, whereas some were used only rarely and by a few learners. The most used inferential strategy was context clues, 62% of the participants made use of this strategy. Both academic and nonacademic background knowledge was another source that was beneficial to 20% of the students. Knowledge of morphology helped 5.5% of the participants to guess the meaning of the unfamiliar words, while another 5% of learners used spelling and pronunciation of the words to guess successfully meanings of some unknown vocabulary items. Wild guesses encountered 7.5% of

total responses. Uses of each kind of knowledge in inferencing are exemplified below. It should also be noted that learners used multiple sources of information while working on each word. Detailed results are presented in Appendix H.

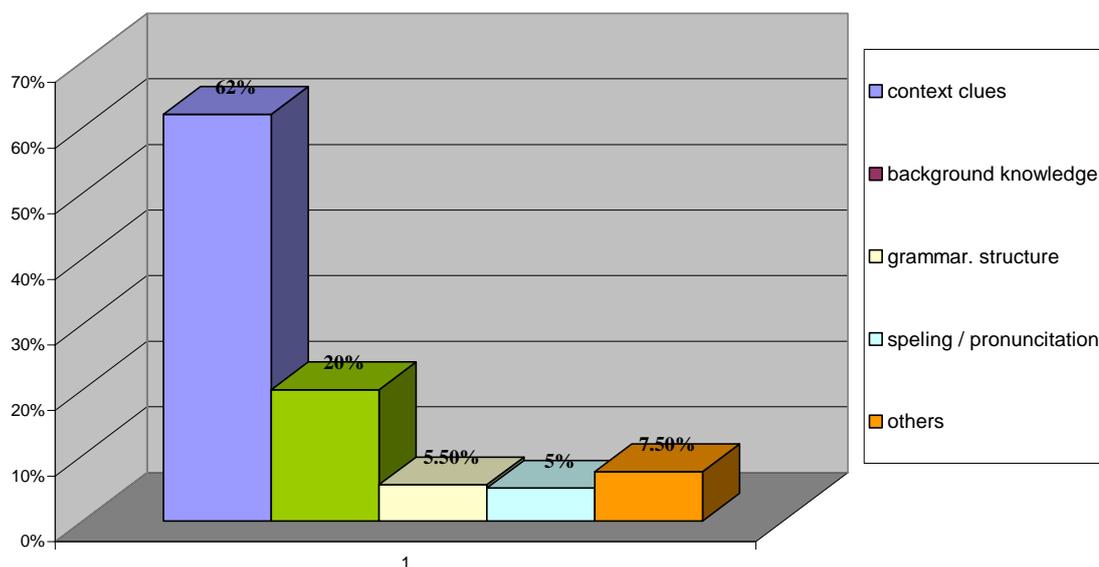


Figure 3: Summary of inferential vocabulary strategies

The following sections discuss the use of each of these categories in detail.

Context Cues

Using context cues to infer the meaning of unfamiliar words was the most successful and useful strategy. Learners used available information for inferring word meanings in 62% of the cases. They employed variety of context cues such as local context cues, synonyms, examples, comparison, and summaries in attempting to guess the meaning of targeted words.

Numerous studies suggest that when a context is rich with contextual clues, it will be sufficient to allow a learner to infer the full word meaning (Celce-Murcia, 2001; Hirano, 1983; Laufer, 1997; Nation & Meara, 2002). The local and global context cues that activate the readers' syntactic, semantic, and pragmatic knowledge in constructing the meaning of the text are held in working memory and constrain ongoing textual interpretations, and in turn, form meaning mappings for new words.

Hirano (1983) explored Japanese learners' use of contextual clues and its effectiveness. She examined five different types of contextual clues and found that the effectiveness of contextual clues ranked in the following order: contrast, experience,

synonym or restatement, the inference (cause and effect), and explanation clues.

Three contextual clues recurrently examined in the study were contrast, synonym or restatement, and cause and effect clues. In contrast and cause and effect clues, conjunctions are used to explicitly show the relationships between the clauses or sentences in the text; therefore, it is considered to be easy for learners to use them as a clue for inferencing the meaning of unknown words. In addition to this, antonyms are provided to show the opposing idea in the contrast clues. In restatement clues, synonyms are used as a clue. Conjunctions and synonyms are both important cohesive devices in English discourse. However, studies of Geva (1992) and Cooper (1983) suggest that second language learners may have difficulty in understanding these cohesive devices and there may also be a difference across learners' proficiency in utilizing these devices. These results are strongly supported by the present study. The participants used a variety of local and global clues to guess the meaning of most targeted vocabulary words. For example, the following words were successfully inferred by summarizing information or locating a proper context clue. Here are some students' explanations about how they were able to guess the meanings of some of the words. The students' responses are reproduced verbatim:

gilded

- | | |
|----------------------|--------------------------|
| A. covered with mud | C. covered with diamonds |
| B. covered with gold | D. covered with bones |

“I think *gilded* means *covered with gold*. This word describes floor and later in the story they say that a pouch of gold was added to mix to make a floor, so the floor had golden particles in it.”

“I am sure it is *B*, because it is written in the previous paragraph that a pouch of gold was added in the mixture that was used to make a floor.”

a pouch

- | | | | |
|----------|-------------|--------------|----------------|
| A. a bin | B. a pocket | C. a big bag | D. a small bag |
|----------|-------------|--------------|----------------|

“You cannot keep gold dust in a big bag. It must be something small, so I think the choice is *a small bag*.”

“I think the answer is *D* because it is mentioned in the passage that a pouch was used to store gold dust.”

copious

A. regular B. selfish C. generous D. scant

“In the passage it is written that Pusch was going to raise \$175,000; that’s a lot of money. In order to collect such an amount of money, people have to donate a lot. Therefore, I think *copious* means *generous*.”

“The word *copious* means *generous* because a patron was going to donate a lot of money.”

provincial

A. fashionable B. modern C. rural D. dirty

“I believe the answer is C because at the beginning of the sentence they say that it was a dull town with no activity. Other choices do not fit the description.”

“I think *provincial* means *rural*. It is being described as a dull town with no activity. Towns are small, and they are usually located somewhere in the suburbs, so *rural* is the best choice.”

mauve

A. navy blue B. dark yellow C. pale purple D. light green

“*Mauve* flowers are *pale purple* flowers, because in the paragraph before they say that the fields are covered with purple flowers.”

“I think *mauve* refers to *pale purple*. It was mentioned several times in the passage ‘purple fields’, ‘covered with purple flowers’.”

arduous

A. easy B. demanding C. comfortable D. unpleasant

“In the passage, nothing says that it was *unpleasant*. I think people were even enjoying together because they were chatting and laughing. But it says that it was hard work that needed a lot of effort, so I think the answer is *demanding*.”

deftly

A. gently B. unprofessionally C. clumsily D. skillfully

“In the passage, nothing says that it was *unpleasant*. I think people were even enjoying together because they were chatting and laughing. It was also mentioned that it was women’s job, which means they knew very well how to clean flowers. Women were also working like machines, very fast without thinking. Therefore, the answer is *D*.”

diminish

A. decrease B. increase C. change D. develop

“I believe the word *diminish* means *decrease* because in the passage the women were using only red threads, and they didn’t want any of the yellow ones because they would *diminish* the value of the flowers. If they didn’t want them, so the meaning is *decrease*.”

Some of the students used synonyms and comparisons to help them infer the meaning of unfamiliar words in context, for instance:

arduous

A. easy B. demanding C. comfortable D. unpleasant

“There is a clear clue in the passage that helped me guess the meaning. The sentence says that it is *hard, arduous work*. Because it is a *hard* work, the synonym is *demanding*.”

embroidery

A. needlecraft B. clay craft C. painting D. cooking

“I think the answer is *needle craft* because there are clues saying that it’s women’s job and it’s very delicate. Needle work is very delicate, not like cooking or other choices.”

accuracy

A. mistake B. confusion C. correctness D. haste

“The answer is *correctness*. The passage says that the women were working like machines. Machines do any kind of job exactly and correctly, they rarely

do any mistakes.”

