ARAB EFL LEARNERS IN GUESSING THE MEANING OF IDIOMS: EFFICIENCY AND TECHNIQUES

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By
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Declaration

I declare that this work is the result of my own investigation and that it has not already been accepted in substance for any degree, nor is it currently submitted for any degree.

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Dedication

To my father and family.

To my instructors.

To optimism and skepticism; to persistence and fatigue.

They have all taught me a lot indeed.

Acknowledgement

A number of people have contributed to the completion of the current study; yet, any shortcomings remain mine.

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Abstract

The current study provides some insights into the hypothesis of incidental vocabulary learning (i.e., learning vocabulary as a by-product of reading or listening). The study is motivated by the question of how feasible it is for EFL learners to comprehend unfamiliar multiword units, idioms in the case of this study, by means of guessing from context, lexical inferencing, during the reading of authentic texts (i.e., the texts written for the speakers of a particular language, not especially written for the non-native speakers or the learners of that language).

Using qualitative and quantitative methods, the current study seeks to: (a) provide a tentative assessment of the efficiency with which a sample of Arab EFL-majoring students guess at the meaning of idioms (e.g., *to talk shop*, *red tape*, *hard on somebody's heel* and *by the skin of somebody's teeth*), (b) identify the techniques that the sample learners use while guessing, and (c) assess the effectiveness of such techniques.

The subjects read a sample of short authentic texts that were retrieved from different websites. Moreover, the subjects were asked to: (a) report whether or not they were familiar with the sample idioms, (b) provide the meaning of these idioms in writing, and (c) report on how they attempted to guess the meaning of the unfamiliar idioms.

On one hand, the subjects were unable to come up with correct guesses in nearly half the number of the items that contained unfamiliar idioms; on the other hand, the subjects provided correct or partially correct guesses in the rest of the items. The subjects used a wide range of techniques that involved one or more of the following: idiom constituents, sentences (or phrases), the subjects' own mental images of idioms, metaphor, the whole text, the topics of the sample texts, subjects' L1, context,

paragraphs, keywords, and even wild guessing. In general, none of the techniques was more effective than the other was for guessing the meaning of the idioms.

In light of the findings, guessing from context during the reading of authentic texts can be one of the major sources of learning the meaning of idioms; yet, on its own, it does not seem to be effective for an optimal level of EFL learners' acquisition of idioms.

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meaning of) idioms by a number of strategies while reading, chief among them is guessing from context. Nassaji (2003, p. 647) reports that

> Paribakht and Wehsche [1999] found that almost 80% of the strategies their university ESL students used in dealing with new words were lexical inferencing, with all other strategies accounting for only about 20% of the learner's strategy use.

Moreover, studies of EFL learners' processing of idioms (e.g., Abdullah & Jackson, 1999; Cooper, 1999; Liontas, 2001, 2002a) have all indicated explicitly or implicitly that EFL/ESL learners of different proficiency levels are familiar with only a few idioms. Bulut and Celik-Yazici (2004, p. 106) quote and explain Irujo's statement related to EFL learners' idiom familiarity as follows:

> 'many second-language materials either ignore idioms entirely or relegate them to the "other expressions" section of vocabulary lists, without providing exercises or other aids to learning' (Irujo, 1986a, p. 237). That is to say, we rarely introduce our students to L2 idioms despite the fact that mastery of these is difficult since idiomatic expressions contain such forms in which words are not often used with their usual meanings.

What Bulut and Celik-Yazici note down about the negligence of idioms by many EFL textbooks seems to apply to the EFL textbooks adopted in some Arab countries. For instance, upon screening the EFL textbooks written for the government schools in Saudi Arabia, one finds that idioms are totally neglected; almost no idiom appears in those textbooks. In addition, piloting the current study has shown that Bahraini EFL majors might not have been exposed to idioms except on a very small scale. Consequently, low frequency of the use of idioms as reported in some corpus-based research, as evidenced by the content of many EFL textbooks and by the pilot-study assessment of a sample of Bahraini EFL majors' familiarity with idioms— that low frequency of use makes idioms part of the least encountered EFL vocabulary. Hence,

low frequency of use can make learning idioms, among other possible factors, one of the most *difficult* tasks for EFL learners to achieve especially on their own.

Reference to the difficulty of learning idioms in L2 or EFL settings is made in a rather copious amount of research (see Bortfeld, 2003; Carter, 2002; Lennon, 1998; Li, 2003; Roth, 1997; Yandell & Zintz, 1961). Yandell and Zintz (p. 256), for instance, describe idioms as "insurmountable obstacles," and they claim that idioms are so "because idioms do not translate literally." Scott (as cited in Adkins, 1968, pp. 148-149) describes idioms (and figures of speech) as "puzzles to the non-native student, resulting in the laborious exercise of working them out."

However, if there exists factors, such as low frequency of use, that can make idioms difficult for an EFL learner to learn, there are also some features of idioms that seem to make them soft targets for EFL learners (Irujo, 1986b), even for their autonomous learning, especially for their lexical inferencing. These features include semantic transparency (see Irujo, 1986b), metaphoricity (see Boers & Demecheleer, 2001; Roth, 1997) and universality of idioms (i.e., their existence across languages) (see Baugh & Cable, 1993, p. 12; Fernando & Flavell, 1981). Thus, at least theoretically speaking, all of these features have the potential of revealing an idiom's meaning to EFL learners particularly when that idiom shows up in context (see Liontas, 2001, 2002a).

Such is the case, EFL learners can be encouraged to guess the meaning of idioms during reading. Adkins (1968, p. 151), a long time ago, stated that "it is of far more value to give the student a broad understanding of the nature of idiomatic and figurative language and to encourage his guessing at the meaning from the context" (see also Irujo, 1986b). However, before encouraging EFL learners to guess at the meaning of idioms, one needs to assess these learners' efficiency at guessing the

meaning of idioms and one also needs to identify the guessing techniques that EFL learners use especially during their reading of authentic texts.

1.3 Research Questions

The current research study addresses the following two major questions:

1. How efficiently can EFL learners guess the meaning of idioms from the context of authentic written texts?
2. What are the strategies (i.e., techniques) which EFL learners use to guess the meaning of idioms in context of authentic written texts?

In addition, the current study addresses the following two questions:

1. How common is the use of such techniques among EFL learners and how frequently are such techniques used?
2. Do such techniques differ in their effectiveness? If yes, then what are the most effective techniques that seem to enable EFL learners to guess the meaning of idioms accurately while reading authentic texts?

1.4 Hypotheses

Although the current study is, for the most part, of an exploratory type, it proposes two hypotheses. The first hypothesis is concerned with the guessing efficiency of a sample of Arab EFL-major students (see 3.1). The second hypothesis is concerned with the effectiveness of the techniques that the subjects use to guess the meaning of idioms appearing in a sample of texts that were retrieved from different websites (see 3.2.2.2). The two hypotheses are:

1. The sample subjects will be able to provide correct guesses to at least one third of the number of the unfamiliar idioms that they encounter in authentic written

texts; partially correct guesses to at least another third of the same idioms; wrong guesses to (less than) the last third of the same idioms.

2. The type of the technique(s) that the sample subjects use to guess the meaning of a given idiom in context of authentic written texts will not affect the accuracy of their guessing. That is, there will not be a statistically significant difference between the numbers of correct, partially correct and wrong guesses that result from the sample subjects' use of a particular technique and those numbers of the same rates that result from the subjects' use of another technique (see 3.6.4).

1.5 Research Objectives

This study aims at:

1. assessing a sample of Arab EFL learners' ability to guess the meaning of unfamiliar English idioms during their reading of authentic texts;
2. identifying a sample of Arab EFL learners' techniques of deducing the meaning of idioms;
3. finding the frequency with which the sample subjects use such techniques;
4. assessing the effectiveness of the techniques with which a sample of Arab EFL learners may guess the meaning of idioms;
5. offering some insights into the hypothesis of incidental vocabulary learning as pertains to learning idioms in particular.

1.6 Significance of the Study

The focus on the strategy of lexical inferencing may provide important pedagogical implications for teaching idioms through reading in EFL settings.

Contrary to many previous studies (see 2.2), the current study uses authentic texts that can be similar to what EFL learners normally read outside the classroom, for example, for the sake of pleasure.

In addition, what is known about teaching and learning idiomatic expressions is lacking in general and in the case of Arab EFL learners in particular (see Abdullah & Jackson, 1999; Bulut & Celik-Yazici, 2004). Review of the related literature calls for more studies in the area of L2 idiom processing as there is little or no research investigating the efficiency and techniques with which EFL learners guess the meaning of idioms from context during their reading of authentic texts.

CHAPTER TWO

LITERATURE REVIEW

2.1 What is an Idiom?

This section sheds light on the problematic task of defining idioms. Moreover, a number of definitions are presented and discussed in order to arrive at a working definition of idiom.

2.1.1 The Problem of Defining Idioms

Although there is a period of years between Makkai (1972) and Fernando and Flavell's (1981) works, on one hand, Liontas's (2002c), Simpson and Mendis's (2003) and Grant and Bauer's (2004), on the other, all acknowledge the problematic task of defining an idiom. Fernando and Flavell (1981, p. 17) cast doubt on the possibility of having a single definition that may *clearly* show what idiomaticity, in general, is by stating that "perhaps idiomaticity is too complex and pervasive to be captured within the narrow confines of a single definition."

More specifically, Liontas (2002c, p. 60) maintains that "one of the thorniest issues in idiom research has been the question of how to define *idiom*." In a similar vein, Simpson and Mendis (2003, p. 426) point out that, "as almost all researchers of idioms have noted, defining the phenomenon [i.e., idiom] to be studied is indeed problematic." Furthermore, Grant and Bauer (2004, p. 38) perceive many of the

current definitions of an idiom as "descriptions," rather than "definitions." They also describe many of the definitions available in the literature as being "not well-formulated" because they are based on general criteria (e.g., *non-compositionality*) that firstly need to "be clearly defined." Other researchers (e.g., Cruse, 1995; Makkai, 1972; Moon, 1997) also admit how problematic it is to define idioms.

The problem of defining idioms is described by Moon (1997, p. 43) in the following observation:

> there are many different forms of multi-word items, and the fields of lexicology and idiomatology have generated an unruly collection of names for them, with confusing results... there is no generally agreed set of terms, definitions and categories in use.

Echoing Moon's observation, Grant and Bauer (2004, p. 40) express their dissatisfaction with the available definitions of idiom by maintaining that "the unspecific definition of an idiom has led to the term 'idiom' encompassing a large variety of different types of MWU [multi-word units]." Similarly, Liontas (2002c, p. 60) observes that *idiom* has been a "cover term" for a number of expressions and words.

Because of the difficult task of defining an idiom, researchers often tend to:

1. use a definition in a relatively narrow sense," as Moon did (1997, p. 46), since definitions of idiom appear in the literature with different meanings (*ibid.*);
2. adopt a working definition when the purpose of their study is not particularly concerned with defining idioms (see Abdullah & Jackson, 1999; Simpson & Mendis, 2003);
3. resort to a "*tentative*" definition as Carter (2000, p. 66) does;
4. provide examples of what they mean by the term *idiom*, without explicitly stating a definition of that term (see Liontas, 2002a).

The problem of defining idioms seems to stem from the different models and criteria adopted to reach such a definition, which is discussed in some detail in the following section.

2.1.2 Definitions of Idiom

Expressions such as *to find a skeleton in the cupboard, red tape, across the board, the lion's share, by and large* and *till kingdom come* are idioms. Yet, as Moon (1997: 46) maintains, "idioms are a very complex group: not least because the term 'idiom' frequently occurs in the literature with a variety of different meanings." Liontas (2002c: 59) touches on the same point, observing that "the problem with idiomaticity today is that there are too many definitions for the cover term *idiom* to be of any practical use to second language acquisition researchers and language-teaching professionals working in second/foreign languages and applied linguistics."

Dictionaries of the English language offer two types of idiom definitions: first, idiom as a multi-word vocabulary item of the language; second, idiom as a word with other meanings. *Collins English Dictionary* (CED, 1994, p. 771) gives the following meanings of *idiom*:

> 1. a group of words whose meaning cannot be predicted from the meanings of the constituent words, as for example *(it was raining) cats and dogs*. 2. linguistic usage that is grammatical and natural to native speakers of a language. 3. the characteristic vocabulary or usage of a specific human group or subject. 4. the characteristic artistic style of an individual, school, period, etc. [C16: from Latin *idiōma* peculiarity of language, from Greek; see IDIO].

As a multi-word item in particular, *The American Heritage Dictionary* (AHD, 1997, p. 674) defines an idiom as "a speech form or an expression of a given language that is peculiar to itself grammatically or cannot be understood from the individual meanings of its elements, as in *keep tabs on.*" A similar definition is provided by *The New Shorter Oxford English Dictionary* (NSOED, 1993, p. 1305), "a form of

expression, grammatical construction, phrase, etc., peculiar to a person or language; a phrase etc., which is understood by speakers of a particular language despite its meanings' not being predictable from that of the separate words." This definition can be explained by the definition given in the *Oxford Advanced Learner's Dictionary* (OALD, 2000, p. 643): "a group of words whose meaning is different from the meanings of the individual words: *'Let the cat out of the bag' is an idiom meaning to tell a secret by mistake.*"

Webster's Encyclopedic Unabridged Dictionary of the English Language (WEUDEL, 1996, p. 951) defines *idiom* as "an expression whose meaning is not predictable from the usual meanings of its constituent elements, as *kick the bucket* or *hang one's head*, or from the general grammatical rules of a language, as *the table round for the table round* and that is not a constituent of a larger expression of like characteristics."

Dictionary definitions of *idiom* as a multi-word item, such as the ones provided above, characterize *idiom* by its peculiarity, a characteristic reflected in Baugh and Cable's (1993, p. 12) definition in their work that was first published in 1957: "a form of expression peculiar to one language." Peculiarity may refer to violation of linguistic norms or rules (see Abdullah & Jackson's definition of idiom on p. 16). According to Fernando and Flavell (1981, p.7), adopting that criterion alone or any other single criterion in order to define idioms leads to the problem of having a definition that does not seem to help linguists identify a sample of language elements as *idioms*. This is due to two reasons: first, English, if indeed not all languages, is full of different sorts of peculiarities, semantic, syntactic and pragmatic. That is, much disagreement might arise when it comes to defining an idiom by using the criterion of peculiarity, a semantic, syntactic or pragmatic violation. Second, most English idioms

are grammatically well- formed (Cruse, 1995). Definitions of idiom based on peculiarity, particularly those like the ones provided by the dictionaries cited above, are considered the "earlier" (Fernando & Flavell, 1981, p. 1) or the "classic" (Liontas, 2002c, p. 60) definitions of idiom.

Another earlier view of idiom is preserved in Hockett's "extreme" definition of idiom, as Liontas described it (2002c, p. 61). It is extreme in the sense that it qualifies every morpheme to be an idiom. Hockett (as cited in Makkai, 1972, p.28) defines *idiom* in the following way:

> Let us momentarily use the term *Y* for any grammatical form the meaning of which is not deducible from its structure. Any *Y*, in an occurrence in which it is not a constituent of a larger *Y*, is an idiom. A vast number of composite forms in any language are idioms. If we are to be consistent in our use of the definition, we are forced also to grant every morpheme idiomatic status, save when it is occurring as a constituent of a larger idiom, since a morpheme has no structure from which its meaning could be deduced.

This definition, once again, does not seem to help identify a specific sample of language as idioms. Nonetheless, Hockett's definition, as Fernando and Flavell (1981) point out, is an insightful one as it highlights the role of context in identifying idioms. Moreover, Hockett's definition shares the focus on *non-compositionality* that many recently offered definitions of idiom have (cf. Bortfeld, 2003). *Non-compositionality* may be defined as "the degree to which a multi-word item cannot be interpreted on a word-by-word basis, but has a specialized unitary meaning" (Moon, 2002, p. 44).

Non-compositionality appears frequently in the traditional (or classic) definitions of idiom. Cruse (1995, p. 37) states that "a traditional definition of idiom runs roughly as follows: an idiom is an expression whose meaning cannot be inferred from the meaning of its parts." Indeed, non-compositionality seems to be the criterion on which most of the definitions of idiom are based, not only the traditional ones. A number of scholars share this position; for instance, Liontas (2002c, p. 59) takes this position by

observing that "it suffices to say that today a majority of researchers has reached the consensus that idioms are, by nature, semantically noncompositional." Likewise, Moon (2002, p. 47) notes that "idioms rate highly in terms of non-compositionality." Furthermore, Grant and Bauer (2004) touch on the same point, "idioms are widely defined as being non-compositional." With a focus on non-compositionality, Moon (2002, p. 64) defines idioms as:

> items which are not the sum of their parts: they have holistic meanings which cannot be retrieved from the individual meanings of the component of words. Idioms are typically metaphorical in historical or etymological terms.

In addition, Moon's definition of idiom, in her introduction to *Collins Cobuild Dictionary of Idioms* (Moon, 2002, p. v), still maintains the focus on non-compositionality, but that definition is also supported with other criteria; namely, peculiarity, metaphoricity and lexical complexity (i.e., idiom as a multi-word item). Moon defines *idiom* as follows:

> An idiom is a special kind of phrase. It is a group of words which have a different meaning when used together from the one it would have if the meaning of each word were taken individually. If you do not know that the words have a special meaning together, you may misinterpret what someone is saying. Idioms are typically metaphorical.

As Moon does, Grant and Bauer (2004, p. 38) adopt the criterion of non-compositionality to define "core idioms" but in the form of a tri-criterion test. A "core idiom," according to the authors, is "a multi-word, non-compositional and non-figurative item." By "non-figurative" Grant and Bauer mean "the 'figure' does not give the correct meaning of the MWU" (p. 51). As can be seen from Moon's and Grant and Bauer's definitions, among others', idioms are not only considered non-compositional but an idiom is also defined on the basis of its being lexically complex (i.e., it consists of more than one word).

Cruse (1995, p. 37) maintains the following: "fortunately it is possible to define an idiom precisely and non-circularly using the notion of semantic constituent." As such, Cruse defines, or to use his term *characterizes*, an idiom "as a lexical complex which is semantically simplex" (*ibid.*). Thus, according to Cruse (*ibid.*), an idiom needs to be lexically complex and non-compositional; that is,"it should consist of more than one lexical constituent; second, that it should be a single minimal semantic constituent." Cruse's examples of what is usually described as idioms include *to pull someone's leg* and *up the creek* (*ibid.*). Cruse's definition is reminiscent of WEUDEL (1996) definition, cited above, which characterizes an idiom as a group of constituents that is not a part of a larger constituent.

Lexical complexity as a distinguishing feature of idioms is indeed prevalent in the various definitions of idiom (Abdullah & Jackson, 1999; Carter, 2000; Cowie & Mackin, 1975; Crystal, 1993; Makkai, 1972; Simpson & Mendis, 2003). Almost exactly, Cowie and Mackin (1975) define idioms as Cruse (1995) does. According to Cowie and Mackin (p. viii), an idiom is "a combination of two or more words which function as a unit of meaning." Although Cowie and Mackin's and Cruse's definitions of idiom, based only on the two criteria of lexical complexity and non-compositionality, show how significant these two criteria are for identifying idioms, there are other criteria in the literature used for this purpose.

First, lexical complexity is closely related to fixedness (fixity or frozenness); second, non-compositionality is closely related to institutionalization. The criteria of fixedness and institutionalization help distinguish idioms from other phenomena such as metaphor (see Cruse, 1995; Fernando & Flavell, 1981; Moon, 2002 for details on the distinction).

According to Carter's definition (2000, p. 66), idioms are fixed complex lexemes, "non-substitutable or fixed collocations." Moreover, Crystal (1993) comments on the fixity of idioms in the following way: "from a syntactic viewpoint, the words [of an idiom] often do not permit the usual variability they display in other CONTEXTS." For instance, *skeleton* in the idiom of *to find a skeleton in the cupboard* is always singular, whereas it can be either singular or plural if used in other contexts (e.g., *the archeologists found a skeleton/skeletons in the cave*). However, it should be borne in mind that idioms have varying degrees of fixedness (see Carter, 2000; Cruse, 1995; Fernando & Flavell, 1981; Moon, 1998; Prodromou, 2003 for detailed treatments).

In addition to being fixed, idioms are institutionalized; they are, as Irujo (1986b, p.288) puts it, "figurative expressions which have acquired conventionalized meanings." Fernando and Flavell (1981, p. 44) defines *institutionalization* as "the regular association in a speech community of a given signification with a given syntactic unit (a compound, a phrase or a sentence), such that the resulting expression is interpreted non-literally." According to Fernando and Flavell (pp. 44-45), institutionalization gives more accuracy to a particular definition of idiom by

> separating items which show a peculiarity of encoding and are in addition non-literal from those that are nonce-idioms or predictable collocations. Nonce-idioms are coined and used between two or three individuals, either for the moment or for a very limited period of time such as a few days. Hocket (1958: 305) has one such example [...] of a wife teasing her husband who incorrectly identifies as blue the colour of a blouse 'of one of those indeterminate blue-green shades for which women have a special fancy name.' *that's a nice shade of blue* is then used idiomatically by the wife to indicate her husband's insensitivity to colour. 'For days thereafter, Mrs. X teases her husband by pointing to any obviously green object and saying *That's a nice shade of blue, isn't it?*' (Hockett, 1958: 305).

As can be observed from the previously presented definitions, researchers usually adopt more than one criterion to define idioms. The discussion on the definitions of idiom, presented so far, emphasizes the nature of idioms as:

1. peculiar (with the sense of syntactic, semantic or pragmatic violation of norms/rules);
2. non-compositional;
3. lexically complex (and fixed or semi-fixed);
4. institutionalized.

A combination of these four criteria seems to help narrow down a set of expressions as idioms (Liontas, 2002c, p. 60, holds a similar viewpoint). The current study adopts Abdullah and Jackson's (1999) working definition, which is based on the four criteria just mentioned. Abdullah and Jackson's working definition of idiom is:

> an institutionalized linguistic expression that consists of at least two morphemes and involves at least one structural, semantic, or pragmatic violation; with the purpose of conveying a message other than its literal meaning, and which is only pragmatically interpreted. The pragmatic aspect here might have the form of historical, cultural, situational or contextual information. (p. 85)

Abdullah and Jackson's sample of idioms include: *to play with fire*, *the straw that broke the camel's back* and *on the tip of one's tongue*.