In the present study, many students experienced difficulties inferring the meaning of words and were labeled by them as the most difficult ones: they were *radiant*, *retreat*, *generate*, *cartouche*, and *compost*. The students mentioned there were not enough contextual clues provided. In several cases the clues were relatively confusing which hindered in some way the participants’ ability to infer the meaning of the targeted vocabulary. However, “by chance” they were able to check the correct answers. For example, several students were very confused while trying to infer the meaning of the word *radiant*. They justified their selections by stating:

radiant

A. dusty B. dark C. bright D. dirty

“It’s very confusing. I don’t know. Anything could do. It’s mentioned that the place was covered in dust and dirt. Don’t know. Just circle C.”

“I can’t find a good clue. No sure. Just go for C (bright). Not clear. The story doesn’t have clear clues. I’ll check C.”

Other “most difficult words” were *retreat* and *generate*. The choices for those words were:

retreat

A. a dangerous place
B. a safe place
C. a miserable place
D. a peculiar place

generate

A. to expend
B. to affect
C. to destroy
D. to produce

The students justified their selections by stating:

“I don’t know about the word *retreat*. But it could be a *dangerous place*, because they wanted to destroy it. Or it could be *safe*, because he used to live there. Not sure.”

“The word *retreat* may be a *peculiar place*, because there were too many rooms made of gold. I think it also can be a *safe place* because the pharaoh lived there and stayed there.”

“I have not idea what a Lurex effect is, so I don’t know what to choose to guess the word *generate*. And the clues are not clear. But I tried to insert the choices, so “produce” works the best.”

“The word *generate* is confusing. I am not sure what it meant in the passage. I didn’t find any helpful clues. But I think D to produce because it makes sense in the sentence.”

It is usually assumed that a major factor affecting lexical inferencing is the ability to make effective use of contextual clues (Dubin & Olshtain, 1993; Haastrup, 1991; Huckin & Bloch, 1993; Nagy, 1997; Nagy, Anderson, & Herman, 1987; Nagy & Scott, 2000; Parry, 1993). However, there is conflicting evidence in the literature as to whether students who have stronger linguistic skills can benefit more from the use of context than those who have weaker linguistic skills (Frantzen, 2003). Some studies have found that no matter what level of language proficiency learners have, context may not help them much in successfully inferring the meaning of unknown words (Bensoussan & Laufer, 1984). Moreover, studies of Geva (1992) and Cooper (1983) suggest that second language learners may have difficulty in understanding the context clues and there may also be a difference across learners’ proficiency in utilizing different devices. To sum up, contextual inferencing was the most effective strategy used by most participants in attacking new words in the present study. It was one of the most practical skills students had applied while trying to infer the unknown vocabulary.

Background Knowledge.

It was discussed in the chapter two that learners’ familiarity with the theme and topic of one of the text was an important source of cues for inferring meaning of unknown words. However, the participants in the present study used not only topic familiarity but also their general background knowledge to guess the meaning of unfamiliar vocabulary. As numerous research shows vocabulary development and prior knowledge are closely correlated (Snow, Burns, & Griffin, 1998; Anderson, 2000; Read, 2000; Nation, 2001; Qian, 2002; Yopp & Yopp, 2000, 2006).

According to Schouten-Van-Parreren (1989), in the process of guessing, the reader performs a mental action on the word-form, making associations between the context and his or her own personal knowledge (both linguistic and knowledge of the world), thus establishing a cognitive foothold. Therefore, relating words to their existing knowledge is important (Vacca, Vocca, Gove, Burkey, Lenhart, & McKeon,

2003). This allows readers to connect their old and new information, which requires them to activate their background knowledge and cognitive processes. When skillful readers happen upon information or words they have not learned, they activate their background knowledge to relate the new information or words to previously acquired information or word knowledge (Duke, 2000; Reutzel & Cooter, 2007).

The results of the present study revealed these advanced Emirati ESL learners enjoyed reading because they had the ability to use their background knowledge in order to comprehend unfamiliar information, words, or concepts. They made inferences so that they could fill in gaps between new information and existing knowledge. For example, the participants used knowledge of different disciplines such as geography, science, and literature, and even the knowledge of their third language, French, to help them to read the cues and infer the meanings of the words correctly.

To infer successfully the word *compost*, some of the students used their knowledge of science. The following choices were given:

compost (n.)

- A. dressing B. fertilizer C. flowers D. garbage

One of the students provided the following explanation for his choice:

“The passage states that flowers have no value except as compost and women put it into a plastic washing basin. It cannot be garbage otherwise they wouldn’t put into the washing basin. I studied in science class about fertilizers could be leaves, dry grass and so on that help plants to grow. I believe this is the answer.”

Another student used her knowledge gained during her literature class to infer the meaning of the word *radiant*, even though she was feeling extremely confused while working on this vocabulary item:

radiant (adj.)

- A. dusty B. dark C. bright D. dirty

“I not sure about the meaning but I remember reading a story in literature in class in which the character entered the room having a radiant smile on her face and her face was shining with happiness. I know that information in the passage is different but that is the only connection I can make. The meaning is

bright.”

Several participants used their knowledge of their third language, French, to guess the meanings of the word *promenade*:

promenade (n.)

A. walk B. rest C. stroll D. dance

“The answer is walking. I think this is a French word, because two years ago when we had French at school, we read a dialogue where the characters were going *a promenade* in the evening. And I think they were going for a walk.”

“I remember this word from our French class. It means to go for a walk. The choice is A.”

To conclude, while reading passages, the students could connect information as much as possible to their prior knowledge. Readers had to read between the lines and relate the text information that had a less explicit explanation to their existing knowledge for better comprehension. The use of background knowledge assisted readers to grasp the content of texts, as they could refer to their prior knowledge in order to fill in gaps between old and new information. Another aspect of advanced learners was that they had rich experience and were able to establish their vocabulary knowledge by activating their background knowledge. Reading could be more concrete to them because they knew, or at least could infer, what a text was talking about.

Word Form Analysis

Learners’ knowledge of L2 word derivations such as stems, affixes, and grammatical inflections were other sources used in inferring the meanings of unknown words. There were 5.5% of the participants who applied their knowledge of morphology to successfully guess some of the targeted vocabulary items. Vocabulary is connected with grammar, so familiarity with grammatical patterns helped the participants in this study to guess the meaning of some words. For example, a word can be classified as a grammatical item or as a vocabulary item. “Beautiful” is a vocabulary item, and in functional grammar it is also an epithet in the nominal group “the beautiful girl” and reflects the speaker’s opinion of the person described.

Many words in a language are morphologically related, at different levels and with different strengths. The verb “to learn,” for example, is not only linked to inflectional forms like “learns,” “learned” and “learning,” but also to the noun “learner” and the adjective “learnable.” It would not be very economical if all these related forms had to be learned and stored separately. This would be unlikely considering the impressive number of words that can be composed using morphology and it demonstrates the power of morphological relations and shows the relevance of morphology for learners of a language: with a limited knowledge of morphological regularities, the learner can achieve a tremendous expansion of his or her vocabulary.

In the present study, morphology was a helpful tool to facilitate the inference of unfamiliar words in context. The research into the acquisition and retention of foreign and second language vocabulary has shown that newly acquired words are better retained if they were initially inferred through linguistic cues rather than through context (Haastrup, 1989). Drawing attention to the morphological structure of words in a second language may result in an increasing awareness of morphological complexity, which can be an important strategy of inferring and acquiring words. In “printed school English,” 84% of the prefixed words and 86% of the derivationally suffixed words are semantically transparent, i.e., their meaning can be inferred on the basis of their constituent morphemes (Nagy & Anderson, 1984). Obviously, morphological cues for the inference of words in a second or foreign language can be essential to vocabulary acquisition. This is confirmed by other studies, for instance Freyd and Baron (1982), which indicate that learners who are good at analyzing words are the more successful word learners.