It should be noticed that the sample of idioms employed in the current study does not include any idiomatic phrasal verbs, nor do they include proverbs. This is a methodological decision that is based on the following rationale:

1. Following Moon (1998), Grant and Bauer (2004) exclude idiomatic phrasal verbs (and some other multi-word items) from the category of *idioms*. According to Grant and Bauer, although many phrasal verbs are idiomatic, "they are such a large group of MWUs that they merit separate and thorough research of their own" (p. 39). Simpson and Mendis (2003) express the same opinion.
2. Idiomatic phrasal verbs have their own characteristic form (that is different from that of an idiom). A phrasal verb consists of a verb plus (a) particle(s).

3. Proverbs communicate certain teachings, or what Carter (2000, p. 68) terms "aphoristic truth," whereas idioms are not usually intended to do the same.

2.2 Previous Studies

Although research on native speakers' processing of idioms has been a "tradition," as Liontas (2002a, p.155) describes it, research on L2 learners' processing of idioms has not received the same interest from applied linguistics researchers. A number of researchers, for instance, Bortfeld (2004), Cooper (1999) and Liontas (2001, 2002a, 2002b), confirm the lack of research on L2 learners' processing of idioms.

Most of the research in the area of L2 learners' idiom processing has been concerned with language transfer, the effect of L1-L2 idiom (lexical or semantic) similarity on L2 learners' comprehension of such idioms. Actually, only a few L2 research studies have dealt with idiom processing outside the circle of L1-L2 idiom similarity and the impact it can have on foreign language learners' comprehension of L2 idioms (Cooper, 1999).

Furthermore, L2 learners' idiom comprehension strategies in general, let alone L2 learners' guessing of the meaning of idioms, have hardly been researched (Liontas, 2002a, 2002b). Only a few research studies, such as those by Abdullah and Jackson (1999), Bulut and Celik-Yazici (2004), Cooper (1999) and Liontas (2001, 2002a, 2002b, 2002c) have dealt with L2 learners' idiom processing. Furthermore, except for Coopers' (1999), these studies were still concerned with the L1-L2 idiom similarity and their effect on L2 or EFL learners' comprehension of idioms.

2.2.1 L2 Learners' Idiom Processing

An early investigation of L2 learners' processing of idioms is Yandell and Zintz's (1961) study, which was probably the first published experimental research to probe into non-native speakers' processing of English idioms. Specifically, Yandell and Zintz (p.257) sought to "determine the efficiency at ethnic groups of children in the use of English idiomatic expressions as found in standard reading texts in the fourth, fifth, and sixth grades." The study provided an assessment of intact L2 children's comprehension of idioms. Using a multiple-choice test, the researchers attempted to assess the idiom comprehension of three ethnic groups of Navajo, Spanish and Zuni pupils (as experimental groups) in comparison to control groups of Anglos. Each idiom was presented in isolation or in the sentence included in the reading texts that were taught in the reading classes just mentioned.

The groups of Anglos outperformed the groups of ethnic groups in comprehending the presented idioms; there was a statistically significant difference between the mean scores of both the control and the experimental groups. Thus, pupils from ethnic groups had much more difficulties comprehending idioms than those of their counterparts from the groups of Anglos. In addition, Yandell and Zintz (1961) compared subjects' reading level (as measured by Stanford Achievement Test) and their scores in the idiom test by choosing subjects from one of the control groups as well as others from one of the experimental groups. The comparison showed that there was a highly positive correlation between the Navajo subjects' reading level and their scores in the idiom test; the same was found for the subjects in one of the control groups as well (Yandell & Zintz, 1961).

The study seemed to focus on statistical treatment more than on offering some interpretations of the results in details; for example, the researchers did not touch on

the possible factors and sources of difficulties that affected their L2 subjects' comprehension of idioms. Moreover, the study did not offer any assessment of the subjects' idiom familiarity nor did it indicate whether the subjects could comprehend some idioms because of their familiarity with them or because of other factors such as the degree of similarity between the English idioms and their counterparts in the subjects' L1. Still, the subjects were probably able to guess the meaning of some idioms from context.

Yandell and Zintz (1961) recommended carrying out further research on the effect of teaching methods on L2 learners' idiom comprehension. Such recommendation was like a call to which Adkins (1968) responded with her research on teaching idioms and figures of speech. Adkins studied the effect of teaching idioms and figurative expressions with "formal methods" (pp. 151-152); yet, she recommended encouraging learners to guess the meaning of new vocabulary (including idiomatic and figurative expressions) presented in reading materials. The researcher states that "it will be of far more value to give the student a broad understanding of the nature of idiomatic and figurative language and to encourage his guessing at the meaning from the context" (Adkins, 1968, p. 151).

With fifteen high-school Spanish-speaking students who were learning English and living in the U.S., Adkins carried out a six-week period of teaching idioms and figures of speech included in reading texts that presented news stories. The researcher's techniques of teaching idiomatic expressions (idioms and figures of speech) to her subjects can be summarized in the following steps: the teacher summarizes a news story to the subjects; the subjects read that story silently; the teacher offers a discussion of the idioms and figures of speech whose meanings have to be "repeatedly pointed out" (p. 152); the teacher makes comparisons between the English

expressions and their Spanish counterparts if possible in addition to discussing the difference between figurative and literal meanings of those expressions; the subjects use the expressions in sentences and they make up stories using them.

A posttest, presenting a sample of idioms and figures of speech in isolation, showed that the subjects could increase their correct answers regarding the meaning of the expressions from 37.3% in the pretest to 64.6% in the posttest. Such an increase of 27.3% of correct answers between the pretest and the posttest performance suggests that direct teaching of idioms and providing learners with broad understanding of the nature of idioms, as Adkins did, may well enhance their learning of new (unfamiliar) idioms and figures of speech in the target language. Similar findings were reported years later by Kovecses and Szabo (as cited in Roth, 1997) who found that metaphor instruction could improve their Hungarian-speaking subjects' ability of providing the missing particles for a sample of English idiomatic phrasal verbs. The group that received the metaphor instruction did better than the group that did not receive such instruction.

Adkins' study also implies that the sample learners might have guessed the meaning of a number of idioms presented in the posttest since, as Adkins stated (p. 152), "very few" of the posttest idioms were encountered during the teaching period. Although the pretest idioms were provided in isolation, the teaching period presented idioms in context, which possibly enhanced those learners' understanding of idioms and figures of speech or that improved their understanding of such expressions. Context, as will be discussed in the following section, has a positive impact on L2 learners' comprehension of idioms (Cooper, 1999; Liontas, 2001, 2002a, 2002b, 2002c). Yet, even when idioms are presented in isolation, L2 learners may well comprehend the meaning of some them because of different factors; one of them is

transparency, whether in terms of L1-L2 idiom similarity or in terms of other types of transparency such as having a common metaphor shared by L1 and L2 idioms (Boers & Demecheleer, 2001). Previous studies such as that of Abdullah and Jackson (1999), Bulut and Celik-Yazici (2004), Irujo (1968b), Liontas (2001, 2002a) and Roth (1997) all demonstrate that L2/EFL learners had little or no difficulty comprehending L2 idioms that are similar to their L1 counterparts.

Indeed, most of the previous research on L2 idiom processing has been concerned with transfer (i.e., the effect of L1-L2 idiom lexical or pragmatic similarity on L2 learners' comprehension of idioms). Not only the effect of L1-L2 idiom lexical similarity was investigated but other aspects of similarity, such as pragmatic similarity and even the metaphoric similarity adopted in different languages, were also examined. Earlier studies, such as Kellerman (as cited in Cooper, 1999) and Irujo (1986b), were influenced by the active contrastive-linguistic research at that time; yet, as will be shown below, much of the L2 idiom processing research is still confined to the study of L1-L2 idiom similarity and its effect on L2 learners' comprehension and production of idioms although it is no longer the heyday of Contrastive Analysis.

Irujo (1986b) not only investigated the effect of L1-L2 idiom similarity on some EFL learners' comprehension but also on their production of idioms; her aim was to find the role of transfer in a group of 12 Venezuelan (Spanish-speaking), advanced EFL learners' comprehension and production of idioms. The researcher classified these idioms into: (a) identical idioms, those with the same form and meaning; (b) similar idioms, "similar to their Spanish equivalents" (p. 287); (c) different idioms.

As regards comprehension, Irujo (1986b) found that identical idioms were the easiest to comprehend; similar idioms were comprehended almost as well as the identical idioms were; different idioms were the most difficult for the sample subjects

to comprehend. Yet, regardless of the type of idiom, those with simple vocabulary and structure, a high degree of transparency and frequency were easier for the subjects to comprehend. In addition, Irujo (p. 295) reported that "fewer different idioms were comprehended and produced correctly." Irujo's study generates two questions:

1. In what sense were those idioms similar or different (Laufer, 2000)?
2. How could these learners comprehend (and even produce) some "different idioms"?

To comprehend "different idioms," the subjects were either already familiar with (some of) those idioms or they guessed the meaning of those idioms correctly because of, for instance, their high degree of transparency. Irujo (1986b) herself touched on both of these factors, transparency and frequency, as mentioned earlier. In addition, some of these different idioms had, as Irujo reported, semantic similarity (as opposed to formal similarity) to some Spanish idioms. Thus, although L1-L2 idiom similarity can be an influential factor in L2 learners' comprehension of idioms, it is not necessarily the most influential factor that can affect L2 learners' comprehension of L2 idioms.

Roth (1997) found similar results to those reported by Irujo (1986b) but with Hebrew-speaking learners of English. Roth (p. 33) found that "the further an L2 idiom is from its L1 equivalent, the more the students will have problems." However, Roth also found that idioms with "'simple' metaphors" were comprehended more often than the ones with difficult metaphors. Moreover, a few subjects only could comprehend two of the sample idioms in Roth's study, a result that Roth comments on by admitting that it was not clear, from the translation test that he applied, whether those few subjects were already familiar with those two idioms or they were able to figure out their meanings (Roth, 1997).

Research concerned with L2 learners' idiom processing was not only done at the level of L1-L2 idiom lexical similarity. Boers and Demecheleer (2001) took the research on L2 idiom processing to the cultural level by studying the impact of the cross-cultural differences of idioms on 78 intermediate-level French EFL learners' comprehension of idioms. The researchers (p. 257) hypothesized that "idioms relating to a metaphoric theme that is salient in the target culture will tend to be less easily 'guessable' to language learners than those relating to a metaphoric theme that is equally salient in the L1 culture." Cultural-specific grounding is one of the variables that affect the degree of idiom semantic transparency (Boers & Demecheleer, 2001).

Thus, the researchers' purpose was to find out if the meaning of those idioms that are based on a salient metaphor in L1 as well as in L2 would be easier for their subjects to guess than the meaning of those idioms that are only salient in the target language. For example, the researchers hypothesized that the meanings of the English idioms involving the metaphoric theme of food would be easier for the French-speaking learners to guess than the meanings of the idioms involving the metaphoric theme of ships. According to the researchers, the metaphoric theme of "food" is more salient in French idioms than it is in the English ones whereas the imagery of ships is more salient in the English idioms (Boers & Demecheleer, 2001). It should be noted that those idioms had an intermediate level of semantic transparency as rated by a sample of native speakers of English (*ibid.*).

Boers and Demecheleer (2001) asked their subjects to provide the meaning of the sample idioms that were provided in isolation because, as the researchers maintain, "The lower the degree of semantic transparency of an idiom, the more a language learner will have to rely on contextual clues to figure out its meaning. For idioms with high transparency, on the other hand, the lexical components may serve as primary

pointers" (p. 255). The sample idioms, according to Boers and Demecheleer (p. 255), were also imageable; that is, "figurative expressions that tend to call up a conventional scene in the native speaker's mind." In addition, the sample English idioms had no one-to-one French matches. The researchers chose such idioms because they were interested in their subjects' guessing; therefore, they had to minimize the possible impact of L1-L2 similarity on their subjects' comprehension of the sample idioms (Boers and Demecheleer, 2001). Furthermore, unlike other studies, Boers and Demecheleer controlled idiom familiarity by asking the subjects to report if they were already familiar with any of the idioms presented.

Although Boers and Demecheleer (2001) presented their subjects with the idioms in isolation, "almost 35% [exactly 33.83%] of the participants' responses overall were at least partially correct" (p. 260). Furthermore, the meaning of the English idioms that involve salient metaphoric themes in French, the subjects' L1, proved easier for the subjects to guess than the meanings of those with less salient or equally salient metaphoric themes in both the first and target languages. Thus, varying degrees of semantic transparency, at least as subsumed by the salience of the metaphoric topic in the learners' L1 idioms, can therefore affect EFL learners' guessing of the meaning of L2 idioms (Boers and Demecheleer, 2001).

Other types of semantic transparency also seem to affect learners' guessing of the meaning of idioms, at least when presented out of context, which can be seen in the results of Bortfeld's (2003) study. Semantic transparency, in Bortfeld's (p. 221) study, referred to the degree that the "individual components [of an idiom] had transparent relations to their idiomatic referents." That is, the more idiom components that had transparent, metaphorical relations to their idiomatic meaning, the higher the degree of transparency which that idiom would have (Bortfeld, 2003).

Bortfeld (2003) presented native speakers of American English with some idioms that were literally translated from three languages, English, Latvian and Mandarin. The sample idioms, in each language, were normally analyzable (transparent), abnormally analyzable (semi-transparent) and unanalyzable (opaque). The subjects were asked to relate these idioms, according to their figurative meanings, to one of the following meaning categories: revelation, secrecy, insanity, anger, and control. According to the researcher, the Latvian and Mandarin idioms were unfamiliar; no subject could speak any of the two languages. Nonetheless, the subjects could correctly classify, or "comprehend" as Bortfeld puts it, roughly 80% of the transparent, literally translated Latvian idioms. Moreover, they could correctly "comprehend" about 70% of the semi-transparent Latvian idioms and the subjects could correctly "comprehend" 44% of the opaque Latvian idioms.

Bortfeld (2003) highlighted the fact that English and Latvian belong to the same family of Indo-European languages, which could have positively affected those results. Yet, even for the idioms translated from Mandarin, a language that is less related to English than Latvian is, the subjects could perform as well as they did for the Latvian idioms; they could comprehend approximately 80% of the transparent idioms, roughly 60% of the semi-transparent idioms and 50% of opaque idioms.

In particular, Boers and Demecheleer's (2001) and Bortfeld's (2003) studies suggest that L2 learners might be able to guess the meaning of, at least, some idioms despite the fact that both studies reported experiments in which the idioms were presented out of context. Since context has a positive impact on the learners comprehension of idioms (Cooper, 1999; Liontas, 2001, 2002a, 2002b, 2002c), L2 learners may well have the efficiency necessary to guess the meaning of idioms

especially as they appear in context. Thus, the question of how well L2 learners can guess the meaning of idioms especially in context remains open to investigation.

2.2.2 L2 Learners' Strategies of Idiom Comprehension

In general, the strand of research on L2 learners' idiom comprehension strategies has reiterated the results of the earlier research such as that of Irujo (1986b) and Laufer (2000) as related to L1-L2 idiom similarity. In addition, it has shown the positive role that context can play in L2/EFL learners' comprehension of idioms (Cooper, 1999; Liontas, 2001, 2002a, 2002b, 2002c). Such research also detected a considerable subjects' reliance on guessing from context to comprehend idioms; yet, guessing from context, as will be discussed below, is not the only strategy that these learners use to comprehend idioms. The results of these studies suggest that L2/EFL learners adopt a heuristic model to comprehend the meaning of idioms whereby they formulate hypotheses about the meaning of idioms in a trial-and-error fashion (Cooper, 1999). Such learners also evaluate their hypotheses and may reconstruct new ones (Liontas, 2002a).

Abdullah and Jackson (1999) sought to find the types of English idioms that Syrian, university-level, EFL learners might transfer into their L1 (Arabic) in comprehension as well as production. The researchers did not only investigate the effect of L1-L2 idiom *lexical* similarity, as done in previous studies, but they also examined the effect of *pragmatic/translational* equivalence of L1-L2 idioms (i.e., idioms with the same meaning but different form) on their subjects' comprehension and production of English idioms. The researchers presented a sample of idioms in isolation and surveyed their subjects' strategies of comprehending and producing English idioms through interviews.

The researchers found that "cognate idioms," those with the same form and meaning, were the easiest to comprehend; thus, the most likely to be transferred from L1 to L2. Idioms with translational equivalents came next and were followed by "idioms with no equivalents". The most difficult idioms to comprehend were "false cognate idioms," or false friends, idioms with the same form but different meanings (Abdullah & Jackson, 1999).

Unfortunately, the researchers did not say much about their subjects' strategies nor did they offer a classification of such strategies; however, different strategies of idiom comprehension were reported in the study. Among these strategies were the uses of *idiom keywords, metaphoric association, image association, literal paraphrase of L2 idiom, giving contextual examples where an idiom can be used, avoidance of interpretation* and *previous knowledge of idiom.*

According to Abdullah and Jackson (1999), the subjects managed to comprehend (18%) of the "idioms with no equivalents," which provides insights about Arab EFL learners' guessing efficiency at such idioms. The researchers reported that for such type of idioms, the subjects made much use of metaphoric association and image association; the answers were usually correct when using these techniques to comprehend idioms with no equivalents.

Language learners, however, do not usually encounter idioms in isolation; as such, Abdullah and Jackson's study did not tell much about how language learners might interpret idioms in context, nor did their study characterize the subjects' guessing of the meaning of idioms. Liontas's study (2002a), much similar to and based on Liontas's (2001) study, investigated not only the effect of context on L2 learners' idiom comprehension but it also explored the strategies of idiom comprehension that L2 learners use when presented with idioms in and out of context.

Liontas (2002a) not only attempted to explore L2 learners' strategies of comprehending idioms of different levels of L1-L2 idiom lexical similarity but he also examined the role of context on L2 learners' comprehension of three types of idioms: lexical-level idioms (those that exist in both the L1 and the target language with exact lexical equivalents), semi-lexical level idioms (those that have some lexical similarities in both the L1 and the target language) and the post-lexical level idioms (those that only exist in either the L1 or the target language; with no lexical equivalents in either of the two languages).

Liontas's subjects were three groups of native speakers of American English who were learning Spanish, German or French as second languages at the university level. The sixty subjects were asked to give the meaning of a sample of L2 idioms of the aforementioned types in both "contextualized" (i.e., in context) and "acontextualized" (i.e., in isolation) conditions. They were then asked to tell how they attempted to find the meaning of the idiom and to comment on the task and on the difficulties they faced while doing the task.

The results of Liontas's (2002a) study draws attention to the role that context plays in L2 learners' comprehension of idiom. By comparing the results of the subjects' comprehension of idioms in acontextualized and contextualized conditions, Liontas found that the subjects' comprehension of idioms, regardless of the L2 they were learning and regardless of the degree of L1-L2 idiom similarity, improved significantly when the idioms were provided in context.

More important for the current study is what Liontas's research has offered in terms of the subjects' efficiency and strategies of guessing the meaning of idioms, especially the post-lexical level ones. That research has shown that the greatest effect of context appeared to be in favour of the post-lexical level idioms which received the

utmost increase of correct responses when provided in context for all language groups, an increase that ranged between (38.7%) to (45.8%). In addition, Liontas's study offered a tally of L2 learners' strategies of idiom comprehension. In the contextualized condition, "context" was the most frequently used strategy, followed by "connecting to other idioms," which was in turn followed by "translation," "exact meaning in English," and "guessing" respectively.

Furthermore, it should be observed that the subjects, in Liontas's (2002a) study, were able to comprehend post-lexical level idioms even when presented in isolation, they scored (25.4%) of the possible correct answers whereas they could score (67.8%) when the same idioms were presented in context. The result suggests that L2 learners can efficiently comprehend the meaning of post-lexical level idioms especially when provided in context. However, the texts adopted in Liontas's study were drawn from books written to teach idioms to L2 language learners; as such, they were contrived texts. Still, Liontas (2001) reported similar results when he adopted Greek literary texts. In both studies, nonetheless, the subjects' idiom familiarity was not controlled; thus, the answers to the meaning of the post-lexical idioms cannot necessarily be viewed as *guesses*.

Another study that did not adopt authentic texts nor did it control subjects' idiom familiarity is Bulut and Celik-Yazici's (2004). However, this study not only looked into the effect of L1-L2 idiom similarity on L2 learners' comprehension of idioms, as the studies of Abdullah and Jackson (1999) and Liontas (2001; 2002a) did, but it also examined the effect of the different levels of discourse (i.e., formal, informal and slang) on EFL teachers' comprehension of idioms.

Bulut and Celik-Yazici (2004) investigated the effect of such idioms on eighteen Turkish EFL teachers' comprehension of English idioms. Moreover, the researchers

also explored their subjects' strategies of idiom comprehension. The sample idioms, including three lexical-level idioms (word-to-word matches in Turkish and English), were not presented in isolation; in other words, the researchers "typed each idiom on a separate note card and then created a context so that the participants would decipher the meanings of the selected idioms" (p. 108).

The findings showed that the discourse level of an idiom has no effect on EFL Turkish teachers' comprehension of English idioms. Nevertheless, there was a positive effect of L1-L2 idiom similarity on the subjects' comprehension of idioms; two of the three lexical-level idioms were the most comprehended ones of the sample idioms. As regards the subjects' strategies, Bulut and Celik-Yazici (2004) adopted Cooper's (1999) classification of idiom comprehension strategies since the strategies that they found were almost the same as those found by Cooper. The researchers reported that guessing was "the mostly used technique." Moreover, (76.9%) of the subjects' guesses were correct, which implies that the subjects' guessing was greatly effective; yet, the number of correct guesses seems to be positively affected by the contexts in which the idioms were presented, those contexts created by the researchers "so that the participants would decipher the meanings of the selected idioms" (*ibid.*).

The studies discussed so far probed into L2 learners' idiom comprehension strategies within an interlingual approach to idioms. Attempting to fill a gap in the literature, Cooper (1999) did not study the effect of L1-L2 idiom similarity on L2 learners' comprehension of idioms but he investigated the online idiom comprehension strategies of eighteen non-native speakers of English. By the term "online," Cooper (1999, p. 238) refers to "the immediate thought processes activated in the minds of L2 learners as they try to comprehend a given idiomatic expression on the spot, without time for reflection."

Cooper's (1999) subjects were of different nationalities. They had been living and working in the U.S. for different periods and they had had some English courses with an average of 7.3 months of study. The subjects were required to give the meaning of English idioms, each was to be found in a sentence which was taken from a dictionary of idioms or from the texts adopted in some previous L1 idiom research studies. By means of think-aloud protocols and interviews with the subjects, the researcher found that his subjects used a number of strategies to comprehend the sample idioms (e.g., *what's cooking?* and *to have a green thumb*). Cooper classified those strategies into three categories: "preparatory", "guessing" and "other" strategies.

Under the umbrella of the guessing category, Cooper (1999) lists the following subcategories:

1. guessing the meaning of the idiom from the context (GC);
2. using the literal meaning of the idiom as a key to its figurative meaning (LM);
3. using background knowledge to figure out the meaning of the idiom (BK);
4. referring to an idiom in the L1 to understand the L2 idiom (L1).

Cooper's results show that, out of the "preparatory," "guessing" and "other" strategies, the subjects relied on guessing from context (GC) the most frequently (28% of the times) (Cooper, 1999: 246). Moreover, the results show that other "guessing" strategies were used by Cooper's subjects as frequently as 19% for (LM), 7% for (BK) and 5% for (L1). The guessing strategies were the most frequently used; they were used about 59% of the coding instances of the different strategies adopted by the subjects to figure out the meaning of the sample idioms, compared to a use of only 39% for the preparatory strategies, and only 2% for "other" strategies.

Cooper's (1999) study showed, as Liontas's (2002a) did, the important role that context plays in L2 learners' guessing of the meaning of idioms. Cooper's study not

only showed that the guessing strategies were the most frequently used by the subjects to comprehend English idioms but it also showed that guessing the meaning of idioms from context (GC), the most frequently used strategy, was the most successful strategy and led to successful comprehension of the sample idioms 57% of the times it was used. Other guessing strategies were not as successful as (GC) was. The average success rate of the guessing strategies was 24.8%. In average, Cooper's subjects were able to comprehend the sample idioms using guessing strategies with a successes rate of 24.8%.

What is interesting about the frequency and success rate of the subjects' strategies, as Cooper points out, is that the more frequent a strategy was the more successful it appeared to be (Cooper, 1999). In addition, the guessing strategies were the ones that led to more correct answers— more than other strategies, such as the preparatory ones, did. This result shows that L2 learners may tend to use more frequently the strategy that may be more successful. Consequently, this result is an indicator of the potential effectiveness of L2 learners' guessing at the meaning of L1 idioms.

In general, using the "preparatory," "guessing" and "other" strategies, Coopers' subjects answered 56% of the test items correctly. Yet, this result should be considered in light of two observations:

1. As Cooper notes in his suggestions for further research, "the idioms were presented in a rich context in this study, and one of the findings was that the use of context was the major strategy employed by the participants to arrive at the meaning of the expressions" (Cooper, 1999, p. 258).
2. Cooper classifies the strategy of using background information (BK) to comprehend the meaning of idioms under the "guessing" strategies. Since Cooper associates (BK) with remembering real-life situations in which the

subject encountered the idiom sometime before, such recall can indeed be related to previous (partial or full) knowledge of (i.e., familiarity with) the meaning of an idiom more than it is related to *pure* guessing in the sense of using familiar stimulus to recognize an unfamiliar one, as Carton (1971) defines guessing.

2.3 Lexical Inferencing

This section offers a discussion of the place that lexical inferencing occupies in some typologies of language learning strategies. The section also advances a discussion of the nature of inferencing, in general, and of lexical inferencing, guessing the meaning of vocabulary items from context, in particular. In addition, a review of the experimental research concerned with L2 learners' lexical inferencing is provided.

2.3.1 Lexical Inferencing and Language Learning Strategies

Inferencing (i.e., guessing) is one of the language learning strategies. According to Chikalanga (1992) and as can be seen in the following definition by O'Malley and Chamot (1990, p. 46), lexical inferencing is one type of inferencing which can be defined as "using information in text to guess meanings of new linguistic items [i.e., lexical inferencing], predict outcomes, or complete missing parts."

Indeed, according to Rubin (1987), research into language learning strategies, in general, can be traced back to Carton's (1966) study of inferencing. Language learning strategies gained more interest in the 1970s, shifting the focus from being on the teaching methods to being on the learners' actions that may improve their language learning (Schmitt, 1997). Such research (e.g., O'Malley & Chamot, 1990;

Wenden & Rubin, 1987) has identified a diverse set of strategies that language learners use while learning a second or a foreign language. The following is a brief presentation of the nature of lexical inferencing and the place it occupies in some of the available typologies (or systems) of language learning strategies.

According to Oxford (1990), a number of terms have been used to refer to learning strategies, for example, *strategies*, *actions*, *techniques*, *tactics*, *skills*, etc., all have been used interchangeably to refer to

> any set of operations, steps, plans, routines used by the learner to facilitate the obtaining, storage, retrieval and use of information (after O'Malley *et al.*, 1983; and Brown *et al.*, 1983), that is, what learners *do* to learn and *do* to regulate their learning. (Rubin, 1987, p. 19)

In a different way, Oxford (1990, p. 9) defines learning strategies as

> specific actions taken by the learner to make learning easier, faster, more enjoyable, more self-directed, more effective, and more transferrable to new situations.

A number of the available typologies (of language learning strategies) include a category labelled *inferencing* or *guessing*. For instance, in Rubin's (1987, p. 23) classification, there are the "guessing/inductive inferencing strategies," defined as the "strategies which use previously obtained linguistic or conceptual knowledge to derive explicit hypotheses about the linguistic form, semantic meaning [i.e., lexical inferencing] or speaker's intention." Rubin classifies language learning strategies into cognitive and metacognitive strategies, having "guessing/inductive inferencing", as one of the six primary cognitive strategies, those that directly affect or "contribute to" language learning (Rubin1987), as opposed to metacognitive strategies that "entail planning for, monitoring, or evaluating the success of a learning activity" (O'Malley & Chamot, 1990, p. 44).

In Oxford's (1990, p. 16-19) typology, however, inferencing is a "compensation strategy" under which there are two primary categories, "guessing intelligently" and

"overcoming limitations in speaking and writing." Compensation strategies are "direct strategies," those used in dealing with "new language" despite "knowledge gaps."

The typologies, just mentioned, were devised in order to classify language learning strategies in general. However, there are also some typologies specific to the strategies that language learners use to learn vocabulary in particular. Schmitt (1997) presents one such typology. Schmitt adopts Oxford's typology, just mentioned, but he keeps a distinction between two types: discovery strategies (e.g., obtaining the meaning of new words) and consolidation strategies (e.g., memorization strategies). Under the discovery strategies, those used to discover meaning, there are the determination strategies that accommodate inferencing. Guessing from context (or lexical inferencing), a type of inferencing, is one of the "determination strategies." Consulting reference books and asking others about the meaning of new words are also "determination strategies" (Schmitt, 1997).

It should be noted that Schmitt (1997) discusses *lexical* inferencing, not inferencing in general since the cited study aims at developing a typology of vocabulary learning strategies. However, there are different types of inferencing. Chikalanga (1992) presents a typology of inferences that accommodates three categories: lexical, propositional and pragmatic/scriptal inferencing.

To discuss lexical inferencing in particular, a discussion of inferencing in general may be necessary. According to psychologists, *inferencing* refers to "a process of identifying unfamiliar stimuli. [....] In inferencing, attributes and contexts that are familiar are utilized in recognizing what is *not* familiar" (Carton, 1971, p. 45). Inferencing is also defined as "the skill of understanding the implicit meaning of texts" (Chikalanga, 1992, p. 697).

A more specific definition of inferencing comes from O'Malley and Chamot (1990, p. 120) who define inferencing as "using available information to guess the meaning of new items, predict outcomes, or fill in missing information." Using different terms, Liontas (2002b, p. 43) describes inferencing as follows: "guessing in context is, strictly speaking, a reading strategy, and its use involves a combined semantic and pragmatic treatment of the input."

A number of definitions such as the last two, mentioned above, highlight inferencing as a process that involves an interaction between linguistic input and learner's linguistic and world knowledge. Oxford (1990, p. 48) draws attention to this interaction by maintaining that "guessing is actually just a special case of the way people typically process new information— that is, interpreting the data by using the immediate context and their own life experience." Similarly, Goodman's psycholinguistic model of reading noticeably highlights the reader's knowledge of language and the world along with text context as the two main elements within which the guessing process operates (Haynes 1993). Essentially, Goodman (1967/1970, p.108) depicts reading as "a psycholinguistic guessing game [that] involves an interaction between thought and language." Such interaction is reflected even in the definitions of *lexical inferencing* (lexical guessing) such as the following definition reported by Nassaji (2003, p. 645): " a process that 'involves making informed guesses as to the meaning of an utterance in light of all available linguistic cues in combination with the learner's general knowledge of the world, her awareness of context and her relevant linguistic knowledge' (Haastrup, 1991: 40)."

Informed or *plausible* guesses should not be taken to mean correct or accurate guesses since lexical inferencing, even if based on plausible thinking, can indeed lead to wrong guesses (see Cooper, 1999; Laufer, 2003, 1997). That is, inferences

(including lexical ones), as Rubin's (1987) definition, mentioned above, indicates, can be perceived as "explicit hypotheses" only. Similarly, Goodman (1967/1970, p.108) defines inferences as "tentative decisions." Such hypothesis construction in the process of inferencing is also reflected in Bloch's (as cited in Nassaji, 2003) cognitive processing model of L2 lexical inferencing in which language learners generate and evaluate their hypotheses or guesses of the meaning of newly encountered (i.e., unfamiliar or unknown) vocabulary items through a generator-evaluator component, one of the two components in Bloch's model. Moreover, although O'Malley and Chamot (1990, p. 44) describe inferencing as one of "the typical strategies that have been discussed in the cognitive category," Bloch's model of lexical inferencing has a metacognitive component through which language learners regulate the steps they go through to generate and evaluate their guesses.

The discussion, thus far, has been concerned with some theoretical issues related to the nature of lexical inferencing or guessing the meaning of vocabulary from context, a type of inferencing, which is one of the language learning strategies. Based on what has already been discussed, lexical inferencing is a problem-solving strategy by means of which language learners (or language speakers in general) attempt to make guesses at the meaning of unfamiliar vocabulary items using their knowledge of language and the world. The role that lexical inferencing plays in L2 vocabulary learning, especially during reading, is to be discussed in the following section in which a review of some experimental research conducted on lexical inferencing in L2 settings is offered.

2.3.2 Research on Lexical Inferencing in L2 Settings

That most vocabulary items are acquired or learned through guessing from context during reading (see Krashen, 1989) is a claim which underwent experimental examination in both L1 and L2 settings but only after being left unquestioned for some time (Huckin & Coady, 1999). Promoting the learning of vocabulary by means of guessing from context has been so popular that some EFL/ESL textbooks encouraged L2 learners to guess the meaning of unfamiliar vocabulary from context as the only or the primary strategy of vocabulary learning, even to the extent of banning dictionary use (Haynes, 1993; Sökmen, 1997).

As the title of Paribakht and Wesche's (1999) study indicates, research on L2 learners' guessing of the meaning of vocabulary items is closely related to research on incidental vocabulary acquisition, learning vocabulary as a by-product of reading or listening. The hypothesis of incidental vocabulary learning states, in short, that L2 learners can learn much vocabulary during reading (by guessing from context) and that their knowledge of that vocabulary increases with multiple-exposure as a result of encountering the vocabulary items more than once in different contexts.

According to Laufer (2003), the "vocabulary through reading" claim, assumed in the hypothesis of incidental vocabulary learning, rests on four assumptions, among them is what Laufer calls "the guessing ability assumption" (i.e., language learners have the ability to guess the meaning of unfamiliar vocabulary from context, for instance, while reading).

Krashen (1989, p. 440), in line with his Input Hypothesis, states, "I argue that the best hypothesis is that competence in spelling and vocabulary is most efficiently attained by comprehensible input in the form of reading, a position argued by several others [...]." Before accepting the "vocabulary through reading" claim, however, there

is a need to find out how well L2 learners can guess the meaning of vocabulary items from context because language learners' guessing of the meaning of vocabulary from context is a "prerequisite," as Laufer (2003) describes it, for learning those vocabulary items through reading.

Indeed, there exists empirical evidence in favour of the "guessing ability assumption." L2 learners were reported to be able of guessing the meaning of some unfamiliar vocabulary items from context; for instance, Huckin and Bloch (1993) studied the strategies that three L2 postgraduates use to guess the meaning of unfamiliar vocabulary items. They found that, by mainly depending on contextual clues, their subjects could successfully guess the meaning of 25 target words (56.8%) out of 44. Furthermore, checking their answers against various contextual clues, the subjects were "usually successful in generating correct or near-correct guesses" (p. 160).

Moreover, Haynes (1993) reported that L2 students of different language backgrounds were good guessers of nonsense words embedded in the context of two reading passages; they were good guessers especially when context offered immediate clues to the meaning of those target words. The study also showed that the lower the student's level of English proficiency was the more difficulties that student would face while guessing the meaning of target nonsense words. Furthermore, Gu and Johnson (1996) found that Chinese non-English majors reported using *guessing from context* among the other strategies that they used to learn English vocabulary; the researchers also found that *guessing from context* correlated positively with the subjects' vocabulary size and their general English language proficiency.

In addition, previous research has presented evidence in support of the incidental vocabulary learning. Krashen (1989) reviewed a copious amount of research in L1 as

well as L2 settings showing that, over time, language learners can expand their vocabulary gain through reading. Similarly, Pigada and Schmitt (2006) note that "a number of studies during the last two decades have confirmed the widespread belief that second language learners can acquire vocabulary through reading." The findings of the two studies just mentioned suggest that language learners learn new vocabulary items by guessing their meanings from context while reading. Such findings need to be implemented in teaching foreign or second languages, and EFL and L2 students should be encouraged to read as much as possible in order to increase their vocabulary span.

However, previous research demonstrated that *guessing from context,* especially during reading, has a number of limitations. First, L2 learners cannot always decide whether a particular vocabulary item is or is not familiar to them; they may not notice unfamiliar words as such or they may mistake a vocabulary item for another (Hanyes, 1993; Huckin & Bloch, 1993; Laufer, 2003, 1997; Parry, 1997). Second, even if an L2 learner notices an unfamiliar vocabulary item as such, they will not always attempt to guess its meaning while reading; they might ignore it (Laufer, 2003; Paribakht & Wesche, 1999; see also Pigada & Schmitt, 2006 for a discussion on this point). Third, not all contexts provide the clues necessary for correct guesses (Hanyes, 1993; Laufer, 2003, 1997). Fourth, Huckin and Coady (1999, p. 190), pointing out the limitations of guessing, assert that "guessing is not very effective in the acquisition of multiword lexical items."

Regarding the forth limitation, one should bear in mind two points: first, Huckin and Coady's (1999) statement is related to the *acquisition* of multiword lexical items, not *obtaining* the meaning of multiword lexical items from context. Second, most, if not all of the previous studies that examined L2 learners' lexical guessing and even

those that investigated vocabulary gain due to incidental vocabulary learning, were devoted to *words*, not multiword lexical items (e.g., idioms and phrasal verbs). Thus, the question of whether or not all vocabulary items of different categories lend themselves well to L2 learners' guessing remains open to investigation. Third, Huckin and Coady presented only two studies in support of the statement in question, neither of which investigated L2 learners' guessing of the meaning of any multiword lexical items. Both studies can be said to provide only some probabilities as to how well L2 learners' guessing of the meaning of multiword lexical items might be but they do not, in any respect, provide an assessment of the L2 learners' guessing efficiency at multiword lexical items.

The first study cited by Huckin and Coady is that by Bahns and Eldaw (as cited in Huckin & Coady, 1999) who "found that, for advanced EFL students, collocations present a major learning problem" (p. 190). Therefore, such a major learning problem may have its bearing on L2 learners' acquisition as well as guessing of the meaning of idioms and other multiword items that involve collocation. Yet, if that result does suggest that guessing is not very effective for the *full acquisition* of multiword lexical items, it does not *necessarily* suggest that guessing cannot be effective for obtaining the meaning of these items from context while reading or even in isolation. For instance, previous research demonstrated that L2 subjects were capable of guessing the meaning of some idioms even when those idioms were provided in isolation (see 2.2). In fact, Huckin and Coady (p. 190) themselves touch on this point by stating that "research suggests that such phrases [i.e., multiword lexical items] are not learned well through incidental exposure, especially in foreign language settings." Thus, by the word "learn," they might have meant *full* acquisition of such vocabulary, which

entails recognizing, knowing the meaning of and committing such vocabulary to long-term memory in addition to using such vocabulary properly.

In addition, the researchers cite Arnaud and Savignon (1997) who found that non-native speaking experienced teachers of English could perform nearly as well as native-speaking undergraduates could in their knowledge of rare words but not in their knowledge of multiword lexical items. This result, according to Huckin and Coady, made Aranaud and Savinon (1997) suggest that guessing might not be effective for the acquisition of multiword lexical items (because guessing is a prerequisite, as Laufer (2003) notes, for the incidental learning of target vocabulary while reading).

Nonetheless, upon examining Arnaud and Savignon's (1997) study, one can also find that, first, the sample idioms used by Arnaud and Savignon, as they stated (p. 163), was a sample of opaque idioms only. Such idioms may well be more difficult for L2 learners to comprehend than transparent idioms may be (Boers & Demecheleer, 2001; Irujo, 1986b). Second, Arnaud and Savignon's study also showed clearly that the non-native speaking subjects' (first-year-English majors, third-year-English majors, teacher trainees and experienced teachers) knowledge of rare words and complex lexical items had significantly improved over time. That result indicates, contrary to Huckin and Coady's suggestion, that incidental learning of these items, and hence guessing at the meaning of idioms, might increase L2 learners' gain of such vocabulary over time.

Hukin and Coady's statement might still be true as related to guessing. For instance, although L2 learners were reported to be able to recognize and identify idioms (Cooper, 1999; Liontas, 2001), Laufer (1997) reported that L2 learners translated idioms word by word, not as an expression whose words as a whole make

up meaning. These findings suggest that some L2 learners would not always recognize idioms (as *idioms*) and thus those learners would not have the chance to guess the meaning of those idioms. Yet, to find out if idioms can or cannot be acquired well through incidental exposure, there is first a need to asses L2 learners' efficiency at guessing the meaning of unfamiliar multiword lexical items (e.g. idioms) during reading or listening. This is particularly important since, as Nassaji (2003, p.647) notes that "inferencing has also been reported to be the major processing strategy when learners attempt to derive and learn idiomatic and figurative meanings in reading." Nassaji cites Cooper's (1999) study to support what is just quoted (see 2.2.2 for a discussion of Cooper, 1999).

In addition, according to Schmitt (1997, p. 200), "few individual vocabulary learning strategies have been researched in any depth, the main exceptions being guessing from context (Huckin, Haynes, & Coady, 1993)"; yet, previous research studies on lexical inferencing, such as the ones reviewed in this section, have been concerned with L2 learners' guessing of the meaning of *words*, not *vocabulary* which signify a wider group linguistic units including multi-word items such as idioms.

Little or no research has been conducted to investigate the role that lexical inferencing can play in L2 learners' comprehension of multi-word items such as idioms, which can be noticed in the reviews of many studies on lexical inferencing, especially in L2 settings, such as the reviews of Huckin and Coady (1999), Nation (2001, Chap. 7), Paribakht and Wesche (1999), the different studies contributed by the researchers in Huckin, Haynes ,and Coady (1993), and Krashen's extensive review in (Krashen, 1989).

In doing research on L2 learners' lexical guessing, there is a need to shift the focus from being on L2 learners' guessing of the meaning of *words* to being on other

vocabulary items such as multiword lexical items (including idioms) so that one can see how the findings reported in the previous research on guessing the meaning of *words* apply to L2 learners' guessing of the meaning of multiword lexical items.

2.4 Conclusion

Chapter Two has offered a discussion of the difficulties associated with defining an idiom and the definitions available in the literature in order to adopt a working definition of idiom. In addition, some of the theoretical issues and the experimental research on lexical inferencing were presented to show that research on L2 learners' lexical inferencing or guessing from context has been mainly concerned with *words*, not vocabulary in general. Such concern resulted in a need to investigate L2 learners' guessing of the meaning of other vocabulary items (e.g., multi-word items such as idioms).

The review of the literature related to L2 learners' processing and strategies of idiom comprehension shows that, to date, only a few research studies have been carried out to explore L2/EFL learners' strategies of idiom comprehension in general. These studies, almost all of them published recently (from 1999AD on), attempted to identify the strategies that L2/EFL learners use to comprehend idioms within an interlingual approach (i.e., studying the effect of the different types of L1-L2 idiom similarity on L2 learners' comprehension of idioms).

Except for Cooper's (1999), these studies were carried out within that interlingual approach to idioms; Abdullah and Jackson (1999), Bulut and Celik-Yazici (2004) and Liontas (2001, 2002a) all carried out research that focused on foreign language learners' comprehension of idioms of different types of L1-L2 similarity. Cooper

(1999) shifted gears and focused his study on ESL speakers' strategies of comprehending a sample of English idioms without reference to of L1-L2 idiom similarity; he also investigated the frequency and the effectiveness (i.e., success rate) of these strategies.