In the present study, students showed the capacity to analyze words into their components. This capacity was evident from the observation that they could perfectly understand morphologically complex words that they had never seen before. The students used affixation to help them to infer some vocabulary items. A word is formed by affixation when a stem is combined with a prefix or a suffix morpheme. For example, English suffixes such as -ian and -ist are used to create words referring to a person with a specialty, such as “musician” and “scientist.” Such suffixes can give very specific evidence about the semantic role of the word.

At Al Ittihad Private School, Mamzar, teachers in primary and elementary schools pay a great attention to developing students' morphological knowledge. In the primary grades students begin to explore the semantic changes brought about with prefixes such as *un-*, *re-*, and *dis-* on base words. In the intermediate grades students continue to explore prefixes and an increasing number of suffixes and their effects on base words: *govern* (verb) + *ment* = *government* (noun). Common Greek and Latin roots begin to be explored, along with the effects of prefixes and suffixes that attach to them. These include, for example, *chron* ("time," as in chronology), *tele* ("distant, far," as in television), and *fract* ("break," as in fracture). A large proportion of the vocabulary of specific content areas is built on Greek and Latin elements. As this morphological knowledge develops, teachers can model how it may be applied to determining the meanings of unfamiliar words encountered in print.

The majority of English words have been created through the combination of morphemic elements, that is, prefixes and suffixes with base words and word roots. The learners in the present study showed understanding of how this combinatorial process works; they possess one of the most powerful understandings necessary for vocabulary growth. An understanding of how meaningful elements combine is defined as morphological knowledge because it is based on an understanding of morphemes. In the intermediate grades and beyond, most new words that students encounter in their reading are morphological derivatives of familiar words (Aronoff 1994). In recent years, research has suggested some promising guidelines for teaching the meanings of prefixes, suffixes, and word roots as well as for the ways in which knowledge of these meaningful word parts may be applied (Templeton 2004). Word roots such as *dict*, *spect*, and *struct* are real minimal units in language that remain after all prefixes and suffixes have been removed but that usually do not stand by themselves as words as in prediction, *inspection*, and *contract*.

For example, the students used this strategy and their background knowledge to infer the meaning of the word *patron*. Several weeks before this research was conducted, a competition for Quran recitation was announced. The school was covered with promotion posters, and the students also received flyers on which the requirements and conditions of the competition were presented. The competition was organized "under the patronage of His Highness Sheikh..." and carried the name of

the person who had organized the contest. When the participants came across the words “patron” in the passage they were able to relate it to the word “patronage” and to guess the meaning of the word correctly. The participants justified their choices by stating:

A patron

A. an employee B. a pharaoh C. a saint D. a sponsor

“I think the word *patron* means the one who supports. I saw on the poster downstairs the ad that says that the programme was organized *under the patronage of Sheikh*.... These two words have the same root; I think they mean the same. But I am not sure.”

“Whenever an important event is held in Dubai, they always write that it is under the *patronage of one of the Sheikhs* who supports the whole event. So *patronage* is a thing, and *patron* may be a person who supports this event.”

“I heard many times the word *under patronage of so and so*, so *patron* could be a person who organized and supports the thing with money.”

“Last week we received a flyer about the Quran competition *under the patronage of Sheikh*.... I think *patron* is the same.”

Several participants used their knowledge of geography or history in combination with morphology to infer the meaning of the word *provincial*. The following choices were given for this word:

A. fashionable B. modern C. rural D. dirty

The students provided the following explanations for their choices:

“In the history class, I studied about the Ottoman Empire and how they conquered other countries and made them their provinces. It’s like a smaller part of a large country and those were usually not very modern. *Province* and *provincial* have the same root so must have the same meaning.”

“I remember this word from geography class. We read about different provinces in some counties. Those were small cities or towns. I think *provincial* comes from *province* and it means *rural*.”

One of the students used a quite interesting explanation while analyzing the word *foreman*. He stated that the prefix *for-* helped him to infer the meaning of the above word. The following choices were given:

- A. a supervisor B. a worker C. a tourist D. a thief

The student explained this choice by stating:

“I am not sure what the word could mean because all the choices are possible. But if you divide the word into two parts, *for+man*, it seems to me as the word could mean some kind of boss because he is for man, like in charge of men. I don’t know but it makes sense to me.”

Other participants used knowledge of suffixes to successfully infer the meaning of the word *to generate*:

- A. to expand B. to affect C. to destroy D. to produce

The students justified their selections by stating:

“The word *to generate* means to produce. I know the meaning of *generation* which is a noun. It means like *creation*.”

“I am not sure but I think that the word *to generate* is similar to the word *generation*. The base is the same. So they mean the same. It means *to produce*.”

As the examples show, students used three skills in order to make use of affixation: breaking a new word into parts so that the affixes and roots were revealed; knowing the meaning of the parts; and being able to connect the meaning of the parts with the meaning of the word.

To sum up, the results of the present study confirmed that knowledge of lexical roots can assist in vocabulary development in that it helps learners predict or guess what a word means. The research revealed that learning to detect morphemes which recur in a number of words is important since this knowledge can help learners identify at least part of the meaning, thus assisting them in guessing from context the meaning of apparently new vocabulary items. Contextual information and word morphology were useful sources that students used to infer the meaning of the targeted vocabulary in the current study.

Spelling and Pronunciation

Spelling and pronunciation of the words was another strategy used successfully but not frequently by the students to guess the meanings of unfamiliar words. Spelling knowledge applies not only to the ability to encode words during

writing; it also underlies individuals' ability to *decode* words during the process of reading (Templeton, 2003a, 2003b). Students' spelling knowledge might be, therefore, a powerful foundation for their reading and their vocabulary development. This latter aspect is linked to the role that morphological knowledge plays, as discussed in the previous section. Words that are related in meaning are often related in spelling, despite changes in sound. Among intermediate students, examination of how spelling patterns reflect meaning leads to vocabulary growth. To get a sense of how the connection works between spelling and meaning, examine the following words: *province provincial*; *generate/generation*; and *compete/competition*. Because the words in each pair are related in meaning, the spelling of the underlined sounds remains constant; although the sound that letters represent may change in related words, the spelling usually remains the same which revealed their relatedness. Once students understand the spelling-meaning relationships among words, they can learn how the spelling or structure of familiar words can be clues to the spelling and the meaning of unknown words, and vice-versa. This not only helps learners to guess the meanings of unfamiliar words but also expands the students' vocabulary.

The word that was guessed successfully using this strategy was the word *novice*, and 36% of the students were able to infer the meaning of this word. These participants found that the word *novice* somehow "looks like" or "sounds" similar to the word *new*. Using this association, they came out with the right answer to the question. The following choices were given:

novice

A. trained B. professional C. dirty D. beginner

Some students wrote:

"I am not sure but I think the word means *the beginner*. This word looks like the word *new*. But I could be wrong."

"Maybe it has something to do with *new*. In this case it can mean *the beginner*."

"The writer was doing this task for the first time, so it was difficult for him. And I also think this word sounds like *new*. So I think the answer is *beginner*."

Another case when the participants used spelling, pronunciation, and their ability to recognize borrowed words was the word *archives*. The following choices were given:

archives

A. records B. messages C. property D. letters

Some students justified their selections by stating:

“I am not sure but the word *archive* looks and sounds like an Arabic word...so I know the meaning in Arabic. I think it means the same in English. So the answer is *records*.”

“I do not know whether this word has anything to do with the Arabic word *archive*. It looks like it and I think it sounds the same. Therefore, the meaning is *records*.”

“I know the word in Arabic; it means the place where the old documents are stored or some kind of old papers.”

“I heard it in Arabic but never met it in English.”

“...I saw it many times in department of traffic, but it was in Arabic. I think it could have the same meaning in English.”

The students found a connection between L1 and L2 to guess the meaning of this word. They used their L1 to help them successfully infer the word *archives* even though this word takes its origin from Greek *ta arkheia* which means *public records*. By trying to pronounce this word, they were able successfully to guess the meaning of this word.