The current study builds on the outcomes of Cooper's (1999) study in which a considerable L2 learners' use of guessing was found. Yet, this study is different from the previous studies, Cooper's (1999) in particular, mainly in the following aspects:

1. Little or no research offered an assessment of EFL learners' efficiency at guessing the meaning of idioms appearing in authentic written texts.
2. Previous research investigated L2 and EFL learners' techniques of idiom comprehension in general while the current study investigates the EFL subjects' guessing techniques in particular.
3. The current study adopts authentic texts that would hopefully be similar to the English texts that EFL majors would normally read outside the classroom, for example, the texts they would read for pleasure.
4. Coopers' subjects were L2 speakers of English, who lived and worked for different periods of time in the U.S., whereas EFL majors, students majoring in English, participate in the current study.
5. No statistical test was used in Cooper's (1999) to verify if there was a significant difference between the number of correct and wrong answers that resulted from the subject's use of a particular technique and that number resulting from their use of another.
6. Most of the previous studies (e.g., Cooper, 1999; Liontas, 2001, 2002a) investigated the frequency with which L2 subjects' use certain techniques. The current study investigates both of the frequency and commonness of technique

use. Frequency refers to number of times a particular technique is used. Commonness refers to the number of subjects who use a particular technique (see 3.6.3).

Although Cooper's and other previous studies, such as the ones discussed above, have provided insights into the L2 learners' idiom comprehension and guessing of the meaning of idioms, there has not been a systematic assessment of L2 learners' guessing efficiency at the meaning of idioms. Furthermore, there has been no or little exploration of (effectiveness of) the techniques with which L2 learners attempt to guess unfamiliar English idioms especially those that appear in authentic texts. The current study is intended to provide insights into how L2 learners, EFL learners in particular, may guess the meaning of idioms while reading authentic texts, unlike many previous studies that presented idioms in isolation or in contrived texts. The methodology adopted in the current study is presented, in detail, in the following chapter.

CHAPTER THREE

METHODOLOGY

3.1 Sample Subjects

29 volunteer subjects participated in the current study. The subjects were all Bahraini students taking the third and fourth-year English-major courses at the Department of English Language and Literature (DELL), University of Bahrain (UOB). The subjects were female EFL learners whose first language is Arabic. In fact, the gender of the subjects was not controlled; that is, a group of students, attending a class in one of the courses just mentioned, was chosen at random. That group consisted of female students except for one whose responses were not included in the data analysis (see the justification in 4.1.1). Furthermore, whether or not there is an effect of gender on EFL learners' guessing of the meaning of idioms is beyond the scope of the current study.

3.2 Data Collection: the Inference Task

Data is collected by an inference task especially designed for the study. The inference task is a test that aims at assessing a sample of language learners' efficiency at guessing the meaning of idioms from the context of excerpts extracted from authentic written texts.

The data collected in the inference task falls into two categories:

1. the subjects' efficiency at guessing the meaning of unfamiliar idioms, represented by the number of correct, partially correct and wrong guesses that the subjects make in the inference task;
2. the subjects' techniques of guessing the meaning of that sample of idioms as reported by the subjects themselves through a multiple-choice questionnaire and retrospective written reports.

The inference task consists of 18 short reading excerpts, each extracted from an authentic written text (acknowledged in Appendix B.5). Each excerpt presents an underlined idiom (sample idioms appear in Appendix B.3). After reading each text, the subjects have to:

1. report in Arabic, the subjects' L1, or English how they have tried to understand the meaning of the idiom, "the underlined expression," as expressed in the instructions of the inference task;
2. provide, in writing, the meaning of the underlined expression.

To report on how they have tried to understand the meaning of the idiom in each text, the subjects are required to:

1. choose one or more from seven options provided in a questionnaire. The questionnaire is provided under each text;
2. give more detail, in writing, about their choice(s).

If no option applies to the way in which the subjects tried to understand the meaning of an idiom, the subjects can respond by writing their own reports, as illustrated in the following section of this chapter.

3.2.1 Design and Rationale

Since a sample of EFL learners' efficiency at guessing the meaning of idioms in the current study is to be assessed in terms of the number of unfamiliar idioms to which the subjects can provide correct, partially correct or wrong guesses, the inference task has to present an adequate number of short texts, each containing one idiom. Otherwise, if the inference task consisted of a very small number of texts, and if the subjects were already familiar with most or all of the idioms presented in those texts then assessing the subjects' guessing efficiency would be based on their guesses of the meaning of a small number of idioms (e.g., 2 or 3). Obviously, that would be an unfair and rather unreliable assessment. Furthermore, a small number of idioms would not be representative of the many idioms in English. However, the task would not be applicable, in terms of subjects' time and energy if the subjects were to read many texts in one session of testing.

Therefore, the inference task was designed to be administered in two sessions by dividing it into two parts. Each part presents the subjects with the same number of reading excerpts; each excerpt contains an idiom that is underlined for the purpose of the task. Both parts can be perceived as one task administered in two sessions.

To make it more convenient for the subjects and for later data analysis, each text was printed on a separate sheet of paper. Under each text, the subject finds three sections to deal with after having read the text (see a sample in Appendix B.2):

Section A: This section is a brief questionnaire that surveys the subjects' guessing techniques. The questionnaire presents seven options through which the subjects can tell how they have tried to understand the meaning of the idiom presented in the text. The subjects can choose one or more of the options but they can choose the first option only if they are already familiar with the meaning of the given idiom, "the

underlined expression". In addition, the subjects can choose the last option (No.7: "Other") to report in writing, using Arabic or English, the guessing techniques, other than those mentioned in the list, that they have used in order to understand the idiom.

Apart from the first and the last options, the subjects tick the options from 2-6 to report their techniques when they are not familiar with the given idiom. The following list contains the options just mentioned (see Appendix B.2):

1. "I tried to guess the meaning of the underlined expression from a word/words in the expression itself [i.e., idiom keyword guessing; idiom keyword(s) as clues for guessing]";
2. "I tried to guess the meaning of the underlined expression from a sentence/sentences [i.e., sentence-dependent guessing, using sentential clues]";
3. "I tried to translate the expression into Arabic in order to understand it [i.e., translation]";
4. "I made up a picture of this expression in my mind [i.e., using mental images]";
5. "I tried to find a metaphorical/figurative meaning for a word/words in the underlined expression [i.e., metaphor]."

The optional techniques above were adopted in the inference task since they were the most frequently reported by the subjects in the pilot study and also by the subjects in two related previous studies (Cooper, 1999; Liontas, 2002a; see 2.3).

Section B: In this section, the subjects are required to give more detail, in Arabic or English, about the way in which they have tried to guess the meaning of the given idiom, especially if they have chosen one or more of the questionnaire options (except No.1).

Section C: This section asks the subjects to provide the meaning of the given idiom in Arabic or English. The subjects are required to do so whether they are already familiar with that idiom or not.

The three sections are so ordered to give prominence to the reporting of the techniques that the subjects use. In the pilot study, the subjects were asked to give the meaning of the given idiom first and then they were required to report their techniques in writing. Some subjects provided answers regarding the meaning of the idioms but they did not describe their guessing attempts. The inference task, adopted in the current study, presents sections A and B as well as "Other" first, and then comes section C where the subjects are asked to give the meaning of the idiom.

The panel members who assessed the validity of the inference task members were also asked to express their views on whether to collect data about the subjects' techniques of guessing by means of multiple-choice reports or by means of retrospective written reports. The panel members came up with mixed views. Most of them recommended the use of both methods. Consequently, on the basis of the observations that resulted from conducting the pilot study and according to the panel members' opinions, both methods were adopted in the inference task.

3.2.2 Content

Due to the research objectives, the texts to be included in the inference task not only have to be authentic but they also have to present an idiom. In pursuit of such texts, the World Wide Web proved practical. The following sections present the steps of constructing the content of the inference task.

3.2.2.1 Sample Idioms

To find a sample of authentic texts, each containing a post-lexical level idiom, first, a master list of sixty modern English idioms were selected randomly from two dictionaries, *Collins Cobuild Dictionary of Idioms* (CCDI, 2002) and the online edition of the *Cambridge International Dictionary of Idioms* (CIDI, 2005).

Second, these idioms were submitted to a panel of twenty-one Arab EFL professors at the Department of English Language and Literature (DELL) in the UOB to point out any idiom (included in the master list) that is lexically similar to any Arabic counterpart. If a single panel member indicated that a particular idiom was lexically similar to any Arabic idiom, that idiom would be excluded from the sample idioms. The members pointed out twenty-four such idioms. Thus, there remained 36 "post-lexical level" idioms (using Liontas's 2002a terms) out of the 60 idioms on the master list. The inference task adopted in the study presented 18 of the remaining 36 idioms, as explained in the following section.

It should be noted here that the purpose of the current study is not to find out what effect the learners' L1 exerts on their comprehension of L2 idioms; choosing post-lexical level idioms only, in this study, rests on one of the research objectives, which is exploring the guessing techniques of Arab EFL learners. As such, the variable of L1-L2 idiom similarity has to be eliminated.

3.2.2.2 Sample Texts

Using search engines such as Yahoo or Google, an online search for written texts containing the thirty-six idioms was carried out in order to assemble a corpus of texts of which some would be included in the inference task. Searching for the prospective texts was as follows:

1. The idiom words, as taken from the *CCDI* (2002), would be fed into the search engine.
2. When the search results were given, two or three results (i.e., texts) would be chosen randomly. If the texts met the forthcoming criteria, they would be stored for later use; if not, the texts would be deleted and the search for other texts containing the same idiom would be restarted.

To be included in the corpus, the text must have met all of the following 9 criteria:

1. The text must be authentic, not contrived. That is, the text is not especially written for non-native speakers of English or as a simplified (i.e., abridged) version of an original text. Moreover, the text is not an example presented to illustrate the idiom's meaning in context (e.g., in a dictionary). Furthermore, the text is not introduced in a textbook on idioms or in a book of linguistics where a discussion of the idiom's meaning or idioms in general is presented;
2. The language of the text should not be of the type that would normally be described as *technical* or that would normally require special knowledge of a particular field;
3. The text must be *natural*, not machine-generated;
4. The language of the text, in general, should not be described as slang, idiosyncratic or incomprehensible;
5. The text must be contemporary. All the texts, used in the final draft of the inference task, were written between 2000 and 2005 except for one that was written in 1998;
6. The idiom, presented in the text, is not used as the title of a music release, a literary work or a book, a name of a website or the like;

7. The text must at least be a paragraph, not a sentence or a phrase;
8. The text must be culturally appropriate;
9. The text is not culture-specific.

By so doing, a corpus of two or three texts for each of the thirty-six idioms selected by the panel members, was assembled. Since it was proposed that the subjects would work on a number of texts in each of the two sessions, it was not practical to present them with full texts, a procedure that would consume the subjects' available time and energy. Therefore, only an excerpt had to be extracted from each text. The average number of words in each excerpt is 111. These excerpts were laid out in the inference task as published (e.g., with their pictures). Moreover, the reading excerpts were not modified or edited except for some minor formatting changes, such as font size, which were necessary to make the layout of the reading excerpts fit in the format of the final draft of the inference task.

Each of the texts in the corpus was given an "ID" number. Using the ID numbers, one text for each idiom was chosen randomly, a process that resulted in having only 36 texts out of 90. Each of these 36 texts presented a different post-lexical level idiom.

3.3 Validity of the Inference Task

In order to establish validity and to ensure that the texts would be appropriate to the subjects' level of language proficiency, the 36 texts were submitted to another panel of 9 EFL experts who were, again, professors at the Department of English Language and Literature, UOB (see Appendix C). The panel members received a booklet containing the reading excerpts. The booklet introduced the members to the objectives of the research and the inference task. The members were asked to:

1. identify any text that they might find "not suitable" to the average third and fourth-year UOB English-major student's level of reading;
2. identify any text that might not suit the research or the proposed task objectives (a first draft of the task was provided in the booklet).

Only the texts approved by the majority of the panel members were included in the final draft of the inference task. Out of these texts, there were 3 texts approved by all the members and 15 texts approved by 8 out of the 9 members. Thus, only these 18 texts were to appear in the final draft of the task, 9 texts in the first part and the other 9 texts in the second one (see Appendix B.4).

The 18 reading excerpts, approved by the panel members and that make up both parts of the inference task, cover a wide range of genres. For example, they include excerpts from bibliographies, short stories, customer reviews, online forums, web pages, online editions of newspaper and magazine articles and an excerpt from a sermon.

In addition, fifteen third- and fourth-year English-major Arab students participated in the pilot study (see 3.2.1) and they were interviewed after the task. Below are the questions raised in the interviews in order to assess the validity of the task and the proposed procedures:

1. Did you find the texts "easy" or "difficult" to understand?
2. Were the task and the questions clear?
3. Was the time sufficient for you to finish the task?

The subjects' answers were analyzed after the interview and the necessary changes were made to the final draft of the inference task. Only one student found that the texts had "lots of difficult words." Moreover, only one student took more than one hour to finish the task (with ten texts).

3.4 Reliability of the Inference Task

The reliability of the inference task was estimated using Cronbach's Alpha Formula.

> [It] indicates the extent to which a set of test items can be treated as measuring a single latent variable. [....] Some professionals, as a rule of thumb, require a reliability of 0.70 or higher (obtained on a substantial sample) before they will use an instrument. (Cronbach's Alpha: Wikipedia, 2007)

The inference task received a reliability estimate of 0.71. Moreover, the total correlation between both parts of the inference task was positive and reached 0.5493. The estimate of reliability, especially with the positive total correlation, is considered suitable for the purposes of the current study.

3.5 Procedures

The inference task was administered in two sessions. The first session of the inference task was administered a day before administering the second session. Permission was obtained to have the subjects carry out the task instead of two of their usual classes.

Before embarking on the first session, the subjects received the written instructions of the task (see Appendix B.1). In addition, the subjects had been instructed that dictionary use was not allowed before they did one text as a warm-up example intended to familiarize them with the task. The subjects had a chance to ask questions regarding the task before they started.

Although, on the basis of the pilot study results, it was expected that the subjects would finish each session of the task in less than one hour, the subjects were not pressed to finish within a pre-determined time limit; they were allowed to finish the task at their own pace.

3.6 Data Analysis

Two threads of data were to be analyzed. The first is related to the subject's efficiency at guessing in terms of the number of the correct, partially correct and wrong answers. The second thread of data is related to the subjects' guessing techniques; namely, the frequency, commonness and effectiveness of such techniques.

3.6.1 Rating Subjects' Answers

The researcher along with a certified Arab EFL teacher undertook rating the subjects' answers (regarding the meaning of the sample idioms). Each rater carried out the process on his own and they had to decide whether a given answer was correct, partially correct or wrong. The raters reached 89% agreement on rating the 468 items done by the sample subjects. Differences in rates were resolved through discussion.

For the unfamiliar items, the subjects' answers were assigned the grades shown in the following list:

Correct (C)	=	1
Partially correct (PC)	=	0.5
Wrong (W)	=	0

It should be noted that zero was assigned not only to wrong answers but also to statements such as "I don't know" and to the items left with no answers.

As regards the half grade, its use in the grading system rests on the following rationale. First, some answers seemed to indicate that the subject understood the idiom but could not express, in writing, its meaning clearly. It was assumed that it would not be *fair* to rate such answers WRONG, nor would it be *fair* to rate them CORRECT. The second reason is that the current study is basically concerned with *assessing* a sample of EFL majors' guessing efficiency, which should be viewed as a

continuum rather than a polarity of extremes. According to Nation (2001, p.234), "learners must be given credit for guesses that are not 100% correct but which make a small but positive contribution to knowledge of the meaning of the word."

In addition, some previously published studies (e.g., Cooper, 1999; Taguchi & Gorsuch, 2002) have adopted the use of the half grade for "partially correct" answers. Furthermore, rating subjects' answers as "partially correct" or "near-correct" was adopted in some previous studies (see Boers & Demecheleer 2001; Huckin & Bloch 1993).

Regarding total scores, a subject's total score has to represent the rates that were assigned to her answers regarding the meaning of idioms that she did not report as familiar. If a subject did both parts of the inference task (that present eighteen texts), and reported that, for example, ten idioms were unfamiliar to her, then her guessing efficiency would be assessed according to the rates assigned to her answers to the ten unfamiliar idioms only.

Obviously, different subjects had a different number of unfamiliar idioms. Consequently, the percentage is used so that there will be a single (unified) scale for all the subjects regardless of the different number of unfamiliar idioms each one of them has. The following equation was constructed to calculate a subject's total score:

[(C x1) + (PC x0.5)] ÷ Sum x 100= Subjects' Total Score.

In simple terms, the equation can be explained as follows:

[(number of correct answers x1) + (number of partially correct answers x0.5)] ÷ total number of unfamiliar idioms x 100 = Subject's Total Score

The "number of correct" or "partially correct answers," in the equation, stand for the answers regarding the meaning of idioms that were not reported as familiar by the subjects. "Total number of unfamiliar idioms" also refers to the idioms that were not

reported as familiar by the subjects. "*x*1" means multiplied by 1 grade; "*x*0.5" multiplied by half a grade.

To further demonstrate how a subject's total score was calculated, the following is an example. Subject *Y* did both parts of the inference task by reading 18 texts, 9 texts in each part, and by giving the meaning of each idiom that appeared in each text. *Y* reported that she was familiar with 10 idioms. Consequently, there remained 8 unfamiliar idioms. If she managed to provide correct answers to 4 of the unfamiliar idioms and partially correct answers to the other 4, then *Y*'s total score would be 75 (or more accurately 75%). Using the equation mentioned above, *Y*'s score is calculated as follows:

$$[(4x1) + (4x0.5)] \div 8 \times 100 = \mathbf{75}$$

3.6.2 Subjects' Idiom Familiarity and Guessing

Since the current study is mainly concerned with assessing guessing efficiency, the items were also required to be analyzed in terms of the subjects' familiarity (i.e., previous knowledge of the meaning of the sample idioms). Assessing a subject's guessing efficiency had to be done by rating that subject's answers to the meaning of idioms that were not reported "familiar" by the subject. As such, each answer had to receive a *correctness* rate as well as a familiarity report (according to the subjects' reports of their familiarity). Accordingly, each answer was either one of the following:

1. Familiar and Correct (assigned if the subject reports a given idiom as familiar and confirms their familiarity with that idiom by providing a correct answer of the meaning of that idiom);

2. Familiar and Partially Correct (if the subject reports a given idiom as familiar, providing a partially correct answer of the meaning of that idiom);
3. Familiar and Wrong (if the subject reports a given idiom as familiar but provides a wrong answer of the meaning of that idiom);
4. Unfamiliar and Correct (if the subject does not report a given idiom as familiar; yet, she provides a correct answer of the meaning of that idiom);
5. Unfamiliar and Partially Correct (if the subject does not report a given idiom as familiar; yet, she provides a partially correct answer of the meaning of that idiom);
6. Unfamiliar and Wrong (if the subject does not report a given idiom as familiar nor does she provide a (partially) correct answer of the meaning of that idiom).

Only responses with unfamiliar reports, regardless of the rates assigned to them, were to be examined in order to assess the subjects' guessing efficiency (see Boers & Demecheleer, 2001). That is, the findings related to the guessing efficiency will be based on the number of the items containing the unfamiliar idioms, whether the subjects' guesses are correct, partially correct or wrong. The number of FAMILIAR CORRECT, FAMILIAR PARTIALLY-CORRECT and FAMILIAR WRONG answers will be excluded and will not be calculated in the subject's total score. Regarding the PARTILLY-CORRECT answers, it can be claimed that when the subject provides such an answer for an idiom which she reports as FAMILIAR then (most probably) the subject is actually familiar with that idiom but she cannot express its meaning accurately and clearly in writing.

3.6.3 Subjects' Guessing Techniques

As mentioned in section 3.2, there were two sources of data about the subjects' guessing techniques:

1. the options provided in the questionnaire (i.e., the optional techniques);
2. the retrospective reports written by the subjects.

A Microsoft Excel sheet was fed with all of the subjects' reports and options (that they ticked). Each of the retrospective-report techniques, those reported in the retrospective written reports, was given a code. Furthermore, the rate of each item done by each subject was laid down beside the reported or chosen technique(s). Such a procedure not only helped count the correct, partially correct and wrong answers but it also helped in:

1. counting the number of times each technique was used, leading to an account of **frequency** of the use of a particular technique;
2. counting the number of subjects who used each of the techniques, which led to an account of the **commonness** of the use of a particular technique among the subjects;
3. counting the rates accompanied by the use of a particular technique, leading to an account of the possible **effectiveness** of a particular technique;
4. finding whether the subjects relied on a single technique or a combination of techniques in order to guess the meaning of a particular idiom.

In addition, the subjects' reports on their own techniques and their comments, and the researcher's notes on the subjects' actions (such as underlining a given word) were all tabulated to prepare them for classification.

By so doing, the analysis of the data is expected to result in accounts of frequency, commonness and effectiveness of the subjects' guessing techniques in addition to the

number of rates and familiarity reports for the 468 items that make up all the subjects' copies of the inference task.

3.6.4 Hypothesis Testing

Two hypotheses were presented in 1.4. The first hypothesis is to be tested by calculating the percentages of the total number of the subjects' correct, partially correct and wrong answers regarding the meaning of the unfamiliar idioms only.

As regards the second hypothesis, the effectiveness of a particular technique is assessed by counting the percentages of the number of correct, partially correct and wrong answers that result from using that technique. The more correct (and/or partially correct) answers and the fewer wrong answers that result from using a particular technique, the more effective that technique will be considered.

To assess the effectiveness of the techniques at hand, a comparison will be made between every possible pair of the identified techniques. For instance, the percentages of the total number of the correct, partially correct and wrong answers that resulted from using Technique X are compared to those percentages of the total number of the answers that resulted from using Technique Y. Next, technique X is compared to Technique N, a procedure that continues until the comparisons are made between all the possible pairs of the identified techniques.

More accurately, each of these comparisons measures up the percentages of the number of correct, partially correct and wrong answers that result from the subjects' use of one technique, and the percentages of those percentages of answers that result from the subjects' use of another technique. The Chi-square test, with $\alpha = 0.05$, is adopted to find if there is a statistically significant difference between the numbers of

rates (i.e., correct, partially correct and wrong) that result from using the two techniques in each comparison.

If only one technique was used to make a guess at the meaning of a given idiom (henceforth, individual-technique use), then it is compared to all of the other techniques that were also used on their own. However, if a combination of techniques was used to make a guess at the meaning of a particular idiom (henceforth, combined-technique use), then the rate assigned to that guess (i.e., that answer) is considered to be the result of using every one of the techniques that belong to that combination. However, each of the techniques used in a particular combination is compared to every one of the identified technique that was used in other combinations. As such, if a technique was used on its own and then it was used in combination with another or other techniques, then that technique will receive two estimates of its effectiveness, one when it was used on its own and the other when it was used in combination with another or other techniques (see Appendix D, parts 1 & 2).

CHAPTER FOUR

FINDINGS AND DISCUSSION

4.1 Presentation of Data

Although 29 subjects participated in doing the inference task, the data coming from one of the subjects were truncated because that subject reported (and confirmed) his familiarity with 8 out of 9 idioms presented in the single session that he attended. Obviously, it would not be rational to assess that subjects' guessing efficiency based on his performance on one item only. Thus, the following analysis and discussion are related to the performance of 28 subjects only (see 3.1).

The 28 subjects did a total of 468 items of the inference task. 24 subjects did both sessions while 4 of them did only one of the two, which means that the subjects who did both sessions dealt with all the 18 sample texts, whereas those who did one session dealt with the 9 texts presented in that session. Table (1) shows the rate that each of the 468 items received.

Table No. 1: Number of Items Containing Reportedly Familiar/Unfamiliar Idioms with the Rates Assigned to the Subjects' Answers

Unfamiliar			*Familiar*		
Correct	**Partially Correct**	**Wrong**	**Correct**	**Partially Correct**	**Wrong**
118	67	170	72	19	22
25.2%	**14.3%**	**36.3%**	**15.4%**	**4.1%**	**4.7%**
Total: 355 **(75.9%)**			**Total:** 113 **(24.1%)**		
Total Number of Items: 468 **(100%)**					

As shown in Table (1), the subjects were already familiar with the meaning of roughly a quarter (i.e., 24.1%) of the inference task items. Thus, their guessing efficiency is to be assessed only in terms of their answers to the remaining items (that contain unfamiliar idioms). The number of such items, 355, represents a little more than three quarters (i.e., 75.9%) of all the 468 items done by the subjects. These data are presented in detail in the following sections.

4.1.1 Idiom Familiarity

Before presenting the data related to the sample subjects' efficiency at guessing the meaning of the idioms, there is a need to assess the subjects' familiarity with the 18 sample idioms presented in the task. Except for one, the subjects were already familiar with some idioms. However, Table (2) below shows that except for two, no subject reported being familiar with more than 8 idioms. As will be discussed below, however, the subjects mistakenly reported some of the idioms as familiar (although they were not indeed familiar with such idioms).

Table No. 2: Number of Familiar Idioms vs. Number of Subjects

# Familiar Idioms	# Subjects
13	2
8	1
7	1
6	4
5	1
4	5
3	3
2	4
1	6
0	1

The subjects provided correct or partially correct answers regarding the meaning of most of the idioms that they reported as familiar. Thus, they proved their familiarity with most of those idioms. Table (3) below presents the number of idioms that the subjects reported as familiar and it also shows the rate assigned to the subjects' answers.

Table No. 3: Rate and Number of the Items Containing Reportedly Familiar Idioms

Correct	Partially Correct	Wrong
72	19	22
63.7%	**16.8%**	**19.5%**
Total: 91 **(80.5%)**		**Total:** 22 **(19.5%)**
Total: 113 **(100%)**		

The subjects provided correct/partially correct answers in 80.5% of the items where they reported the idioms as familiar. Nonetheless, they provided wrong answers in 19% of the items in which they reported the idioms as familiar. It should be noted that the *one-session doers*, the four subjects who did one session only, were not familiar with more than three idioms: one was familiar with 3 idioms, the other with 2, and each of the last two was familiar with one idiom only. The 28 subjects reported an average of 3.5 idioms as familiar.

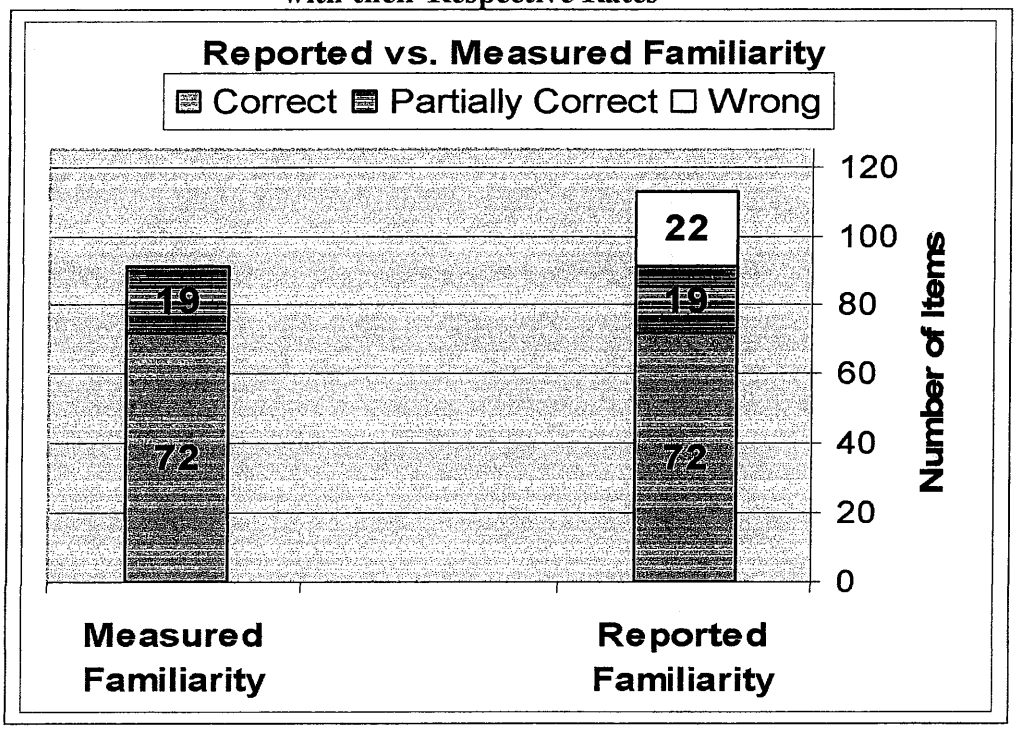
Although the subjects reported their familiarity with one or another idiom 113 times (out of the total of 468), they provided correct or partially correct meanings of these reportedly familiar idioms only 91 times, which represents 80.5% of all the reportedly familiar idioms. However, there were 22 times when the subjects failed to prove their familiarity with one or another idiom. Failing to prove one's idiom

familiarity refers to their inability of providing correct or partially correct meanings of the idioms that they report as familiar (see 4.2.1 for further discussion).

Although the subjects reported being familiar with an average of 3.5 idioms, as mentioned earlier, they could prove their idiom familiarity only with an average of 2.5 idioms (presented in the 22 items just mentioned). Accordingly, two types of familiarity can be distinguished: Reported Familiarity and Measured Familiarity. The first type refers to being familiar with an idiom as reported by the subjects whether they were truly familiar with that idiom or not; that is, reported familiarity refers to what the subjects believe they are familiar with whether they proved that *familiarity* or not. The second type, Measured Familiarity, refers to the subjects' familiarity as measured by the task; that is, as evidenced by the subjects' (partially) correct answers as of the meaning of idioms that they reported as familiar. That the subjects managed to guess the meaning of some idioms that they, by mistake, reported "familiar" is a possibility that cannot be ruled out; yet, the results suggest that such possibility might be true for a few cases only (see 4.2.1 for further discussion).

The distinction between the two types of familiarity is important because it shows that the subjects missed the chance of learning (by guessing from context) the meaning of the idioms presented in 22 items as shown in Figure (1) below. The subjects did not show, in these items, how well they can guess the meaning of these idioms. In these 22 items, the subjects did not attempt to make guesses since they mistakenly believed that they were already familiar with the meaning of such idioms. As such, these items are excluded from the calculation of the subjects' total scores (see 3.6.1 & 3.6.2). Figure (1) below shows the number and rate of the items for both types of familiarity.

Figure No. 1: Number of Items in the Two Types of Familiarity with their Respective Rates



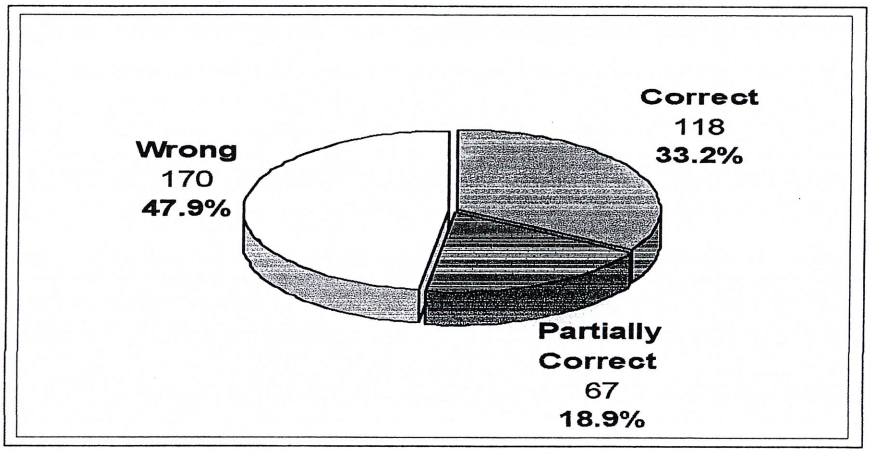
In terms of the sample subjects' Measured Familiarity, the subjects were familiar with only 91 items (i.e., 72 correct + 19 partially correct answers), not with the idioms in the 113 items since the subjects mistakenly reported their familiarity with the idioms in 22 items. Without providing correct (or partially correct) answers in these 22 items, the subjects failed to confirm their familiarity with the idioms in 19.5% of the reportedly familiar items, or 4.7% of all the task items.

4.1.2 Guessing Efficiency

On one hand, the subjects failed to make correct (or partially correct) guesses in approximately half (47.9%) of the 356 items containing unfamiliar idioms. On the other hand, the subjects managed to provide correct or partially correct guesses for the

other half (or more accurately 52.1%) of the same items (for further discussion, see 4.2.1). Moreover, the subjects were able to provide correct guesses for nearly twice the number of items for which they provided partially correct guesses.

Figure No. 2: Rates of the Subjects' Answers in the 356 Items Containing the Reportedly Unfamiliar Idioms



The Figure above represents the subjects' overall performance in guessing. The individual subjects' grades, in percentages of the highest possible grade (i.e., 100), are presented in Table (4) below. The subjects achieved a mean score of 39.1 (out of 100) in their attempts at guessing the meaning of the idioms reported as unfamiliar. That is, the subjects scored 39.1% of the possible highest grade (i.e., 100). The grades, listed in Table (4) in descending order, show a great disparity between the best and the worst performance; that is, the grades range from 78.6 (i.e., the most efficient guessing; the highest rank) to 0.0 (i.e., the least efficient; the lowest rank). Table (4) also shows that 14 subjects, half the sample subjects, scored more than the average grade while the other half of the subjects' grades fall somewhere below the average.

Table No. 4: Subjects' Grades in the Inference Task

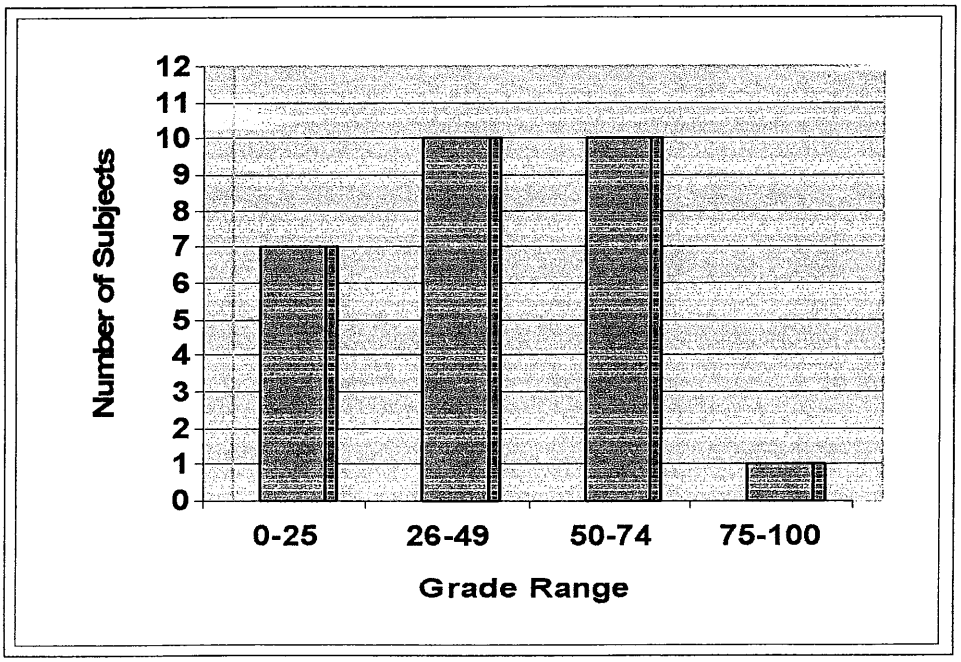
Serial No.	Subject's	Grade	Rank	
1	Sakeena Jaafer	**78.6**	**1**	
2	Shaikha AlHazeem	**67.9**	**2**	
3	Rana	**67.6**	**3**	
4	M. AlJaw	**65.0**	**4**	
5	Ymlah	**62.5**	**5**	**Above**
6	Afrah Hassan	**57.1**	**6**	
7	Yousra	**56.3**	7	**Average**
8	**Al-Dossary**	**56.3**		
9	Wrath of Aschilies	**55.9**	**8**	
10	Samya	**52.9**	**9**	
11	**Sara**	**50.0**	**10**	
12	M. AlShemari	**46.2**	**11**	
13	Mai	**43.8**	**12**	
14	Noor Green	**40.0**	**13**	
15	Mariam Ali	**38.2**	**14**	
16	Zainab Mahdi	**33.3**	**15**	
17	Jawaher	**32.1**	**16**	
18	Yousif	**31.3**	**17**	
19	Sweetcorn	**30.6**	**18**	
20	Rocostyle	**30.0**	**19**	
21	Zainab	**29.2**	**20**	**Below**
22	Star	**25.0**	**21**	**Average**
23	Zainab AlDalla	**20.8**	**22**	
24	Noor1	**20.0**	**23**	
25	Mai AlSawali	**18.2**	**24**	
26	Nabila Aziz 1	**17.6**	**25**	
27	**CoolBlue**	**16.7**	**26**	
28	**Mary**	**0.0**	**27**	

It is worth mentioning that CoolBlues' and Mary's grades, the lowest, probably weighed down because of the relatively less data obtained from the single session they attended, unlike most of the subjects who attended both sessions. However, CoolBlue's and Mary's weak performance can also be attributed to other factors such as their level of English, their being uninterested in reading the sample texts and/or their being not motivated enough to do the task. All of these factors are possible because the other two subjects who attended one session only, Al-Dossary and Sara,

scored much higher than CoolBlue and Mary did. Therefore, attending only one session might have negatively affected CoolBlue's and Mary's grades but such effect seems to be limited, if existent. Such interpretation is further supported by the fact that the distribution of all the one-session doers' grades (across the ranks) is not far away from the normal distribution. That is, Al-Dossary occupied the seventh rank, an advanced rank; Sara came the tenth, somewhere in between but a little above the average; Mary and Coolblue turned out to be in the lowest ranks.

To sum up the findings on the subjects' performance, Figure (3) below shows the subjects' grades in four groups of grade range. The Figure also provides the number of subjects in each group.

Figure No. 3: Subjects' Grades in Groups of Grade Range



Moreover, Figure (3) demonstrates that 1 subject only was able to score more than 75, and that 10 of the subjects managed to come up with correct/partially correct guesses for half or more of the items containing unfamiliar idioms. As such, these 11

subjects (i.e., 39.3% or more than a third of the subjects) scored at least 50 (out of 100). In another range of grades, 10 subjects (i.e., 35.7% or more than a third of the subjects) were able to score more than a quarter of the highest possible grade but less than 50. Furthermore, seven subjects, exactly 25% of the subjects, were able to score only a quarter or less of the highest possible grade.

In summary, 17 subjects (i.e., 60.7%), scored less than 50, whereas 11 subjects scored more than 50. Yet, as mentioned earlier, half of the subjects scored more than the average grade, 39.1, while the other half scored less than the average.

4.1.3 Guessing Techniques

As mentioned earlier, two methods were used to identify the subjects' guessing techniques: first, the multiple-choice questionnaire provided under each text (henceforth, the optional techniques); second, the retrospective reports that the subjects were asked to write (henceforth, the retrospective-report techniques). Table (5) below shows that the subjects used (i.e., ticked) one or more of the questionnaire options in 422 times; moreover, they wrote 114 reports. Hence, using both methods, the subjects reported on their guessing techniques 536 times.

Table No. 5: Subjects' Use of questionnaire Options vs. Writing their own Reports

	Times#	**Times%**
Using Questionnaire	422	78.7%
Writing Reports	114	21.3%
Total	**536**	**100%**

A number of techniques were identified by analyzing the subjects' responses to the questionnaire and by analyzing their written reports. The subjects' guessing techniques are classified into 7 major categories, each accommodates a number of techniques (see Appendix A.2). Table (6) below provides the total frequency of use for all the techniques that each category holds. That is, the table shows the total number of times in which the subjects used the techniques held by each category.

Table No. 6: Classification of Subjects' Techniques with their Frequency Count

Category	Frequency #	Frequency %
Idiom-Dependent Techniques	132	24.6%
Sentence-Dependent Techniques	132	24.6%
Mental Image-Dependent Techniques	92	17.2%
Metaphor-Dependent Techniques	60	11.2%
Whole Text-Dependent Techniques	58	10.8%
L1-Dependent Techniques	40	7.5%
Other (*context; paragraph; keyword; topic; wild guessing*)	22	4.1%
Total	**536**	**100%**

Table (6) also shows that the *idiom-dependent* as well as the *sentence-dependent* techniques received the highest frequency of use. Each of these two categories of techniques represents almost a quarter (i.e., 24.6%) of the overall frequency of all technique use (see Appendix A.2). In other words, most frequently, the subjects used the idiom constituents and sentences as clues to the meaning of the sample idioms. In more detail, Appendix A.3 presents the frequency of each technique as discussed in the following section.

4.1.3.1 Frequency and Commonness

Distinction should be made between: (a) frequency, the number of *times* in which the subjects used a particular technique; and (b) commonness, the number of *subjects* who used a particular technique. With respect to the frequency of technique use, table A.3, provided in Appendix A.3, lists all of the identified techniques in the descending order of the number of times in which they were used.

Table A.3 shows that the optional techniques were the most frequently used ones. For instance, Option 3, with which the subjects could report their use of sentences as clues to the meaning of the sample idioms, turned out to be the most frequently used technique. It can be observed that the frequency of the optional techniques, the first five techniques (at top of the table) was much higher than that of the retrospective-report techniques. For example, the most frequently used retrospective-report technique is No.1, *re-reading the text/paragraph*, which accounted for 5% of the overall frequency. The rest of the retrospective-report techniques had a frequency of less than 3%. For example, *wild guessing* (at the bottom of the table) had a frequency of only 0.4%. Moreover, it can also be observed that the last four techniques, *personalizing, imagining the situation, setting different meanings for the idiom, and replacing the idiom* (see Appendix A.1: Techniques 17,18, 19 and 23 for examples of what these techniques refer to), were the least frequently used ones, each with a frequency of only 0.2% (each of these four techniques was used once).

A frequent technique, however, may not necessarily be a common one; similarly, a common technique may not necessarily be a frequent one. Table A.4, in Appendix A.4, presents the number of subjects that used each of the identified techniques. The techniques appear in the descending order of the number of subjects that used each

one of them. Although *re-reading the text/paragraph* accounted for only 5% of the overall frequency, Appendix A.4 shows that 11 subjects, 39.3% of the total number of subjects, used it. Similarly, although the optional technique No. 4 (*translation of idiom*) received only 5.2% frequency of use, half the number of subjects reported using it.

4.1.3.2 Individual- vs. Combined-Technique Use

Two types (or conditions) of technique use were identified. First, there is a combined-technique use, using more than one technique to guess the meaning of a particular idiom. Second, there is an individual-technique use, using a single technique to guess the meaning of a particular idiom (see 3.6.4). Out of all the times in which a particular technique was reported, whether by ticking one or more of the questionnaire options or by writing retrospective reports, there was more combined-technique use than individual-technique use. Below is Table (7) showing the number of times in which the subjects used the guessing techniques in both types of technique use.

Table No. 7: Number of Times of Individual- vs. Combined-Technique Use

Type	Individual-Technique Use	Combined-Technique Use
Times	189 **35.3%**	347 **64.7%**
Total	536 **100%**	

In more detail, the table provided in Appendix A.5 presents the number of times that each of the identified techniques received when it was used in the individual condition and in the combined one. For all the techniques, the combined use was

always greater than that of the individual use of the same technique, which is true except for two: option 4 (translation of idiom) and option 5 (mental image). Option 4 (translation of idiom), a *L1 dependent* technique, received an equal amount of individual and combined use (i.e., 50% for each). Option 5 (mental image), however, received a little (i.e., 4.4%) more times in favour of its individual-technique use (see 4.2.2.2 for further discussion).

Furthermore, in Appendix A.5, it can be observed that the retrospective-report techniques received much more combined use than they did the individual one. The same generally applies to the optional techniques but there was more balance between the two types of technique use. For instance, the individual-technique use for all retrospective-report techniques received zero times except for No.1 and No.7. In contrast, the optional techniques received much more use that is individual. The optional technique No.4 (translation of idiom), for instance, received the same number of times in both conditions of technique use. The optional technique No.5 received nearly the same number of times in both conditions. These observations regarding individual- and combined-use of techniques will be considered in the Discussion of the Findings.