There might be several reasons why the students did not use these tools more often. Spelling and pronunciation in English can be confusing even for native speakers of English. This is partly because English has words derived from many different languages with many different spelling systems - such as French, German, Latin and Greek. Thus, a French native speaker learning English as a second language probably will benefit more from orthographic decoding than an Arabic learner since French and English have a lot of inter borrowing. There are many words in both languages that are spelt similarly and have the same meaning, for example, *delicious* (English) – *delicieuse* (French); *odor* (English) – *odour* (French); *genius* (English) – *genial* (French); *float* (English) – *flotter* (French), etc.

However, Arabic is different from English in many ways. Differences range from phonological, morphological and structural difficulties that face Arabic speaking students while learning English have been well documented (Ibrahim, 1986, 1989; Suleiman, 1985, 1990; Zughoul, 1980). There are unique aspects of the Arabic language which pose special transfer problems when Arab speakers learn English (Thomson-Panos & Thomas-Ruzic, 1983). The orthographies of both languages are different and tend to pose difficulty in pronunciation and spelling (Ibrahim, 1986, 1989). For example, the Arabic alphabet is semitic and written from right to left; there are 28 letters in the Arabic alphabet. English uses the Latin alphabet and has both printing and writing, but Arabic has only writing; it is a cursive alphabet with letters always connecting to one another. There are no capital letters in Arabic. Arabic letters can have as many as 4 different shapes, depending on where the letter occurs in the word. English has capital, or upper case, and lower case letters. So there can be as many as four letter shapes in English, too. For example a capital *G* looks nothing like a lower-case *g*. Moreover, Arabic has one letter for each sound - so spelling is a lot easier than in English. You hear the sound; you know which letter to use. Moreover, the Arabic and English phonological systems vary extensively, not only in the range of sounds used, but also in the relative importance of vowels and consonants in expressing meaning (Santos & Suleiman, 1993). While English has 22 vowels and diphthongs and 24 consonants, Arabic has only eight vowels and diphthongs and 32 consonants. While there are no similarities between the Arabic and English writing systems, Arabic spelling within its own system is rather simple and mostly phonetic. Letters stand directly for their sounds. As my experience at school show Arabic speakers attempt, therefore, to pronounce English words using the same phonetic methodology. To sum up, the participants in the present study did not use spelling and pronunciation strategy often due to the great differences between their L1, which is Arabic, and L2, which is English.

Summary

Vocabulary is indeed a sizable component in second or foreign language learning and often students are overwhelmed with the amount of vocabulary that they need to know. Students feel especially frustrated during the exams when they are

asked to guess the meanings of unfamiliar words in context. This task is considered to be challenging and most difficult even for advanced students. The present study investigated whether background knowledge, topic familiarity in particular, plays an important role to help students infer the meanings of unfamiliar words in context. Moreover, it investigated what strategies the students employed to guess the meaning of targeted vocabulary items.

The results of the study revealed that learners' familiarity with the theme and topic of the text was an important source of clues for inferring the meanings of unknown words. While reading the passage, *Palace Under the Nile Mud*, pertaining to a more familiar topic, students guessed 70% of unfamiliar words correctly. Moreover, most of them enjoyed the theme of the story about Egypt since they were able to relate to it. The majority of the students gave favorable feedback on the text that was used for this study. Thus, the text type and theme evidently influenced learners in terms of both their motivation and their success in lexical inferencing. Based on this observation it is recommended that teachers should be selective in terms of the text used in the inferencing task. Since culture is intertwined with language teaching, second language teachers must make sure that students are culturally-familiar with the text they give to students for performing a lexical inferencing task. The material should be tailored to all level learners including adapting the text to make it more comprehensible to learners.

On the other hand, while reading the passage, *Purple Spicy Fields of Kozani*, that pertains to a less familiar topic, learners inferred only 57% of the targeted vocabulary items correctly. The majority of the students did not respond positively about the passage. They mentioned that they couldn't relate to the topic of the passage since they had little or no information about the issues discussed in the passage. Moreover, some students were not able to complete the task on time and requested extra time to finish the exercises.

The present study revealed that high-performing L2 learners seem to enjoy reading because they have the ability to rely on their background knowledge in order to comprehend unfamiliar information, words, or concepts. They make inferences to fill in gaps between new information and existing knowledge. Vocabulary and prior knowledge are closely correlated. Stepping back to look at the whole picture of

expository texts with their text frameworks also helps readers better understand the content. On the other hand, struggling readers face challenges in understanding texts because they have limited experience associated with vocabulary or concepts they encounter. This causes them to lose their motivation to read. Teachers should pay close attention to background knowledge when working with L2 learners. Although many of them may have been studying English for years, they may not be familiar with or have knowledge of aspects of some topics or subjects. That means even common knowledge must not be assumed. The teachers should check in with learners frequently to be sure they understand and find ways to fill in this kind of background knowledge promptly and sensitively.

Another factor that has been addressed in this research is guessing the meaning of unfamiliar words from context. Guessing from context is a complex activity drawing on a range of skills and types of knowledge. It is worth bearing in mind that it is a subskill of reading and listening and depends heavily on learners' ability to read and listen with a good level of proficiency. Learning a complex guessing strategy will not adequately compensate for poor reading or listening skills and low proficiency. Developing these reading and listening skills is the first priority.

The results of the present study showed that these advanced Emirati L2 learners used a variety of inferential strategies to help them infer the meanings of the unfamiliar words in context. Participants used context clues (62%), grammatical and morphological knowledge (5.5%), background knowledge (20%), and spelling / pronunciation (5%) to guess the meanings of unknown words. The present study revealed that contextual inferencing is an important skill used by most readers in attacking new words. It is closely related to comprehension and this is one of the most practical skills students learn. Different clues that learners used to guess the meaning of unfamiliar words have several uses in reading. The four uses named below are of special importance to readers of second and foreign languages: First, context clues help readers to derive the pronunciation and meaning of a known word from its uses in a sentence. Second, context clues also help to determine the pronunciation and meaning of an unknown word from its use in a sentence. When context is used for this purpose, a student reads around an unknown word, gets the general meaning of the sentence and then guesses at the pronunciation and meaning of the unfamiliar word

from the way it is used. Third, context determines how the access of similar words used in different contexts or with different grammatical usages affects their meanings. Fourth, context provides clues to the meanings of words that vary according to the subject area in which they are used. Context clues can function only if the material is suited to the reader in terms of difficulty and familiarity or interest. If the context is too involved, or if there are too many unknown words, context is of little value. When the material deals with unfamiliar concepts or is dry and dull to the reader, he or she is not likely to be able to develop a continuous line of thought suitable for anticipating an unknown word.

To sum up, topic familiarity had a positive impact on lexical inferencing for these learners. There were substantially more correct inferences when reading about a more familiar topic compared to a less familiar topic. Having appropriate background knowledge may have helped learners to more efficiently direct attention to input while reading the more familiar story. The local and global context cues that activated the readers' syntactic, semantic, and pragmatic knowledge in constructing the meaning of the text were held in working memory and must have constrained ongoing textual interpretations, and in turn, form meaning mappings for new words. These results expand upon previous research reported above that observed learners' use of background knowledge during think-aloud tasks in lexical inferencing research paradigms, and those that studied effects of topic familiarity and semantic richness on discrete sentence processing. The results also increase our understanding of the strong role of background knowledge in vocabulary development that begins during reading by studying learners' initial meaning assignments to new words.

CHAPTER FIVE

CONCLUSION

Summary of Findings

The present study was designed to identify which inferential strategies advanced Emirati L2 learners use to infer the meaning of unfamiliar words from context and whether topic familiarity has a significant effect on successful word inferencing. To comprehensively investigate the first research questions, students were asked to read two expository passages, one pertaining to a more familiar topic and another pertaining to a less familiar topic. Then, students were requested to infer the meanings of targeted vocabulary words by answering multiple-choice questions. The correct answers of the students were thoroughly examined. To investigate the second research question, the participants of the study filled in a questionnaire that asked them to explain what helped them to infer the meaning of unfamiliar words from the context. Their responses were carefully examined.

The findings revealed that the background knowledge, topic familiarity in particular, had a significant effect on successful vocabulary inferencing of unknown words from context for those learners. The participants of the present study made more successful inferences while reading the passage that addressed a more familiar topic. They also gave positive feedback about the passage, mentioning that they didn't encounter a lot of problems while working on the questions for that passage; and they were able to finish their task on time. On the other hand, while reading the passage addressing a less familiar topic, the students made fewer successful guesses. They also found the passage to be more difficult to understand and didn't not finish their task on time.

When the learners were not able to use knowledge of the topic to help them infer the meanings of unfamiliar words, they used general and linguistic knowledge to guess the meanings of the words. In the present study, most of the students used context clues as a tool to complete the task. Context clues are hints about the meaning of an unknown word that are provided in the words, phrases, and sentences that surround the word. Some of the words were inferred by using knowledge of suffixes and prefixes. As they are meaningful units, the ability to recognize these parts of the

words and elaborating on them facilitated successful guessing of the vocabulary. Moreover in a few cases, students used spelling and pronunciation to infer the meanings of the targeted vocabulary successfully.

Analyses of the study indicated that different participants can act on different linguistic levels. In some cases they used syntactic clues to find out the grammatical structure of a sentence. They also used semantic clues to explore the immediate or wider context of the unknown word in order to find its meaning. Others based their guesses on lexical clues to inspect the word form in order to derive its meaning. Sometimes, though not always, they acted on stylistic clues to appreciate the stylistic usage of a word.

One must not, however, that for these strategies to work a certain level of proficiency in L2 must be achieved by a learner. He or she should be able to grammatically analyze and parse sentences and, at the same time, he or she should be acquainted with the most frequent syntactic patterns in the target language. Acting on the semantic and lexical levels the subject is required to know a fair number of words in the target language. How large this number has to be is difficult to say, however, since this also depends on the general difficulty of the text under consideration. Apart from these kinds of basic knowledge the students must acquire a coherent framework suitable for the guessing activity itself.

The present study of contextual inferencing strategies can provide insights into the relative importance of vocabulary teaching in second language acquisition. Knowledge of processes underlying the learners' use of vocabulary may support teaching, as it will make clear on which areas of vocabulary language teaching should concentrate and will help determine the best way of teaching vocabulary. Secondly, this line of study could support the work that is being done in the area of vocabulary acquisition. As many words are related by form and/or by meaning, studying the nature of these relations may shed new light on the processes and factors that are relevant to the acquisition of vocabulary. Thirdly, the study of L2 morphology may contribute to general theories of second language acquisition. The role of the learner's background knowledge, for instance, is one of the factors that will play a major role in the study of both L2 vocabulary and other areas of SLA research, and findings in the field of vocabulary could be generalized to the other fields.

Finally, insights in the field of contextual inferencing may contribute to models of vocabulary processing in L1 and L2 and models of the bilingual mental lexicon. Such descriptive studies as this when compared with others do allow discovery of commonalities which may help to develop a theory of lexical inferencing. But a better approach than performing more descriptive studies may be to create (even if initially simplistic) models of the lexical phenomena that we wish to examine, develop hypotheses from the models, and then test these against data from more carefully controlled experiments. The information from this study and the others reported here may be useful in the development of such a model. Potentially fruitful areas of investigation are the connection of individual purposes and learning preferences with specific strategy sets in word inferencing, the examination of the effect of task on inferencing, effectiveness of various combinations of strategies in inferring from text, the effect of teaching strategies on their use in - and out of the classroom and, more ambitiously, the connection of strategy use and the structure of the L1-L2 mental lexicon with word retention.

A review of research combining the perspectives of cognitive psychology and L2 acquisition will probably be vital in developing such models. There is a large body of psychological literature on L1 vocabulary which has been tapped by authors such as Ellis (1996), who are beginning to explore these cognitive aspects of L2 vocabulary acquisition.

Pedagogical Implications

The findings of the present study suggest that particular consideration should be given to the teaching of inferential strategies and expanding learners' background knowledge to improve their ability to infer the meanings of unfamiliar words from context. The results of the present study show that background knowledge, topic familiarity in particular, played a significant role in helping these Emirati L2 learners to guess to meaning of the targeted vocabulary. It also reveals that advanced Emirati students used general background and linguistic knowledge to infer the meaning of unknown words from the passages. In this chapter some of the pedagogical implications and recommendations for teaching inferential strategies and how to expand learners' background knowledge are discussed in detail.

Importance of Teaching Vocabulary

Nowadays it is widely accepted that vocabulary plays an important part in language teaching and should be at the centre of language teaching, because although very little can be conveyed without grammar; nothing can be conveyed without vocabulary (Wilkins, 1972). There is no doubt that vocabulary acquisition is one of the most important needs of any ESL/EFL learner. Understanding key notions of how vocabulary is acquired can help language teachers deliver more realistic and effective vocabulary teaching. For this reason, it is crucial to introduce our students to vocabulary learning strategies (VLS) so that they can do this more effectively.

Advanced learners can generally communicate well, having learnt all the basic structures of the language. Students have a receptive knowledge of a wider range of vocabulary, which means they can recognize the item and recognize its meaning. However, they need to broaden their vocabulary to express themselves more clearly and appropriately in a wide range of situations.

Several researchers have emphasized the importance of teaching vocabulary and pointed out that a limited vocabulary is a barrier that prevents students from learning a second or foreign language. If learners do not know how to expand their vocabulary, they gradually lose interest in learning. As Krashen (1989) puts it “when students travel, they don’t carry grammar books, they carry dictionaries” (p. 259). Widdowson (1983) also reminds us that “the more one considers the matter; the more reasonable it seems to suppose that lexis is where we need to start from, the syntax needs to be put to the service of words and not the other way round” (p. 92).

Teaching to Infer the Meaning of Unfamiliar Words in Context

It is not possible for teachers to provide specific instruction for all the words their students do not know. Therefore, students also need to be able to determine the meaning of some words that are new to them by using effective word-inferential strategies. Nation (2001) points out that commonly used vocabulary strategies seem to be simple memorization, repetition, and taking notes on vocabulary, and these more mechanical strategies are often favored over more complex ones requiring significant active manipulation of information (imagery, inferencing, keyword method).

According to Nation (2001) shallower activities may be more suitable for beginners whereas intermediate or advanced learners can benefit from context usually included in deeper activities. Research into some deeper VLS, such as forming associations, guessing the meaning of the word from context, and using the keyword method have shown that active management of strategy use is important. In other words, rather than being used individually, multiple strategies used concurrently are more successful in inferring meanings from contexts.

Guessing from context is a complex activity which draws on a range of skills and types of knowledge. It is worth bearing in mind that it is a subskill of reading and listening and depends heavily on learners' ability to read and listen with a good level of proficiency. Learning a complex guessing strategy will not adequately compensate for poor reading or listening skills and low proficiency. Developing these reading and listening skills is the first priority.

When learners are given training in guessing from context, they should work with texts where at least 95% of the running words are familiar to them. This will allow them to have access to the clues that are there. In addition, the words chosen should be guessable. Not all words have enough clues: adjectives are usually difficult because they enter into few relationships with other words; nouns and verbs are usually easier. Training in guessing should be given plenty of time. In high school, for example, it could be practiced three or four times a week for about ten minutes each, for at least six weeks, preferably longer. The aim of the practice is to get learners guessing quickly without having to go deliberately through all the steps. Fraser (1999) found that making L2 learners familiar with the strategies of ignore, consult, and infer, using about eight hours of instruction, resulted in a decrease in the amount of ignoring and an increase in the amount of inferring. In Fraser's (1999) study, the success rates were over 70% for consulting a dictionary and inferring from context, if partially correct inferences were included. A further eight hours of instruction of linguistic context clues helped maintain the success rate of inferring especially for inferring where learners created a paraphrase for the meaning of the unknown word. Involving the class working together with the teacher, in groups, pairs, and then individually, can focus on subskills: determining parts of speech, interpreting conjunction relationships, and doing word-part analysis. Fraser (1999) points out that

training should also involve going through all the steps, gradually getting faster and faster. The teacher can model the procedure first, gradually handing over control to the learners. Learners can report on guessing in their outside reading and listening and others can comment on their attempts. There can be regular guessing-from-context tests using isolated sentences and connected texts. Learner improvement on these tests can be recorded as a means of increasing motivation.