4.1.3.3 Effectiveness

To assess the effectiveness of the techniques that the subjects used in order to guess the meaning of the sample idioms, 46 comparisons between the guessing techniques were drawn as discussed in (3.6.4). Each of these comparisons was drawn between a pair of the nine most frequently used techniques, the techniques that the subjects used (more than) 10 times. Only the 9 most frequently used techniques were

chosen because the use of the other techniques was not frequent enough to undergo the adopted statistical test, the Chi-square.

Table (8) below demonstrates that, for the most part, there was not a statistically significant difference between the number of correct, partially correct and wrong answers that resulted from using a particular guessing technique and that number of answers resulting from using another. That is, a statistically significant difference between the numbers of rates was found in only 5 out of the 46 comparisons. In specific terms, only two techniques were less effective than some techniques. The first technique, *relating the idiom to a piece of information in the text*, was less effective than four of the compared techniques; the second technique, *translation of idiom*, was less effective than one technique only. Accordingly, hypothesis No.2, on which the 46 comparisons were based, is partially supported.

Table No.8: Results of Comparing the Effectiveness of Techniques
[Key: >: more effective than... =: as effective as...]

Technique	**Result**	**Technique**	***Reference***
sentence dependent guessing	>	Relating the idiom to a piece of information in the text	*Comparison No. 23. Appendix D*
Metaphor	>	Relating the idiom to a piece of information in the text	*Comparison No. 38. Appendix D*
Reading the whole text	>	Relating the idiom to a piece of information in the text	*Comparison No.44. Appendix D*
By reading the text	>	Relating the idiom to a piece of information in the text	*Comparison No.45. Appendix D*
By reading the text	>	Translation of idiom	*Comparison No.31. Appendix D*
The Rest of the Compared Techniques	=	**The Rest of the Compared Techniques**	***The Rest of Comparisons. Appendix D***

Appendix (D) presents all of the forty-six comparisons in two parts. The first part presents the comparisons related to using the techniques in the individual-use condition while the second part presents the comparisons related to using the techniques in the combined-use condition. Only optional techniques 2, 3, 4, 5 and 6 were tested in both conditions since the individual-use of the other techniques received a little data to be statistically tested. It should be noticed that there was no statistically significant difference between any of the techniques compared in the individual-technique use. The statistically significant differences were only found in some of the comparisons that measured up the percentages of the number of (correct, partially correct and wrong) answers that resulted from using some techniques in the combined-technique condition, a result discussed in 4.2.2.3.

4.2 Discussion of the Findings

This section furthers a discussion of the findings. The section deals with the hypotheses proposed earlier and it is concerned with interpreting the findings related to the efficiency and techniques with which the sample subjects attempted to guess at the meaning of the unfamiliar idioms.

4.2.1 Guessing Efficiency

A major objective of this study was to assess a sample of EFL majors' efficiency at guessing the meaning of English idioms in context of authentic written texts. At the outset of the study, it was hypothesized that "the sample subjects will be able to provide correct guesses to at least one third of the number of the unfamiliar idioms that they encounter in authentic written texts; partially correct guesses to at least

another third of the same idioms; wrong guesses to (less than) the last third of the same idioms". One of three results, presented earlier, supports the hypothesis while the other two do not. Hence, the first hypothesis is partially supported because:

1. the subjects were able to provide correct guesses to a third of the items containing unfamiliar idioms. The subjects' correct guesses represent 33.2% of their answers regarding the meaning of unfamiliar idioms;
2. the subjects could not provide partially correct guesses except for 18.9% of the items the unfamiliar idioms;
3. the subjects provided wrong guesses in 47.9% of the unfamiliar idioms, which is much more than a third of the unfamiliar idioms.

The findings of the current study indicate that EFL majors seem to have difficulty comprehending unfamiliar post-lexical level idioms by guessing their meaning from context during reading authentic texts. Such difficulty is evidenced by: (a.) the subjects' wrong guesses in almost half (i.e., 47.9%) of the items containing the unfamiliar idioms, (b) the subjects' mean score of 39.1 (out of 100), and (c) the subjects' failure of recognizing unfamiliar idioms as such in 4.7% of the total number of the task items.

The question is why the subjects made wrong guesses in almost half of the items containing the unfamiliar idioms whereas they made correct or partially correct guesses in the other half of the same items. One may assume that the type of technique(s) that the subjects used in order to guess the meaning of idioms affected the accuracy of their guessing. However, as the findings presented earlier indicated, no technique turned out to be more effective than another was in enabling the subjects to make correct guesses. Hence, other factors must have affected the accuracy of the subjects' guessing. Such factors may not be limited in number but, most probably, the

following factors, in particular, had the greatest impact on the accuracy of the subjects' guessing of the meaning of the sample idioms:

1. the degree of the idiom semantic transparency (see Boers & Demecheleer, 2001; Irujo, 1986b);
2. the richness (or poorness) of the available contextual clues that are related to the meaning of a given idiom (see Laufer, 2003);
3. the subjects' language proficiency in general and their vocabulary span in particular (see Huckin & Coady, 1999);

Another aspect of the difficulty that EFL majors can face while trying to guess the meaning of unfamiliar idioms is their inability, at times, to recognize unfamiliar idioms as such. The subjects mistakenly thought of the idioms presented in 22 items (i.e., 4.7% of the of task items) as familiar; yet, they could not prove their familiarity with those idioms (i.e., they did not provide correct or partially correct answers as to the meaning of those idioms). Thus, such idioms were only *reportedly* familiar (see Reported vs. Measured Familiarity in 4.1.1). Such a result is reminiscent of Laufers' (2003) and Laufer and Yano's (2001) findings that showed that EFL learners do not always notice unfamiliar words as unfamiliar.

A possible interpretation of such reports on familiarity is that the subjects were indeed familiar with the idiom constituents, not with the idiom itself. It is possible that the subjects did not recognize a given idiom as an expression (or as a single unit of meaning) but as separate words that have nothing to do with one another, a result reported by Laufer (1997). In addition, some subjects might have mistaken an idiom for another (see technique No.9 in Appendix A.1). The reader should notice that EFL learners were also reported to mistake some unfamiliar words for familiar ones (see Hanyes, 1993; Huckin & Bloch, 1993; Laufer, 2003, 1997; Parry, 1997).

Although, as discussed earlier (see 2.2.2), EFL learners' failure of noticing unfamiliar vocabulary while reading is a limitation of guessing from context (see Huckin & Coady, 1999; Laufer, 2003), it should be noticed that such failure is not specific to guessing from context. In other words, readers have to recognize their unfamiliarity with a vocabulary item first so that they can act in a way that might enable them to learn its meaning whether by guessing from context or by another vocabulary learning strategy. That is, noticing or recognizing unfamiliar idioms (or unfamiliar vocabulary items in general) is, to use Laufer's (2003) term, a "prerequisite" for learning such unfamiliar items.

In addition, the idioms that the subjects mistakenly identified as unfamiliar represent only 4.7%, a relatively small amount of the sample idioms. Hence, the subjects' reports of their idiom familiarity may well be described as genuine reports of idiom familiarity. That is, for the most part, the subjects were able to recognize the idioms with which they are familiar (or unfamiliar).

Although the subjects mistakenly reported that they were familiar with the idioms in some items and although they provided wrong guesses in approximately half the number of the items containing unfamiliar idioms (see Figure No. 2), they managed to come up with correct and partially correct guesses of the meaning of idioms in the rest of the items. The number of the correct guesses was nearly twice the number of the partially correct ones. A third (33.2%) of the items containing unfamiliar idioms received correct guesses. Accordingly, the number of the correct guesses is important, at least in comparison with the number of the wrong guesses. Moreover, the subjects provided more correct guesses than partially correct ones.

While the subjects' mean score of 39.1 (out of 100) is relatively low, 50% of the subjects scored above the average; moreover, a good number of the subjects, more

than a third (i.e., 39.3%), were able to score (more than) 50, half the possible highest score. It can arguably be stated that if a third of the EFL majors can *score* half the grade or more in their attempt to understand unfamiliar idioms (while reading) by guessing only then the significance of that score and of such guessing efficiency cannot be overlooked.

The discussion thus far has been concerned with the quantitative aspects of the data. A closer look at the subjects' answers casts light on the quality of those answers. Most of the subjects' answers (see examples in Appendix A.1) can be described as *educated guesses* whether such answers were wrong, correct or partially correct guesses. That is, the subjects' answers, in general, can still be depicted as guesses behind which there were plausible reasoning and a logical line of thinking (for examples, see the subjects' reports under *analyzing and discussing the idiom* in Appendix A.1). The very small number of *wild guessing* reports, only 2, further supports this interpretation (see Appendix A.2, in *Other* category). Still, there is a group of answers that might have been the result of hasty attempts at guessing or which were based on miscues. Such attempts lacked deliberation and more concentration (for examples, see the subjects' reports under No.2 *Relating the idiom to a piece of information in the text*).

Although EFL majors' efficiency at guessing the meaning of unfamiliar idioms while reading authentic texts appears to be limited, it can still play a positive role in understanding a considerable amount of unfamiliar idioms. That is, the subjects failed to provide correct or partially correct guesses in approximately half (i.e., 47.9%) of the items containing unfamiliar idioms; yet, they were able to provide correct guesses in a third of the same items and they managed to provide partially correct guesses for 18.9% of the same items.

4.2.2 Guessing Techniques

The following three sections provide a discussion of the identified techniques, their frequency of use, their commonness and their effectiveness.

4.2.2.1 Identified Techniques and their Frequency

According to the classification of the identified techniques presented earlier (see Table No.6 in 4.1.4.1 & Appendix A.2), EFL majors used one or more of the following while guessing the meaning of the sample idioms:

1. target idioms (i.e., idiom constituents);
2. sentences (or phrases);
3. the subjects' mental images of the idioms;
4. metaphor (i.e., possible figurative meanings of idiom constituents);
5. the whole text;
6. the subjects' L1 (i.e., translating the idiom into L1, connecting to L1 idioms or literal translation of idiom);
7. context;
8. paragraph;
9. keywords (in the text, not idiom keywords);
10. topic of text;
11. wild guessing.

It is unsurprising that the category of *idiom-dependent* accommodates the biggest number of techniques as well as one of the most frequently used techniques, *idiom-keyword guessing* (Optional Technique No.2). Guessing the meaning of a vocabulary item requires cognitive processes that involve the item itself; all the techniques held

by this category involve the idiom constituents. That is, in order to guess the meaning of a particular idiom, the subjects manipulated idiom constituents in different ways as explained in the following discussion of the three most frequently used techniques in the *idiom-dependent* category:

1. Optional Technique No. 2, being one of the two most frequently used of the identified techniques as well as being the most frequently used *idiom-dependent* technique, indicates that the subjects frequently paid attention to the idiom itself as the source of its meaning. As can be seen from the subjects' answers (Appendix A.1), they would focus on one or more of the idiom constituents in different ways. For example, a subject tried to understand *hit the jackpot* in line with the meaning of *hit* as used when talking about very successful musical or entertainment releases. In one of his studies on L2 learners' understanding of idioms, Liontas (2002a) reported that his subjects used the same technique, "idiom-keyword guessing," quite frequently. The think-aloud reports in Cooper's (1999) study also showed similar data.
2. Using the technique of *relating the idiom to a piece of information in the text*, the subjects established a relation between the idiom's meaning and a piece of information provided in the text. For instance, a subject related *got butterflies in my stomach* to the title of the text, *Telling the Boss You're Pregnant* (Appendix B.4: Session 1; Text 2). The subject's answer is "the woman is pregnant." It seems that most of the guesses that resulted from using this technique were not evaluated against the available contextual clues; for instance, "as eager, or as

anxious, as you may be to make your announcement." The subjects could probably have made better guesses if they had used the appropriate contextual clues such as the one just mentioned. Thus, it is possible that EFL majors sometimes use miscues instead of clues while guessing as some previous research noted; that is, some contexts can be misleading (see Nagy, 1985; Raptis, 1997). Deciding which clues lead to the meaning of the target item is a necessary skill for guessing.

3. *Building up on partial previous knowledge of idiom* was often a successful technique, leading to four correct answers and one partially correct answer out of the seven times it was used, which suggests that multiple exposure to unfamiliar vocabulary items, idioms in this case, may indeed lead to cumulative gain if one assumes that such previous knowledge helped the subjects guess the meaning of those idioms. Nonetheless, most of the subjects' reports on using this technique gave credit to context rather than to their previous partial knowledge of the idioms in question. Thus, it appears that the subjects' previous partial knowledge of the idiom did not contribute to those four correct and partially correct answers (see the subjects' reports in Appendix A.1: Technique No.7). Laufer (2003) found similar results with EFL subjects' guessing of *words*, not multi-part vocabulary items. The results of the current study do not seem to support the "cumulative gain" assumption, "if a word is not remembered after the learner's first exposure to it, additional encounters will increase the probability of retaining it" Laufer (2003, p. 569; see also Nation, 2001; Raptis, 1997 for further discussion of vocabulary cumulative gain).

The subjects did not stop at idiom constituents while trying to guess the meaning of the unfamiliar idioms; sentences were also involved. Optional Technique No.3, *sentence-dependent guessing*, turned out to be one of the two most frequently used techniques. From the subjects' reports, one can see that they not only seemed to hunt for helpful sentences but they also evaluated the *helpfulness* of different sentences. A subject reported that she attempted to make a guess "by reading the sentences that come after the expression, because [she] couldn't understand it by reading what comes before."

Furthermore, the subjects' reports on using sentences as clues to the meaning of a particular idiom show that there was much more reliance on the meaning of sentences than on the syntactic relations between the sentences. There was only one report of using the syntactic relations between sentences (or clauses) as a clue to the meaning of the given idiom whereas there were 130 reports on using the semantic relations (see Appendix A.1, Technique No. 21). This suggests that the overall meaning of some particular sentences was, at least for the subjects, a richer source of clues than the syntactic relations between sentences were. Using sentences with such high frequency may be attributed to the richness of clues that they offer.

Using sentences and using idiom-keywords to guess the meaning of the unfamiliar idioms, being the most frequently used techniques, were followed by the use of *mental images*, Optional Technique No. 5. The subjects reported little detail on their use of this technique. However, the use of this technique was frequent and common. Its frequency represents 17% of the overall frequency of technique use, and it was used by 65.5% of the subjects.

These results suggest that EFL majors attempt to discover meaning from the images, or "vivid" mental images in Liontas's (2002c, p. 59) terms, that idioms

evoked in their minds. The subjects used mental images in different variations: one subject imagined that she was the person who said the expression (the same is reported in Cooper, 1999), another "linked an image to some words," a combination of *mental image* and *keyword guessing*, and a subject "imagined the situation." Such variations of this technique might be a sign of different processing styles (see Brown, 2000) and they also show that the images evoked by idioms are quite idiosyncratic rather than static or conventional. The different images might have led to different answers. For native speakers, however, imageable idioms tend to evoke conventional mental images (Boers & Demecheleer, 2001), which does not seem to be the case for EFL learners. The figurative meanings evoked by colours, however, seem to be somehow more static for EFL learners. For instance, *red*, in *paint the town red*, was associated with *warning* and *danger* (Appendix A.1).

EFL majors not only recognized idioms as imageable but they also recognize the metaphoric nature of idioms (i.e., idioms have a literal and a metaphoric meaning that is usually intended by using the idiom), which a subject expressed by reporting, "I tried to figure out the binary meaning of the words." The subjects used two *metaphor-dependent* techniques, which together represent 11.2% frequency. The subjects used, Optional Technique No.6, which is the fourth most frequently used technique with a frequency of 10.4% and they used *associating a color that is a word in the idiom with a concept* (see Appendix A.2 under *Metaphor Dependent*). The subjects seemed to uncover the metaphor loaded in the idiom, using the idiom literal meaning as a key to its figurative meaning (see Cooper, 1999). Thus, even if EFL majors are unfamiliar with a particular idiom and even if they encounter that idiom for the first time, they can still recognize idioms as expressions that have figurative meanings. There were only two cases, however, in which EFL majors provided literal interpretations of

idioms, which indicate that they mistakenly thought of idioms as separate words (see Laufer, 1997). A number of previous studies showed that EFL/ESL learners were able to identify most of the idioms presented to them (see Cooper, 1999; Liontas, 2001; cf. Laufer, 1997).

With nearly the same frequency of use received by *metaphor-dependent* techniques, *whole-text dependent* techniques together had a frequency of 10.8%. The *whole text-dependent* techniques can be described as attempts at tracking the meaning of a given idiom somewhere (or rather everywhere) in the text itself but not directly in the idiom constituents. For instance, the subjects read the whole text or they kept re-reading the text in order to guess the meaning of the given idiom.

Although *re-reading the text* had a frequency of 5% only, it was the most frequently as well as the most commonly used retrospective-report technique. In addition, it was used by 39.3% of the subjects, which makes it one of the 6 most commonly used techniques. *Re-reading the text* can be attributed to one or more of the following factors:

1. the subjects' failure of reaching an answer with which they would be contented during their first reading of a text (see the examples in Appendix A.1, Technique No.1);
2. the subjects' attempt at consolidating their comprehension, gathering more information and finding more clues to the meaning of the idiom in question;
3. difficulty of the given text (e.g., having plenty of unfamiliar vocabulary) or the idiom presented there. Although difficulty of a particular, is a possibility, it should be borne in mind that the sample texts underwent a test of face validity whereby the subjects' professors elected these texts as

being at the average subjects' level of reading proficiency. The level of difficulty of some idioms (e.g., being opaque or having a topic that is not salient in the subject's L1), might have affected the subjects' guesses (see Boers & Demecheleer, 2001; Irujo, 1986a, 1986b). The sample idioms presented in the inference might have been of different levels of difficulty because they were chosen at random. It can be assumed that EFL learners encounter idioms of different levels of difficulty while reading authentic texts, which is why the difficulty of idioms was not controlled in this study.

Essentially, re-reading the text/paragraph is not the only form of repetition that appears in the data; there are repetitions of idioms and sentences, too. Cooper (1999) explains his subjects' repetition of idioms as a way of gaining more time and as a "preparatory strategy" that prepares them to assign meaning to idioms; *repetition of sentences*, which was reported one time only, seems to have the same function.

The rest of the techniques in this category, *reading the whole text*, *by reading the text* can be actions of evaluating a reader's preliminary answers or assumptions of the meaning of a particular idiom; they can be a way of *fine-tuning* an answer. For instance, "I read the passage, but I already formed a meaning to the expression just as read it," and "I had an idea about the expression but when I read the passage I got the right meaning"— both reports and others more, particularly those included under *by reading the text*, seem to support the view that EFL majors might keep reading or choose to read the whole text as a means of checking their preliminary assumptions about the meaning of the target idiom. Vague reports such as "by reading the text" might also refer to the subjects' attempt at consolidating their comprehension and

supporting their preliminary assumptions as of the idiom's meaning with more clues; it could be a way of making the utmost possible use of context.

An interesting result of this study is the subjects' reliance on their L1, Arabic, while trying to assign meaning to the sample *post-lexica level* idioms (i.e., idioms that have no lexical equivalents in the L1). Although the frequency of L1 techniques together represent only 7.5% of the overall frequency, 50% of the subjects reported using one or more of the *L1 dependent* techniques. On one hand, low frequency of *L1* techniques can be attributed to the nature of the sample idioms which have no L1 lexical counterparts. On the other hand, the big number of subjects who used these techniques to deal with the sample idioms, despite their being of the post-lexical-level type, is an indicator of the subjects' tendency to rely on their L1 in learning new vocabulary items, idioms in this case, even when these items do not have lexical equivalents in the L1.

Cooper (1999) and Liontas (2001, 2002a) reported that L2 learners relied on their first languages to guess the meaning of idioms that belonged to different levels of L1-L2 idiom similarity. In the cited studies, the subjects' use of *L1 dependent* techniques can be attributed to the sample idioms adopted in those studies which were lexical- and semi-lexical-level idioms. The current study, however, showed that EFL learners may use their L1 to guess the meaning of post-lexical level idioms, too.

In conclusion, with different amounts of frequency of use, the subjects in this study exploited a wide spectrum of techniques while guessing the meaning of unfamiliar idioms presented in authentic written texts. Yet, the classification of techniques showed that, in terms of the number of techniques as well as their frequency of use, the subjects' guessing process mainly involved the idiom itself (i.e., the meaning of the idiom constituents, the subjects' mental images of the idiom, the metaphor on

which the idiom is based, and translating the idiom or connecting it to a L1 counterpart).

Two points should be pinned down about these techniques. First, the findings interestingly showed how L1 might act behind the scenes while EFL subjects are reading; that is, even though the sample idioms were post-lexical level in relation to L1 (i.e., Arabic) idioms, half the subjects tried to translate the sample idioms into Arabic and/or to connect them to L1 counterparts. How influential and active L1 might be during L2 learners' reading, in general, and during their guessing of unfamiliar vocabulary items, in particular, remains open to investigation. Second, out of the *variations* of depending on a given idiom to guess its meaning, mentioned above, the subjects used the meaning of the idiom constituents (idiom keyword guessing) the most frequently. Still, some sentences played an active role in the subjects' guessing process as frequently as idiom keywords did.

The question is why both of *idiom keyword* guessing and *sentence-dependent* guessing received the same amount of frequency of use. A possible answer is that the subjects would start guessing at the meaning of an idiom by manipulating its keywords first. If they failed to reach a guess of the idiom's meaning, they would move on hunting for a helpful sentence or sentences. Even if they came up with a guess by merely manipulating idiom keywords, the subjects might have resorted to sentences in order to check their initial guesses against the context of those sentences. As Raptis (1997) suggested, a reader's guesses usually leave them with a feeling of uncertainty. Indeed, such uncertainty might have led some subjects to reading more of the text, reading the whole text or even re-reading the text as the data on the *whole-dependent* techniques imply. Thus, the EFL majors' guessing process seemed to involve both micro- and macro-discourse levels, which demonstrates how varied and

complex the EFL learners' guessing can be particularly at the sample subjects' level, being EFL majors. Furthermore, the very limited frequency of wild guessing, as found in the subjects' reports, can be an indicator of the systematic nature of EFL majors' guessing.