Teachers should be able to justify the time and effort spent on a guessing strategy to themselves, their learners, and other teachers. These justifications could include: the value of the strategy for both high-frequency and low-frequency words; the strategy accounts for most vocabulary learning by native speakers; the number of words that can be dealt with and perhaps learnt through this strategy; the effectiveness of the strategy; the benefits of the strategy in contributing to reading and listening comprehension; and the fact that although learners differ widely in their control of this skill, this training can narrow these differences.

Teachers should also be able to look critically at the various activities suggested for improving guessing (Dunmore, 1989; Honeyfield). In any list of vocabulary strategies, guessing from context would have to come at the top of the list. Although it has the disadvantage of being a form of incidental learning (and therefore being less certain) and not always being successful (because of lack of clues), it is still the most important way that language users can increase their vocabulary. It deserves teaching and learning time. A well planned vocabulary development programme gives spaced, repeated attention to this important strategy.

Vocabulary Inferencing and Knowledge of Morphology

Word parts include affixes (prefixes and suffixes) and roots. Knowing some common affixes and roots can help students learn the meaning of many new words. For example, if students learn just the four most common prefixes in English (un-, re-, in-, dis-), they will have important clues about the meaning of about two-thirds of all English words that have prefixes. Prefixes are relatively easy to learn because they have clear meanings (e.g. un- means not and re-means again); they are usually spelt the same way from word to word; and of course, they always occur at the beginning of words. Allowing for help from context and knowledge of the less common

meanings of the prefixes, approximately 80% of prefixed words could be understood (Nation, 2001). Learning suffixes can be more challenging than learning prefixes. This is because some suffixes have more abstract meanings than do prefixes; e.g., learning that the suffix -ness means “the state or quality” might not help students figure out the meaning of kindness.

About 60% of all English words have Latin or Greek origins. Nation (2001) states that advanced learners of English can usefully study small numbers of roots with a prefix or a suffix. One way of checking whether these roots are worth learning is to try to make substitution tables around them. If the stem can combine with many affixes to make a large number of words, it deserves attention. Word roots are found commonly in content-area school subjects of science and social studies. As a result, Latin and Greek roots form a large proportion of the new vocabulary that students encounter in their content-area textbooks. Teachers should teach the word roots as they occur in the texts students read.

Expanding Students' Background Knowledge and Choosing the Reading Material

The present study revealed that topic familiarity had a positive effect on inferencing of unknown words from context. The results revealed that the advanced Emirati learners of English used their knowledge of the topic to guess the meaning of unfamiliar words successfully. To deal with vocabulary issues teachers could use the pre-reading stage to pre-teach essential lexis, or use some (unknown) words from a reading passage as part of the procedure to create interest and activate students' schemata. Teachers could also devise exercises practicing contextual guessing that could be done during the post-reading stage, or set a time limit or a word/phrase limit for students to ask for the meaning of the words they do not know. Also, remembering that reading is a skill the learners take “outside” the classroom, instructors should introduce authentic texts in the lessons and encourage them to read extensively, as this is the best possible way for students to develop automaticity, i.e., the automatic recognition of words when they see them.

To tackle the problems with unfamiliar topic and genre (except for choosing a text appropriate to our students' interests in the first place), teachers could use various ways to stimulate interest in the topic during the pre-reading phase, e.g., by showing

them visual or aural stimuli and discussing the topic, by having them look at the headlines and predicting what story might follow before they read it, by asking them about their own experience in relation to the topic, etc. Teachers should use techniques that support the learning preferences of their students. Creating interest in the topic/genre is concurrent with activating learners' schemata. The more alien the topic and genre are to our learners, the more time will have to be spent on creating interest and activating their schemata. As teachers and learners progress with their course of study, different genres and topics should be introduced to broaden the learners' horizons and reading experiences.

Finally, students' negative expectations could be counteracted in all three stages of a reading lesson. First, this could be done by choosing topics that interest our students and getting them personally involved, e.g., "interacting" with the writer by expecting questions to be answered, reflecting on expectations at every stage, anticipating what the writer will say next, etc. Second, during the while-reading stage, it can be done by agreeing on both general and specific purposes for the students' reading. If the students know why they are reading, they will be able to choose how to approach the task and maximize their chances of achieving the purpose of reading. They can be put in pairs or groups to share responsibility for the task, or the jigsaw reading technique could be used to emphasize the interactive side of reading. Third, in the post-reading task, it can be done by comprehension questions pitched at the right level of challenge, starting from the overall meaning of the text, its function and aim, rather than working on vocabulary or more specific ideas straight away (Grellet, 1981). Another way to check comprehension is to ask learners to do a task after reading, e.g. assembling an object from a set of instructions. Successful reading enables a certain task to be completed and it is what most people do in their L1 after reading. Moreover, it enables integrating other skills into reading, which is important from the pragmatic point of view - in real life we seldom read something and not talk or write about what we have read.

Another important factor is the variety of reading material. The students must be exposed to different genres during their classes. For example, many early childhood educators ignore the teaching of expository texts (Duke, 2000). Expository texts include biographies, essays, how-to books, encyclopedias, reference books,

experimental books, scientific reports, newspaper articles, and so on (Reutzel & Cooter, 2007). The neglect of teaching of informational texts causes a lot of children to have difficulties in understanding these materials. The neglect of learning through expository texts in the early grades affects children's reading success after the third grade. Providing children with more opportunities to explore expository texts should be encouraged (Snow, Burns, & Griffin, 1998; Yopp & Yopp, 2000, 2006).

It is also essential for the teacher to select appropriate texts: Criteria include interest and relevance of topics, as well as a manageable difficulty level. For example, a rather technical, science-oriented text about environmental issues can be of little interest and considerable difficulty for some students who have no background about the subject, and they may also show some lack of persistence in trying to understand it. Theme-related texts could be useful because the words appear repeatedly and take on salience and importance, thereby enriching the meanings from varied contexts.

Another issue is the importance of setting appropriate tasks – that is, tasks that assure that learners do what they need to do in order to develop their vocabulary knowledge (i.e., involving deeper, varied processing): In this case it would mean setting tasks requiring word-level as well as global text comprehension and calling attention to words of particular instructional interest. However, the teacher should remember that not all contexts are equal. Haynes (1993) found that guessing which only required reference to immediate sentence context was more effective than guessing which depended in textual elements farther away from the target word. In other words, guessing using local context is superior to guessing using global context. Because of this, Haynes believes that guessing should be encouraged if clues are in the immediate context, but that the teacher should also teach when “not to guess.” Accordingly, if guessing requires global context, the guessing strategy should be abandoned and the dictionary or other resources should be used instead. Finally, it is important to build learners’ awareness of how new vocabulary knowledge may be accessed through reading and related activities.

Limitations and Suggestions for Further Research

There are some important limitations to the present study. First of all, the bulk of the data in the study derives from self-reports of the students. As pointed out by

several researchers (Catalan, 2003; Fan, 2003; Gu & Johnson, 1996), quite obviously, by means of a questionnaire one cannot observe the vocabulary strategy the students use to help them guess the meanings of the words from the context. Instead the instruments enable the researcher to look at the perceptions such as beliefs and thoughts of the students about strategies they are employing. Other research instruments such as a think-aloud protocols and observation need to be implemented to gain more information about students' vocabulary behaviour.

Second, some of the test words might not have been effective for this particular task. Although the test words were pre-piloted, it seems that a few participants in the advanced level class knew one or two of the test words. This, of course, can affect the validity of the results. In any case, more lexical items should be tested on the students (also different word classes) in order to examine patterns of possible combinations of knowledge sources used by the participants.

In addition, the present study did not aim to uncover the differences in the preferences between male and female students. Moreover, the study focused on one age group only. This could, therefore, be a topic of further research along with observing the strategy use of a wider age group including high school and university students. Further research is also needed to determine the relationship between success in learning English and the use of vocabulary guessing strategies, as well as the correlation between different learning styles and strategy use.

Previous studies have suggested that an important factor affecting success in lexical inferencing strategy use is the learner's language proficiency (Kern, 1989). However, language proficiency is multifaceted, and it is possible that some dimensions of that knowledge may play a greater role than others in helping the learner to infer the meaning of an unfamiliar word from context. Thus, further research is needed to investigate the relationship between the different components of language proficiency and lexical inferencing, for example, the role of size of vocabulary knowledge versus depth of vocabulary knowledge in deriving word meaning from context. Size and depth of vocabulary knowledge have been shown to differentially affect L2 reading comprehension (Qian, 2002). Are these variables also different in their contributions to lexical inferencing strategy use and success? Further research is also needed to address the role of other dimensions of linguistic

knowledge, such as grammatical knowledge, morphological knowledge, and discourse knowledge, in L2 lexical inferencing.

To conclude, teaching L2 learners how to infer unfamiliar vocabulary in context constitutes an area of continual concern for language learners since they are repeatedly faced with the need to have a sufficient level of vocabulary and to be equipped with the necessary information to be able to use them productively. Although no course of instruction could possibly furnish all the insight that a second language learner would need in order to successfully learn and use every new vocabulary item, teaching how to guess unfamiliar vocabulary items may help to give learners insights about the word system in English. This would provide valuable information that they would probably not acquire on their own and improve their understanding of accuracy as well as semantic and syntactic appropriateness of words in this system. We need to investigate how we can teach this vocabulary strategy most effectively and find out the problems surrounding such a decision. This needs to be the concern of all second language educators. Despite the limitations, it is hoped that the current research has provided some valuable insights into the ways advanced Emirati learners of English guess the meaning of unfamiliar words in context.

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APPENDIX A

A passage pertaining to a more familiar topic

Palace Under the Nile Mud.

An archaeologist's dream came true when the remains of a pharaoh's palace were found, says Hans Dahne...

The 3,250-year-old palace of Pharaoh Ramses II has been discovered under 60 centimeters of Nile River mud, and the find appears to demonstrate that the ancient Egyptians lived even more **sumptuously** than had previously been believed.

Head of the German archeological team Edgar Pusch describes the high-point of his career. "It was seven o'clock in the morning on December 6. A **foreman** said, 'there is something that looks unusual'. I thought that it was just a **cartouche**. You can read it after all. We used a blower to dust away the quartz grave. First a **radiant** Egyptian blue, then yellow and red appeared.

"The name began with Ra. It was a bolt from the blue. I jumped up, did a dance and shouted. The whole dig came to a standstill and everyone wondered what had happened."

After the dream find, Pusch says he paid the Egyptian workers double-time for the day. The 25-by-10-centimetre cartouche of the name Ramses II enabled the 52-year-old archeologist to solve the riddle of the unusual palace under the mud of the Nile.

For more than 10 years, Pusch had been digging some 100 kilometers north of Cairo, in Pi Ramesse, the capital of the builder pharaoh who ruled from 1290-1224 BC.

He thought he was on the right track when he **stumbled** upon a **gilded** floor.

"After two months of work we have exposed 180 square meters and there is no end in sight," he says. The floor provides one small insight into the indescribable wealth of the Egyptian pharaohs.

"The master builder would have poured a **pouch** of gold dust into the plaster mix," Pusch says. "The floor was then laid, and there is effectively not a square centimeter without gold. When one walked across the floor, tiny gold particles would be worn away and it **generated** a kind of Lurex effect."

The palace's remains, says Pusch, appear to confirm a legend "by which even the dust on the streets of Pi Ramesse were of gold".

The palace consists of **inconceivably** many rooms. "The 2.10-metre-thick walls were of mud bricks, **exquisitely** laid, plastered with **stucco** and painted in a variety of colours," Pusch says.

The German archeologists also found "priceless ceramics and statuettes" in sacrificial graves.

Ramses II's sons, pharaohs themselves, seem to have taken little pleasure in their father's **retreat**, demolishing the palace, taking with them the larger gold bits for recycling. On the gold floor, they built horse stables over 400 square meters.

Following his find, Pusch is hoping to gain similar recognition to that achieved by the American, Kent Weeks, who found the grave of Ramses II's sons in the Valley of the Kings at Luxor.

Weeks received **copious** donations to continue his work, and Pusch hopes to raise \$175,000. His budget has been cut by 60 percent over the past five years.

"One doesn't find a Ramses II palace every day. The name of any **patron** would go down for good in human cultural history," Pusch says. And it could well be the case that he has been centimeters away over all these years from Ramses' lost legendary **archive**.

APPENDIX B

A passage pertaining to a less familiar topic

Purple Spicy Fields of Kozani

It was five o'clock in the afternoon when we arrived in Kozani. The town was still dull with inactivity, the way all **provincial** cities in Greece are in that no man's time between the day's work and the evening's **promenade**. We had come here to witness the saffron harvest. Together with La Mancha in Spain and the Mashad region of Iran, and parts of Afghanistan and India, Kozani is one of the few producers of what is the world's most expensive spice.

It was raining lightly, and a cold damp chill **seeped** into our bones as we got out of the car. Typical saffron weather. The harvest usually lasts three weeks during mid-to-late October and early November, depending on the rains. At the height of the season, the fields stretching left to right all around Kozani are covered with a purple rove of *crocus sativus*, the fragile goblet-shaped flowers with the three red threadlike stigmas that are saffron. The flowers grow no taller than three or four inches in neat rows so close together that they transform the otherwise muddy earth into some huge purple painting.

Sultana Dougalis and her mother, Maria Nevou, were already busy at work in the dining room when we arrived. A mountain of the fragile **mauve** flowers was **heaped** over thick blue paper covering the table. The women's fingerprints were stained deep yellow. Gossip and chatter punctuated their work. Soccer **blared** on the television above them, and Haris, Sultana's husband, kept the women company but didn't touch the flowers. Saffron is very much female work in Kozani, as delicate as **embroidery**. But it is hard, **arduous** work. A few minutes later Haris's mother came to help as well.

All three women's hands moved like a blur with machine-like **accuracy**. With one hand they picked up the flower and slightly separated the petals. With the other they **deftly** picked out the three red threads, carefully avoiding the yellow styles, which **fetch** considerably less per kilo and **diminish** saffron's value. They tossed the threads into a small pan, and dropped the spent flowers, which have no value except as **compost**, into a plastic wash basin.

Cleaning one flower took about four seconds. It took **novice** hands about 20. Most producers use a kind of specially designed blower that separates the stigmas from the flowers, but the amount they were cleaning that night – a thousand or so flowers that would produce a few grams at most – wasn't worth turning on the machine for.

Once the stigmas were all pinched off, Haris took them in the basement where they were spread out and **stacked** in large screens near some kind of heat source, either fireplace or burner or oven, to dry. Once dried, the stigmas are cleaned by hand again.

APPENDIX C

Topic familiarity questionnaire

A. *Purple Spicy Fields of Kozani*

1. What is saffron?
2. Which countries is saffron produced in?
3. Is saffron expensive or cheap? How do you know?
4. Is saffron a flower, a tree, or a bush?
5. Name some uses of saffron.

B. *Palace Under the Nile Mud*

1. Have you ever been to Egypt? If not, would you like to visit Egypt? Why / Why not?
2. What is Egypt famous for?
3. Name any two famous historical sites in Egypt.
4. What impresses you the most about Egypt?
5. Do you think archaeological discoveries made in Egypt are important? Explain.