4.2.2.2 Individual vs. Combined-Technique Use

The combined-technique use was nearly twice as much as the individual-technique use. Thus, the subjects were inclined to use a combination of techniques more than they were to use one technique in order to guess the meaning of a particular idiom. Such inclination may be indicative of trial-and-error processing. When the subjects use a combination of two or more techniques to guess the meaning of an idiom, they may do so in a trial-and-error fashion while checking their assumptions of the meaning of idioms that they come up with against the context and their knowledge of the world.

The data offer some evidence that the subjects did check their answers. Sometimes, the subjects would be skeptical about the *correctness* of their guesses, which suggests that they kept experimenting with techniques and evaluating answers. Actually, such interpretation goes in line with Cooper's (1999) heuristic model of L2 learners' idiom comprehension.

In some cases, the subjects relied on a single technique to guess the meaning of a particular idiom with responses such as "I only had to [...]," which is a clear signal of using a single technique to guess the meaning of a given idiom. Yet, such individual-technique use does not necessarily undermine Cooper's heuristic model because individual use of the identified guessing techniques was only (35%) of the overall frequency (of use of all techniques). Even if the subject indeed used only one

technique for guessing the meaning of a particular idiom, it could mean that she happened to be convinced with her guess from the first time or by using the first technique that she tried; responses such as "I had only to [...]" supports this interpretation (see appendix A.1).

There remains a word of caution about the findings related to individual- and combined-technique use: the retrospective-report techniques received much less individual-technique use than the optional techniques did. Therefore, there is probably an effect of the method of data collection on these results especially when one considers that the techniques reported through the retrospective reports were all used in combination with another/others except for two techniques with a relatively small amount of individual use that does not exceed (14.8%) of the total use of each of the two techniques.

4.2.2.3 Effectiveness

The second hypothesis presented in (1.4) predicts that the type of the technique(s) that the sample subjects use to guess the meaning of a given idiom in context of authentic written texts will not affect the accuracy of their guessing. The second hypothesis is partially supported. In general, the results showed that different techniques have the same effectiveness for guessing the meaning of idioms as presented in authentic written texts. Only two techniques, *relating the idiom to a piece of information in the text* and *translation of idiom* proved less effective than one of four of the compared identified techniques. The relative failure of the first might be the result of using miscues. The relative failure of the other might have stemmed from the fact that the idioms presented in the inference task were all post-lexical level ones;

hence, translation, which is one of the *L1 dependent* techniques, would not be of much help.

The four techniques that proved more effective than the two techniques just mentioned are *metaphor*, *sentence-dependent guessing*, *reading the whole text* and *by reading the text*. The effectiveness of *metaphor*, trying to find metaphorical/ figurative meanings for the idiom constituents, can be attributed to the fact that the target vocabulary items at which the subjects had to guess were metaphorical expressions. The effectiveness of *sentence-dependent guessing* suggests that sentences can be especially helpful clues to the meaning of unfamiliar vocabulary items, idioms, in particular. Furthermore, the effectiveness of *reading the whole text* and *by reading the text*, two of the *whole-text dependent* techniques, implies that generating accurate guesses is positively affected by the different proportions of text that one reads.

It is worth mentioning that the statistically significant differences were only found in some comparisons between the techniques used in the combined-technique condition. This suggests that some techniques can be more or less effective when used with another or other techniques.

At this point, however, it should be remembered that in 41 (out of the 46) comparisons tested by the Chi-square, there was not a significant difference between the number of correct, partially correct and wrong answers that resulted from using a technique in comparison with those that resulted from using another. These results suggest that constructing an *accurate*, or a correct guess, generally speaking, is not affected by the use of a particular technique. In other words, there does not seem to be a more effective guessing technique than another is. Furthermore, no optional

technique turned out to be more effective than another did, whether in the individual- or in the combined-technique use.

Such findings contradict Cooper's (1999) that showed some techniques were more effective than others were for guessing the meaning of idioms. However, there are three differences between Cooper's study and the current one, which might have led to the differences in the results related to the effectiveness of techniques:

1. Cooper ignored the combined use of techniques; he examines the effectiveness only of those techniques that "directly led the subject to the answer" (Cooper, 1999, p. 252).
2. Cooper did not use authentic texts, which was discussed in (2.3.3).
3. Cooper did not use any statistical test that would verify if there was a statistically significant difference between the number of correct, partially correct and wrong answers that resulted from using one technique and those that resulted from using another. In this study, however, the statistical treatment (i.e., the comparisons examined by the Chi-square test) has shown that, for the most part, the difference between the numbers of correct, partially correct and wrong answers for each technique was not statistically significant to confirm better effectiveness of one technique over another.

Thus, it seems that a particular technique has no effect on the subjects' success (or failure) of guessing the meaning of idioms, which can be explained by the fact that there are many variables involved in that process. Such variables include subjects' reading proficiency, subjects' interest in reading itself and in the text, subject's knowledge of vocabulary, the degree of the idiom semantic transparency (see Boers & Demecheleer, 2001; Irujo, 1986b) and other variables that cannot be practically isolated from the process of reading and understanding the meaning of unfamiliar

idioms presented in authentic written texts. For instance, if a subject used a particular technique to guess the meaning of a very transparent idiom, that subject might be successful; yet, if the same subject used the same technique to guess the meaning of a very opaque idiom, then the subject might fail to do so because of the degree of idiom transparency, not necessarily because of the technique itself. The influence of these variables needs further investigation and therefore lies beyond the scope of this study.

CHAPTER FIVE

CONCLUSION AND RECOMMENDATIONS

5. 1 Conclusion

This study provided a tentative assessment of a sample of Arab EFL majors' efficiency at guessing the meaning of post-lexical level idioms included in some authentic written texts. In addition, the study identified a wide range of techniques that a sample of EFL majors use to guess the meaning of idioms while reading authentic texts. The frequency, commonness and effectiveness of such techniques were also investigated.

The findings of the current study indicate that the sample Arab EFL majors' guessing efficiency at the meaning of post lexical-level idioms seems to be limited; yet, it can still play a positive role in the process of understanding the meaning of the sample idioms during their reading of authentic texts. It is important to bear in mind that the findings reported in this study are related to guessing the meaning of *post-lexical level* idioms only; such results are not related to all idioms that an EFL major encounters during reading. Previous research, such as that of Irujo (1986b), Liontas (2001, 2002a) and Roth (1997), showed that post-lexical level idioms are the most difficult ones for EFL learners to comprehend in comparison with lexical-level idioms (i.e., similar idioms in two languages) and semi-lexical-level idioms (i.e., partially similar idioms in two languages). Therefore, although the sample EFL majors' guessing of the meaning of post-lexical level idioms has its limitations, reading

authentic texts can still be one of major the sources of learning the meaning of such idioms (by means of guessing from context).

The current study provided some insights into the hypothesis of incidental vocabulary learning. The study has experimentally shown that, by guessing from context, the EFL majors managed to comprehend unfamiliar idioms in a considerable number (i.e., the third) of times in which they encountered such idioms. The study has also shown that partial knowledge of idioms could be behind some successful attempts at guessing.

Nonetheless, the sample of the study, all third- and fourth-year EFL majors who can be regarded as advanced readers (see Arnaud & Savignon, 1997), failed to comprehend the meaning of a considerable number of the sample idioms by means of guessing from context. Moreover, EFL majors would not always recognize their unfamiliarity with some idioms. In addition, the subjects' previous partial knowledge of some idioms could not guarantee successful guessing of those idioms in some cases. Even if one assumes that more times of exposure to idioms will make it easier for EFL learners to guess the meaning of idioms later on, low frequency of the use of idioms may not permit the multiple-exposure required for accurate guessing.

Leaving the meaning of post-lexical level idioms for the EFL majors to learn from reading only does not seem to be appropriate; yet, encouraging these learners to guess the meaning of such idioms may well help them learn a number of idioms during their usual reading of authentic texts. Direct teaching of idioms and learners' guessing from context are not necessarily contradictory; they can indeed be complementary to one another.

As regards the EFL majors' guessing techniques, this research study identified a list of techniques that the EFL majors' employed in their quest for the meaning of

idioms. EFL majors used a diverse set of idiom guessing techniques, which is a clear signal of the EFL majors' different learning styles and, in many cases, their rather creative problem-solving processes. Inductive and deductive reasoning seemed to be behind the use of some techniques, and both of the reflective and impulsive styles of learning appeared in the data (see Brown, 2000).

> In the case of inductive reasoning, one stores a number of specific instances and induces a general law or rule or conclusion that governs or subsumes the specific instances. Deductive reasoning is a movement from a generalization to specific instances: specific subsumed facts are inferred or deduced from a general principle. (Brown, p.97)

For instance, most of the *idiom-dependent* techniques such as Option2, *idiom keyword guessing*, seem to stem from the deductive reasoning whereas the inductive reasoning seems to be the use of most of the *whole text-dependent* techniques, such as *guessing according to the meaning of the whole text*. Similarly, some EFL majors' answers seem to be a sign of the impulsive or reflective styles of problem solving (see Appendix A.1, the reports under *wild guessing* and under *analyzing and discussing the idiom*).

Actually, this study suggests that EFL majors would often use a combination of techniques to guess the meaning of a particular idiom during reading; their guessing can involve the trial of different techniques followed by an evaluation of their guesses and techniques they use. Such evaluation may be largely subjective but may reach the extremes of certainty (or uncertainty).

Although the scope of this study is not wide enough to see if there is a correlation between a particular learning style and successful, accurate guessing, this study offered some insights into this point. In general, no technique turned out to be more effective than another, which suggests that a learning style has perhaps no effect on the accuracy with which EFL learners guess the meaning of idioms (see Brown 2000

for a discussion of the possible correlation between learning styles and successful second language learning).

5. 2 Pedagogical Implications

According to the findings of the current study, the following pedagogical implications should be considered:

1. EFL teachers should encourage their students' guessing of the meaning of idioms during reading but direct teaching of idioms and explicit idiom learning (e.g., learning the meaning of an idiom from a dictionary) should go hand in hand with such encouragement.
2. EFL learners should be encouraged to use their own guessing techniques. In general, imposing the use of certain techniques on EFL learners might be counter-productive.
3. EFL teachers should raise the learners' awareness of their guessing techniques. For instance, when the learners make guesses, even wrong guesses, of the meaning of idioms, the teacher may ask them to report the way in which they tried to understand the idioms in question.
4. EFL learners should be aware of their guessing efficiency especially as it pertains to post-lexical level idioms. Through guessing, an independent vocabulary learning strategy, EFL learners can learn a number of idioms. Researchers (e.g., Sökmen, 1997) recommends encouraging L2 learners to use independent vocabulary learning strategies; Adkins (1968) and Irujo (1986b) recommend enhancing L2 learners' skill of guessing the meaning of idioms from context.
5. EFL textbook writers should allow more idioms to come into their books.

5. 3 Suggestions for Further Research

Further research should be carried out to investigate the following:

1. Through longitudinal studies, researchers may aim at finding out whether or not EFL majors' efficiency at guessing the meaning of the idioms used in authentic written texts improves over a span of time.
2. Further research may investigate EFL majors' efficiency at guessing the meaning of idioms in terms other than *correctness*; the focus can be shifted towards the quality of such guesses, or the logic on which they are based.
3. Researchers should examine the correlation between the quality and quantity of EFL learners' reading of authentic texts and their efficiency at guessing the meaning of idioms.
4. Future studies may look into the relationship between EFL learners' academic achievement and their guessing efficiency.
5. Future research may investigate EFL learners' efficiency and techniques with which they guess the meaning of other multi-word vocabulary items such as (idiomatic) phrasal verbs.
6. Using different methods of data collection (e.g., interviews and think-aloud protocols), prospective research may investigate EFL learners' efficiency and techniques with which they guess the meaning of idioms.
7. Case studies may be carried out to investigate EFL majors' guessing at the meaning of idioms rather exhaustively.
8. There is a need to draw a comparison between the impact of direct teaching and guessing from context on EFL students' learning of idioms. Direct Teaching of idioms and learning idioms through guessing from context are not necessarily contradictory; they can be complementary to one another.

9. The study may be replicated with male EFL learners or with a sample of both male and female learners in order to find out if there are any differences between their performances in terms of their idiom familiarity, efficiency at guessing and the techniques they use while guessing.
10. The study may also be replicated with non-EFL majors. Furthermore, future studies should compare EFL-majors and non-EFL majors in terms of idiom familiarity, efficiency at guessing the meaning of idioms and the type of techniques they use while guessing.

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Appendix A.1: A Sample of the Subjects' Reports on their Technique-Use

1. Re-reading the text
"I read the text twice."/ "I read the passage many times."/ "I read the text more than once."/ "I had to read and re-read the text." / "by reading the passage 3 times! I somehow come up with a meaning." / "I tried to read the sentences more than once." (The subject underlined almost all of the sentences in the text)
2. Relating the idiom to a piece of information in the text
"The woman is pregnant." (See session:1, text No.2; the idiom is *get butterfly in one's stomach*) / "... you feel a movement in your stomach. I think it's when the baby starts to kick." [The text is entitled: "Telling the Boss You're Pregnant." "I think it means talking informally and friendly about common things which are not related to politics." (See session: 2 text No.6; the idiom is *talk shop*) / "Chatting like old friends." / "...talking about hobbies" [Subjects' answer is:"أن نقتل أعدائنا و نقضي عليهم" for ***bury the hatchet*** (See session: 1, text No.6)]
3. Reading the whole text/paragraph
"I read the whole paragraph in order to understand what the underlined sentence means. [The subject most probably means the ***underlined expression*** because there were not any underlined sentences in the text]." "I read the passage, but I already formed a meaning to the expression just as read it." "I read the whole thing." & "I did that by reading the whole paragraph."
4. Guessing according to the meaning of the whole text/paragraph
"by guessing what the whole paragraph is talking about." / "It's somehow a conclusion to the whole passage so if you get the hint you'll figure [out] the meaning." "I tried to relate this expression to the whole paragraph."
5. By reading the text
"From reading the passage I kind of guessed the meaning, not sure." "I had an idea about the expression but when I read the passage I got the right meaning." (Partially correct answer). "Reading the text makes it easy to just guess." then the same subject reported, "not sure, to have fun." (for *paint the town red*) "I just guess the meaning from reading the text." "I guessed the meaning from the text." "I tried to guess the meaning from the text." "I guessed it from the text and the meaning of each word of the expression." "from the text." "I guessed it from Arabic and from the text."
6. From context
"I relied on the context." and "By going back to context." / "From context." "I knew it from the context." / "By guessing it depending on the context."

7. Building up on previous partial knowledge of the idiom
"I think I came across it before." / "For instance I hear it a lot in police movies, but never looked it up or bothered about it, here it is explained in the sentences it occurred in. But I read all the passage in the process." (for ***go by the book***) / "I heard it before but not sure about its meaning but I tried to guess it from the text."
8. Keyword guessing
"[…] by connecting some words meaning with the other." / "…keeping some words from the text in my mind." / "I used other words within the sentence to identify the meaning of the underlined expression."
9. By thinking of another English idiom/expression
"I tried to understand it by thinking of another idiom that looks similar to this one." / "I think it means either let's ***settle the score*** or let's bury the evidence." (Emphasis mine. The subject interprets ***bury the hatchet***) / "To show their dirty laundry." (for ***sweep under the carpet***) "[…] hot-tempered…" (for ***in hot water***)
10. Topic-dependent guessing
"Try to guess the main theme." / "I tried to guess the meaning on the basis of the topic of the text."
11. Repeating the idiom: i. Reading the idiom more than once ii. Repeating the idiom mentally
"I read the phrase twice." and "I read it more than once." / "by reading it many times." & "Reading it again and many times." "I kept repeating it in my mind, in order to figure out its meaning."
12. Paragraph-dependent guessing
"Analyzing the paragraph." / "Knew the meaning from the next paragraph." / "Looking at associated meanings in the same paragraph." / "أعتقد أن المعنى واضح حيث لم أحتاج إلى قراءة بقية الفقرات لكي أستوعب المقصود من هذا التعبير."
13. No need to read the whole text
"the sentence explains it […], I didn't have to read the whole passage."
14. analyzing and discussing the idiom
"The butterflies are beautiful things similar to the babies." [for ***get butterflies in your stomach***] "...إنه عبارة عن شيء شاذ لا يحدث و حدوثه يمثل معجزة تخالف أسس الطبيعة [for ***once in a blue moon***] "For the paint take some time to dry." [for ***watch the paint dry***]
15. Wild Guessing
" wild guess."
16. Personalizing
"I imagined that I am the one who said the expression."
17. Imagining the situation
"I imagined the situation."
18. Setting different meanings for the idiom
"I set different meanings, but I was confused on which one of the is the right one." (The answer is "take the risk" for *kick the bucket*)
19. Replacing the idiom
"…changed the expression in a way to make it understandable."

20. Option No.2: I tried to guess the meaning of the underlined expression from (a) word/word(s) in the expression itself. ***(underline the word(s) in the text)***
"حاولت فهمها من خلال المعنى الدارج في وقتنا الحالي المتعلق بـ hit خاصة في عالم الفن. (الإجابة: نجاح سامق)" (Correct. The subject underlined *hit* in *hit the jackpot*) "لقد ركزت فقط على الكلمات الموجودة تحتها خط ( )"The subject underlined the idiom only "I can think of bucket." (The idiom presented in the text is *kick the bucket*." / "I thought of the word (face) and other words…" (the subject underlined the word *face* in *face the music*). / "think of it word by word." / "… I already formed a meaning to the expression just as I read it." (The subject underlined *you scratch* and *scratch yours* in *you scratch my back, I'll scratch yours*) (another subject underlined the words *my* and *yours* in the same idiom)
21. Option No.3: I tried to guess the meaning of the underlined expression from (a) sentence/sentences. (*Underline the senescence(s) in the text*)
Semantic: "The meaning is explained in the sentence. crystal clear." / "By reading the sentences that come after the expression, because I couldn't understand it by reading what comes before." / "Read the other sentences references and what they indicates." / "by getting the concept of the sentence, eventually you'll get the meaning of the expression." **Syntactic**: "the idiom is linked to another clause by *and*, so they mean the same." [Italics mine] **Repetition**: "I couldn't guess the meaning, I tried to read the sentences more than once."
22. Option No.4: I tried to translate the expression into Arabic in order to understand it.
Translation: "I translated it to Arabic, and try to find if we use any other expression similar to it."/ "I tried to translate it word for word." **Connecting to L1 idioms or idiomatic expressions**: "يضرب عصفورين بحجر" (the answer is given as the meaning of ***the best of both worlds***). "I made a connection between the expression in Arabic الليالي الحمراء with this expression..." (the answer is given as the meaning of ***paint the town red***). "يخفي آثار الجريمة." (the answer is given as the meaning of ***bury the hatchet***).
23. Option No.5: I made up a picture of this expression in my mind.
"I imagined it in my mind." / "I linked an image to some words." **Mental Image of situation**: "I imagined the situation." **Personalizing**: "I imagined that I'm the one who said this expression."
24. Option No. 6: I tried to find a metaphorical/figurative meaning for the word(s) in the underlined expression.
"I tried to figure out the binary meaning of the words." / "to know the best of two things or to get something from both sides." (for ***the best of both world***) "I guess it means finish the hard work and watch the results of his work in life." (for ***watch the paint dry***) **Associating a color that is a word in the idiom with a concept**: "I think it's kind of a warning" (for ***paint the town red***) / "…they have to prepare themselves to a dangerous issue." (for ***paint the town red***) / "good and bad" (for ***in black and white***)

Appendix A.2: Classification of the Subject's Techniques

This table represents a classification of the techniques identified in the study. Both of the optional and the retrospective-report techniques are listed. The optional techniques are *italicized.*

Category	Technique	Times #	Total for each category
Idiom Dependent	*Optional 2. I tried to guess the meaning of the underlined expression from (a) word/word(s) in the expression itself.*	**100**	132
	2. Relating the idiom to a piece of information in the text	**9**	
	7. Building up on previous partial knowledge of the idiom (Coming across the idiom in the past)	7	
	11. Repeating the idiom: (i. Re-reading the idiom ii. Repeating the idiom mentally)	7	
	9. By thinking of another English idiom/expression	**5**	
	14. analyzing and discussing the idiom	**2**	
	18. Setting different meanings for the idiom	**1**	
	19. Replacing the idiom	**1**	
Sentence Dependent	* *Optional 3. I tried to guess the meaning of the underlined expression from (a) sentence/sentences in the text.* * Semantic * Syntactic * Repetition (of sentence(s))	 130 1 1	132
Mental Image Dependent	* *Optional 5. . I made up a picture of this expression in my mind.*	90	92
	Imagining the situation	**1**	
	16. Personalizing	**1**	
Metaphor Dependent	* *Optional 6. I tried to find a metaphorical/figurative meaning for the word(s) in the underlined expression.*	56	60
	Association of a color that is a word in the idiom with a concept	4	
Whole Text Dependent	**1. Reading the text/paragraph more than once**	**27**	58
	3. Reading the whole text/paragraph	**15**	
	5. By reading the text	**10**	
	4. Guessing according to the meaning of the whole text	**6**	

L1 Dependent	** Optional 4: I tried to translate the expression into Arabic in order to understand it.*	28	40
	*** (Trying to) connect to /recall similar L1 idioms/expressions, Thinking of or connecting to a lexically similar L1 idiom/expression**	10	
	Literal Translation of the idiom	2	
Others	**6. Context dependent**	8	22
	12. Paragraph dependent	5	
	8. Keyword dependent	4	
	10. Topic dependent	3	
	15. Wild guessing	2	

Appendix A.3: Guessing Techniques Sorted According to their *Frequency*

Technique	Times #	Times %*
Option 3: □ I tried to guess the meaning of the underlined expression from (a) sentence/sentences…	132	24.6%
Option 2: □ I tried to guess the meaning of the underlined expression from (a) word/word(s) in the expression itself…	100	18.7%
Option 5: □ I made up a picture of this expression in my mind…	90	16.8%
Option 6: □ I tried to find a metaphorical/figurative meaning for the word(s) in the underlined expression…	56	10.4%
Option 4: □ I tried to translate the expression into Arabic in order to understand it…	28	5.2%
1. Re-reading the text/paragraph	27	5.0%
2. Reading the whole text/paragraph	15	2.8%
3. By reading the text	10	1.9%
4. (Trying to connect) to/recall similar L1 idioms/expressions to a lexically similar L1 idiom/expression	10	1.9%
5. Relating the idiom to a piece of information in the text	9	1.7%
6. From context	8	1.5%
7. Building up on previous partial knowledge of the idiom (Coming across the idiom in the past)	7	1.3%
8. Repeating the idiom: (i. Reading and re-reading the idiom ii. Repeating the idiom mentally)	7	1.3%
9. Guessing according to the meaning of the whole text/paragraph	6	1.1%
10. By thinking of another English idiom/expression	5	0.9%
11. Word-dependent guessing (Keyword guessing)	4	0.7%
12. Association of a color that is a word in the idiom with a concept	4	0.7%
13. Topic-dependent guessing	3	0.6%
14. Paragraph-dependent guessing	3	0.6%
15. Literal Translation of Idiom	2	0.4%
16. No need to read the whole text	2	0.4%
17. analyzing and discussing the idiom	2	0.4%
18. Wild Guessing	2	0.4%
19. Personalizing	1	0.2%
20. Imagining the situation	1	0.2%
21. Setting different meanings for the idiom	1	0.2%
22. Replacing the idiom with another	1	0.2%

* Percentage of the overall frequency (i.e., out of the 536 times in which the subjects used the identified techniques).