APPENDIX D

Vocabulary pretest

| | | |
|----------------------|---------------|---------------------|
| sumptuously (adv.) | know the word | don't know the word |
| foreman (n.) | know the word | don't know the word |
| cartouche (n.) | know the word | don't know the word |
| quartz (n.) | know the word | don't know the word |
| radiant (n.) | know the word | don't know the word |
| standstill (n.) | know the word | don't know the word |
| to stumble (v.) | know the word | don't know the word |
| gilded (adj.) | know the word | don't know the word |
| pouch (n.) | know the word | don't know the word |
| to generate (v.) | know the word | don't know the word |
| inconceivably (adj.) | know the word | don't know the word |
| exquisitely (adv.) | know the word | don't know the word |
| stucco (n.) | know the word | don't know the word |
| sacrificial (adj.) | know the word | don't know the word |
| retreat (n.) | know the word | don't know the word |
| copious (adj.) | know the word | don't know the word |
| patron (n.) | know the word | don't know the word |
| archive (n.) | know the word | don't know the word |
| provincial (adj.) | know the word | don't know the word |
| promenade (n.) | know the word | don't know the word |
| to seep (v.) | know the word | don't know the word |
| goblet-shaped (adj.) | know the word | don't know the word |
| to blare (v.) | know the word | don't know the word |
| embroidery (n.) | know the word | don't know the word |
| blur (n.) | know the word | don't know the word |
| deftly (adv.) | know the word | don't know the word |
| accuracy (n.) | know the word | don't know the word |
| to fetch (v.) | know the word | don't know the word |
| to diminish (v.) | know the word | don't know the word |
| to stack (v.) | know the word | don't know the word |

APPENDIX E

Palace Under the Nile Mud

Multiple choice questions

- | | | |
|--|---|--|
| 1. sumptuously (adv.) A. fancy B. lavishly C. plainly D. poorly | 6. gilded (adj.) A. covered with mud B. covered with bones C. covered with diamonds D. covered with bones | 11. stucco (n.) A. mixture of paint and mud B. mixture of mud and gold C. mixture of cement and sand D. mixture of diamonds and cement |
| 2. foreman (n.) A. a supervisor B. a worker C. a tourist D. a thief | 7. a pouch (n.) A. a bin B. a pocket C. a small bag D. a big bag | 12. a retreat (n.) A. a dangerous place B. a safe place C. a miserable place D. a peculiar place |
| 3. cartouche (n.) E. a statuette F. a coffin G. a panel H. a number | 8. to generate (v.) A. to expand B. to affect C. to destroy D. to produce | 13. copious (adj.) A. regular B. selfish C. generous D. scant |
| 4. radiant (adj.) A. dusty B. dark C. bright D. dirty | 9. inconceivably (adv.) A. unbelievably B. inconsistently C. unlikely D. unwisely | 14. a patron(n.) A. an employee B. a pharaoh C. a saint D. a sponsor |
| 5. to stumble (v.) A. to fall B. to break C. to discover D. to examine | 10. exquisitely (adv.) A. terribly B. beautifully C. selectively D. casually | 15. archive (n.) A. records B. messages C. property D. letters |

APPENDIX F

Purple Spicy Fields of Kozani

Multiple choice questions

- | | | |
|---|---|--|
| 1. provincial (adj.) A. fashionable B. modern C. rural D. dirty | 6. to blare (v.) A. to sound loudly B. to show C. to sound quietly D. to mute | 11. to fetch (v.) A. to bring in B. to send away C. to appear D. to lose |
| 2. promenade (n.) A. walk B. rest C. stroll D. dance | 7. embroidery (n.) A. needlecraft B. clay craft C. painting D. cooking | 12. to diminish (v.) A. decrease B. increase C. change D. develop |
| 3. to seep (v.) A. to pour B. to pass through C. to drip D. to flow over | 8. arduous (adj.) A. easy B. demanding C. comfortable D. unpleasant | 13. compost (n.) A. dressing B. fertilizer C. flowers D. garbage |
| 4. mauve (adj.) A. navy blue B. dark yellow C. pale purple D. light green | 9. accuracy (n.) A. mistake B. confusion C. correctness D. haste | 14. novice (adj.) A. trained B. professional C. dirty D. beginner |
| 5. to heap (v.) A. to arrange B. to disburse C. to throw away D. to pile up | 10. deftly (adv.) A. gently B. unprofessionally C. clumsily D. skillfully | 15. to stack (v.) A. to empty B. to store C. to pile up D. to take away |

APPENDIX G

Post vocabulary questionnaire

1. How many words did you guess correctly?
2. What difficulties did you encounter while reading the passage?
3. What were the most difficult words to guess? Why?
4. What were the easiest words to guess? Why?
5. What helped you guess the unfamiliar words in the passage? Fill in the table and briefly explain.

| correctly guessed words | What helped me guess the meaning of the words correctly? | | | | | |
|-------------------------------|--|------------------|---------|-----------------------|----------------------|--------|
| | topic | context clues | grammar | spelling/ pronunc. | general knowledge | others |
| 1. | | | | | | |
| 2. | | | | | | |

APPENDIX H
Inferential Vocabulary Strategies

| The targeted words | context clues | knowledge of the topic | grammar. structure | spelling/ pronunciation | other |
|-------------------------|---------------|------------------------|--------------------|-------------------------|---------------|
| 1. sumptuously (adv.) | | 30 | | | |
| 2. foreman (n.) | 10 | 5 | 1 | | 8 |
| 3. cartouche (n.) | | 1 | | | 4 |
| 4. radiant (adj.) | 3 | 7 | | | 3 |
| 5. to stumble (v.) | 21 | | | | 2 |
| 6. gilded (adj.) | 25 | | | | |
| 7. pouch (n.) | 24 | | | | |
| 8. to generate (v.) | 21 | 3 | | | 2 |
| 9. inconceivably (adv.) | 4 | 23 | | | |
| 10. exquisitely (adv.) | 8 | 19 | | | |
| 11. stucco (n.) | 3 | 5 | | | 6 |
| 12. retreat (n.) | 9 | | | | 2 |
| 13. copious (adj.) | 20 | 3 | | | |
| 14. patron (n.) | 4 | | 20 | | |
| 15. archive (n.) | 3 | | | 18 | |
| 16. provincial (adj.) | 12 | 3 | 5 | | |
| 17. promenade (n.) | 9 | | | | 4 |
| 18. to seep (v.) | 22 | | | | |
| 19. mauve (adj.) | 20 | | | | |
| 20. to heap (v.) | 18 | | 3 | | |
| 21. to blare (v.) | 7 | | | | 4 |
| 22. embroidery (n.) | 11 | 3 | | | |
| 23. arduous (adj.) | 19 | | | | |
| 24. accuracy (n.) | 4 | 2 | | | 4 |
| 25. deftly (adv.) | 2 | | | | 3 |
| 26. to fetch (v.) | 15 | | 2 | | |
| 27. to diminish (v.) | 23 | | | | 2 |
| 28. compost (n.) | 2 | 5 | | | |
| 29. novice (n.) | 12 | | | 11 | |
| 30. to stack (v.) | 21 | 5 | | | |
| Total: 570 (100 %) | 352 (62%) | 114 (20%) | 31 (5.5 %) | 29 (5 %) | 44 (7.5 %) |

VITA

Lyudmyla Vitaliyivna Klykova was born on January 12, 1976, in Artyomovsk, Ukraine. She was educated in public school in Ukraine, where she received her high diploma with honors. She graduated from Gorlovka State University in Ukraine with a Bachelor's degree in English Language Teaching Methodology and Higher Diploma in English Language. She moved to Dubai, UAE, in 1998 and worked as a high school English teacher. In 2003, Ms Klykova began the master's program in Teaching English for Speakers of Other Languages (TESOL) at the American University of Sharjah.