Appendix A.4: Guessing Techniques Sorted According to their *Commonness*

Technique	Subjects #	Subjects %
Option 2: □ I tried to guess the meaning of the underlined expression from (a) word/word(s) in the expression itself…	24	85.7%
Option 3: □ I tried to guess the meaning of the underlined expression from (a) sentence/sentences...	21	75.0%
Option 5: □ I made up a picture of this expression in my mind…	19	67.9%
Option 6: □ I tried to find a metaphorical/figurative meaning for the word(s) in the underlined expression…	19	67.9%
Option 4: □ I tried to translate the expression into Arabic in order to understand it…	14	50.0%
1. Re-reading the text/paragraph	11	39.3%
5. Relating the idiom to a piece of information in the text	9	32.1%
2. Reading the whole text/paragraph	7	25.0%
4. (Trying to connect) to/recall similar L1 idioms/expressions to a lexically similar L1 idiom/expression	7	25.0%
9. Guessing is according to the meaning of the whole text/paragraph	6	21.4%
3. By reading the text	5	17.9%
6. From context	5	17.9%
12. Association of a color that is a word in the idiom with a concept	4	14.3%
7. Building up on previous partial knowledge of the idiom (Coming across the idiom in the past)	4	14.3%
11. Word-dependent guessing (Keyword guessing)	4	14.3%
10. By thinking of another English idiom/expression	3	10.7%
13. Topic-dependent guessing	3	10.7%
8. Repeating the idiom: (i. Reading and re-reading the idiom ii. Repeating the idiom mentally)	2	7.1%
14. Paragraph-dependent guessing	2	7.1%
16. No need to read the whole text	2	7.1%
17. analyzing and discussing the idiom	2	7.1%
15. Literal Translation of Idiom	2	7.1%
18. Wild Guessing	1	3.6%
19. Personalizing	1	3.6%
20. Imagining the situation	1	3.6%
21. Setting different meanings for the idiom	1	3.6%
22. Replacing the idiom	1	3.6%

Appendix A.5: Individual- and Combined-Use of Techniques

Technique	Used Individually # %	Used with In combination with (an)other(s) # %	Total Times # %
Option 2: □ I tried to guess the meaning of the underlined expression from (a) word/word(s) in the expression itself…	**43** (43%)	**57** (57%)	**100** (100%)
Option 3: □ I tried to guess the meaning of the underlined expression from (a) sentence/sentences…	**55** (41.7%)	**77** (58.3%)	**132** (100%)
Option 4: □ I tried to translate the expression into Arabic in order to understand it.	**14** (50.0%)	**14** (50.0%)	**28** (100%)
Option 5: □ I made up a picture of this expression in my mind…	**47** (52.2%)	**43** (47.8%)	**90** (100%)
Option 6: □ I tried to find a metaphorical/ figurative meaning for the word(s) in the underlined expression…	**17** (30.4%)	**39** (69.6%)	**56** (100%)
1. Re-reading text/paragraph more than once	**4** (14.8%)	**23** (85.2%)	**27** (100%)
5. Relating the idiom to a piece of information in the text	**0** (0%)	**9** (100%)	**9** (100%)
2. Reading the whole text/paragraph	**0** (0%)	**15** (100%)	**15** (100%)
4. (Trying to connect) to/recall similar L1 idioms/expressions to a lexically similar L1 idiom/expression	**0** (0%)	**10** (100%)	**10** (100%)
9. Guessing according to the meaning of the whole text/paragraph	**0** (0%)	**6** (100%)	**6** (100%)
3. By reading the text	**0** (0%)	**10** (100%)	**10** (100%)
6. From context	**0** (0%)	**8** (100%)	**8** (100%)
12. Association of a color that is a word in the idiom with a concept	**0** (0%)	**4** (100%)	**4** (100%)
7. Building up on previous partial knowledge of the idiom (Coming across the idiom in the past)	**1** (14.3%)	**6** (85.7%)	**7** (100%)
11. Word-dependent guessing (Keyword guessing)	**0** (0%)	**4** (100%)	**4** (100%)
10. By thinking of another English idiom/expression	**0** (0%)	**5** (100%)	**5** (100%)
13. Topic-dependent guessing	**0** (0%)	**3** (100%)	**3** (100%)
8. Repeating the idiom: (i. Reading and re-reading the idiom ii. Repeating the idiom mentally)	**0** (0%)	**7** (100%)	**7** (100%)

14. Paragraph-dependent guessing	**0** (0%)	**3** (100%)	**3** (100%)
16. No need to read the whole text	**0** (0%)	**2** (100%)	**2** (100%)
17. analyzing and discussing the idiom	**0** (0%)	**2** (100%)	**2** (100%)
15. Literal Translation of Idiom	**0** (0%)	**2** (100%)	**2** (100%)
18. Wild Guessing	**0** (0%)	**2** (100%)	**2** (100%)
19. Personalizing	**0** (0%)	**1** (100%)	**1** (100%)
20. Imagining the situation	**0** (0%)	**1** (100%)	**1** (100%)
21. Setting different meanings for the idiom	**0** (0%)	**1** (100%)	**1** (100%)
22. Replacing the idiom	**0** (0%)	**1** (100%)	**1** (100%)
----------	**Total of individual use**	**Total of combined use**	**Total**
----------	**189** (35.3%)	**347** (64.7%)	**536** (100%)

Appendix B.1: Instructions to Subjects

You are participating in a research study that will hopefully help us understand some aspects of your language learning. The task which you are going to do should be enjoyable and it should help you know more about your own language learning as well.

Instructions:

You are going to read 9 short texts. In each text, there is an expression underlined.
We would like you to do three things; after reading each text:

First, you will find sections A, B and C under each text. In sections (A), choose *one or more* of the options to tell us how you tried to understand the meaning of a particular underlined expression; that is, tell us what you actually did and thought about when you tried to understand the meaning of the underlined expression.

Choose the option(s) that best describe how you *tried* to understand the expression **even if you cannot tell what it means**.

If no option applies to the way in which you tried to understand the meaning of the underlined expression, then **choose 'Other'** and write about how you tried to understand the meaning of the underlined expression; please give as **much information** and **detail** as possible! You can respond in Arabic or English.

Second, in sections (B), tell us more about *how you tried* to understand the meaning of the underlined expressions. You can respond in Arabic or English. Please give as **much information** as possible.

Third, in sections (C), tell us what each underlined expression means. You can respond in Arabic or English. Give as **much information** as possible.

Note #1: Remember that in sections (A), there is no right or wrong option, everyone has his/her own way of doing things.
Note #2: Tell us what you actually do and think, not what you believe you should do.

Appendix B.2: A Sample Page of the Inference Task
Text No.6 in the first session is provided below

6.

BBC News: May, 2002: Analysis:
By Greg Barrow, BBC correspondent at the United Nations



UN and Iraq 'talk shop'

The way that officials described it, the UN Secretary General, Kofi Annan, and the Iraqi Foreign Minister could have been chatting about their hobbies during the latest round of discussions aimed at getting UN weapons inspectors back into Iraq.

"They have really been able to talk shop," one UN official said, as if the two men had spent the past three days in New York exchanging tips about fly-fishing or bird-watching. [...]



First technical discussions since 1998

A. Choose one or more of the following options to tell us how you tried to understand the meaning of the underlined expression:-

□1. I already know what the underlined expression means because I learned it sometime ago.

□2. I tried to guess the meaning of the underlined expression from (a) word/words in the expression itself. *(underline the word(s) in the text)*

□ 3. I tried to guess the meaning of the underlined expression from (a) sentence/sentences. *(Underline the senescence(s) in the text)*

□4. I tried to translate the expression into Arabic in order to understand it.

□5. I made up a picture of this expression in my mind.

□6. I tried to find a metaphorical/figurative meaning for a word (or the words) in the underlined expression.

□7. ***Other.*** (Give as much detail as you can in Arabic or English):-

B. Tell us more about the way in which you tried to understand the underlined expression. (Give as much detail as you can in Arabic or English)

C. What does the underlined expression mean? (Give as much detail as you can in Arabic or English)

Appendix B.3: The Sample Idioms Presented in the Inference Task (in the order of their appearance in the inference task)

Session 1

1	You scratch my back and I'll scratch yours
2	to get butterflies in your stomach
3	to face the music
4	to go by the book
5	to go out of the window
6	to bury the hatchet
7	in black and white
8	in hot water
9	to kick the bucket

Session 2

1	once in a blue moon
2	red tape
3	to paint the town red
4	to sell oneself short
5	to sweep under the carpet
6	to talk shop
7	the best of both worlds
8	to watch the paint dry
9	to hit the jackpot

Appendix B.4: The Sample Texts

First: Texts in Session 1

1.

Authors Admit Faking Blurbs on 'Dire' Books

By Daniel Foggo

(Filed: 14/03/2004) [...] A number of prominent writers confessed to giving glowing "soundbite" reviews to work they did not rate highly. One admitted to providing inaccurate tributes to raise her own literary profile.

A bestselling woman author said that she gave "generous" praise for books she considered "dire". She described it as a "you scratch my back, I'll scratch yours" culture, with authors helping each other irrespective of the merits of the books.

Among those who admit to giving fake reviews is Isabel Wolff, whose romantic novels include The Trials of Tiffany Trott and The Making of Minty Malone. She said that she had given "unreadable" books good quotes "four or five times". Her motivation was partly "low cunning", and a desire to have her name on the cover of books that might sell well. "I give the most generous quotes imaginable to these frankly dire-looking books," she said.



Isabel Wolff: Emmi Fredericks's novel [below] 'looked terrible'

---

2. **Telling the Boss You're Pregnant**

How and when should I tell my employer I'm pregnant?

Chances are, you get butterflies in your stomach just thinking about breaking your good news to your boss. As eager, or as anxious, as you may be to make your announcement, only you can best decide how and when to let your supervisor in on your secret. How it goes will depend on such factors as the culture of your workplace, the extent to which your office has been affected by other women's pregnancies, and your relationship with your supervisors.

---3.

Boje and Gibbs should travel to India: Symcox, sports official

M Subramoney

Durban, Nov 5 (PTI) A prominent South African sports administrator and a former cricketer have urged Nicky Boje and Herschelle Gibbs to travel to India and "face the music" for their alleged involvement in the 2000 match-fixing episode.

Ashwin Trikamjee, a former leading non-racial sports administrator and former Test cricketer Pat Symcox said today that if the the duo did not travel, they would make matters worse for themselves.

"They have been implicated by Hansie Cronje and by not going on the trip they are showing blatant prejudice against a country like India," said Trikamjee, who is also the president of the South African Hindu Maha Sabha and a leading lawyer. [...].

---

4. **A Sermon on Daniel 12: 1-3- Go By The Book!**

The book through which salvation is given

It's in the book. Everything we need to know for this life and for the next is in the book of God's Word. In a sense we know that the Bible isn't a self-help book because we know what our condition was by nature, we were dead in our transgressions and sins and couldn't do anything to help ourselves. God's law shows us our sins and reminds us how often we don't go by the book of God's Word and go by the book of the devil, the world, and our own sinful flesh instead. God's Word tells us to make Him and His Word the top priority in our lives and far too often we find ourselves making it a convenience. God's Word tells us to help and serve others and far too often we find ourselves selfishly helping and serving ourselves.

---

5. **Window Upon the World**
John E. Ruffle

"Where no oxen are, the manger is clean, but much increase comes by the strength of the ox." -Proverbs 14:4 NASB

Unlike many people, I tend to write longhand, keeping a special journal for that sole purpose. It is sacrosanct. So when I couldn't get a replacement for my previous hard-backed journal last month, my writing routine went out of the window and my personal world turned upside down. I finally dug up a "pre-owned" book - a cast-off from our five children. Scribbled and half-torn pages - it 's a mess!

---

6. **Circle in the Sand**

Ketrige knelt and, using a portable shovel, began digging a deep hole in the sand. When he judged that the hole was deep enough, he removed his weapon from its holster and threw it into the hole.

"Let's bury the hatchet," he said straightening, looking deeply into alien's eyes.

The big alien returned the stare and then looked down at his cigar shaped weapon. He seemed to hesitate only for a few moments, but for Ketrige it seemed as if eternity has passed. With a loud clank of metal against metal, the human and alien weapons joined together in common grave. As Ketrige began to fill the pit with sand, Saktu joined him, tramping the burial spot flat and placing one of the heavy rocks over the buried weapons in a symbolic gesture.

---

7. **Worry about Winning not Petty Issues**

Charming is not a word one often associates with the Raptors.

But there it is, in black and white, actually in green ink, inside the pages of the Benetton Basketball Club media guide: "The Toronto Raptors are one of the most famous and charming teams in the NBA."

---

8. **UTV: News: Sports**

United striker Ruud van Nistelrooy found himself in hot water when the Football Association charged him for a dangerous challenge on Ashley Cole in the Red Devils' 2-0 defeat of Arsenal at Old Trafford on Sunday, October 24 - a win that halted the Gunners' 49-match unbeaten run.

United boss Ferguson responded by putting together a collection of video evidence featuring what he believes are fouls by Arsenal players which he claims should be punished.

United boss Ferguson responded by putting together a collection of video evidence featuring what he believes are fouls by Arsenal players which he claims should be punished. [...].

9.

Herald: the Online Edition:

Kmart may have identity crisis with shoppers *By AMY HOAK - H&R Staff Writer*

DECATUR - Trips to the Big K are becoming rare for Joan Willis.

When she heard some Kmarts were closing, she figured it was only a matter of time before others followed suit. So the 76-year-old Deca;tur resident started weaning herself early, making only occasional trips to the store.

As it turns out, Decatur's remaining store on Pershing Road has survived.

But one of its advertising tactics, combined with recent news reports on the company, are leaving some customers confused about whether the local Big K will eventually kick the bucket.

Continue to the next page (Texts in Session 2)

Second: Texts in Session 2

1. **The dreaded CRS disease**

Kathy Nichols Parent Trap

I went to see a movie last weekend with my sister-in-law, who is the mother of three.

It was a rare moment in time when both of us could get together, without kids, and see a grown-up movie in peace. It happens every once in a blue moon, and when it does, it's a wonderful thing.

Wouldn't you know it? We couldn't get away from motherhood altogether.

We picked a film, "The Forgotten," which was about a mom -- let's face it, Julianne Moore, who is about a thousand times more glamorous than any mom I've ever known -- who is the subject of an insidious plot. Someone is trying to make her forget her dead son. [...].

---

2. SOLNET October 30, 2002: Red Tape

The costs of keeping up to date with red tape - the new regulations and all the form filling it involves - can cost a small firm 100 times more than a large firm.

That is the view of Terry Taber, who is Essex regional organiser for the Federation of Small Businesses.

A new international report on red tape says "there is general dissatisfaction with the volume, complexity and rate of change of legislation". The comment comes from the Organisation for Economic Co-operation & Development based in Paris. [...].

3.

Paint the town RED Author: Al & Stella (---.proxy.aol.com) Date: 04-22-02 12:10 Hey guys, lets get babysitters and paint the town RED. My wife and I and our two rug rats will be arriving Saturday April 27, we are young, hip and Conservative love to dance and have fun. Anybody interested getting together and catching a break..... Let us know :) Best Regards, Al Reply to this message	Re: Paint the town RED Author: Sarah (12.45.137.---) Date: 05-07-02 11:34 It's YOU again. You must have had a very bad childhood. And by the way - are you chicken to post your real name? BIG Johnson, you are a real joke!!! Life is so short and so fragile... kids are so sweet and so special.... Having kids is a blessing not a burden. YOU need help, big guy!! You are living in the stone age...

4. **A Customer Review:**

This is the story of a woman, Kate, whose relationship with her brother has defined her life and the way she views the world around her. Kate and her brother were extremely close during her early childhood but events later occur which change the way Kate and her brother relate to one another. Upon reaching adulthood, Kate leaves her very small farming community and eventually becomes a highly-educated zoology researcher/professor at a university in a large city.

She seems very aware of the differences in background between herself and her students/colleagues and between herself and the people she grew up with. Kate claims that she doesn't "get people" to the extent that she doesn't understand what makes people tick or why people do the things they do. But Kate's narrative proves that she sells her self short. Although emotionally withdrawn, Kate is a woman who is constantly noticing and analyzing factors that affect the way people develop throughout their lives.

5.

Sin or Skin

Does God look at our sin for entrance into His Heaven, or as Mormon prophets have taught, is it the *color of our skin?* There are many false teachings and blasphemies that Mormons have taught, and then tried to sweep under the carpet, but their doctrine concerning black skinned people is definitely one that they desperately try to hide. On a recent talk show the Mormon Prophet, Gordon B. Hinckley, was asked about their altered doctrine concerning blacks. As Hinckley squirmed with embarrassment, he hastened to beg off discussing such *old figs* of the past . *But how old are those Mormon figs?*

6.

BBC News: May, 2002: Analysis:
By Greg Barrow, BBC correspondent at the United Nations



UN and Iraq 'talk shop'

The way that officials described it, the UN Secretary General, Kofi Annan, and the Iraqi Foreign Minister could have been chatting about their hobbies during the latest round of discussions aimed at getting UN weapons inspectors back into Iraq.

"They have really been able to talk shop," one UN official said, as if the two men had spent the past three days in New York exchanging tips about fly-fishing or bird-watching. [...]



First technical discussions since 1998

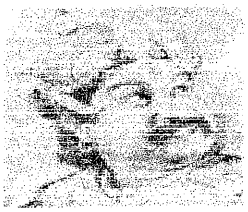
7.

Early American reproduction home in Dartmouth
By LAURA MCLEAN, Standard-Times correspondent

This week's featured home located in the secluded area of Indian Cliffs, off Chase Road, is one that enjoys the best of both worlds in the truest sense. Its location puts it within easy reach of the seashore, the busy shopping districts of North Dartmouth and the charming village of Padanaram. Meanwhile, its rural setting on four acres of sloping woodlands, open lawns accentuated with artful landscaping, conveys all the joys of a nature sanctuary.

A private world awaits at 553 Chase Road in North Dartmouth. You sense this immediately turning off Chase Road onto a winding drive through a heavily wooded area known as Southern Indian Cliffs, where only five homes are spread out over 19 acres. As you follow the long and winding drive, lined with native trees and stone walls, the house gradually comes into view. [...]

8.



Praveen (praveen) wrote,
@ 2000-12-15 08:03:00

A good lecture
Get in Early into the office, and Get a lecture on getting Married from Rajesh and Smruti.. What a beginning for the day. Nearly one hour was spent on advising me to get married, and if possible in UK itself so that I can settle down here. Thanks., I will keep these in mind. Smruti, I had told you more than a year back, that after say another 5-10 years, I will be retiring, to my "Self Sustaining Farm House" (Alternate living??!!) and relax., maybe I will watch the world go by or just watch the paint dry. I haven't changed a bit. I still have that in my mind. Thanks anyway.

9.

Thursday November 23, 2000
The Guardian

Out of the Shadows

Jamie O'Neill has just won a £1m book deal. He is being compared to James Joyce. So why has he spent 10 years as a night porter? And what about his love affair with Russell Harty? Stephen Moss reports

'Impecunious night porter gets £1m for novel" is one of those rags-to-riches publishing stories the press loves. Bus drivers, teenage students, teachers who hit the jackpot: it could be you. But Jamie O'Neill, this week's literary lottery winner, is even more interesting than that. Who knows, his book might even live up to the hype. [...].

Appendix B.5: Acknowledgement of the Sources of the Sample Texts

The following is a list of the online sources from which the sample texts were retrieved. All the information that was possible to obtain in order to acknowledge these sources is provided below. There are two digits beside the word *Text* below; the first digit stands for the part of the inference task, the first or the second part, whereas the second digit stands for the number of the text (in the order of their appearance). To find the texts, return to the previous appendix.

Text 1.1
"Authers Admit Faking Blurbs on 'dire' books." By Daniel Foggo (Published: March 14, 2004), News Telegraph. Retrieved from the World Wide Web, Nov. 2004: <http://www.telegraph.co.uk/news/main.jhtml?xml=/news/2004/03/14/nblurb14.xml &sSheet=/portal/2004/03/14/ixportal.html>

Text 1.2
"Telling the Boss You're Pregnan: How and when should I tell my employer I'm pregnant?" (Published: 2004), MSN Family. Retrieved from the World Wide Web, Oct. 2004: <http://www.family.msn.com/tool/article.aspx?dept=baby&sdept=bpc&name=bc_052 003_tellboss>

Text 1.3
"Boje and Gibbs should travel to India: Symcox, sports official." By M. Subramoney (Published: Nov. 5, 2004), PTI News. Retrieved from the World Wide Web, Nov. 2004: <http://www.ptinews.com/pti/ptisite.nsf>

Text 1.4
"Sermon on Daniel 12: 1-3- Go By The Book! The book through which salvation is given." (Sermon Given: Nov. 19, 2003), GSDG Sermons Online. Retrieved from the World Wide Web, Nov. 2004: <http://www.gsdg.org/SermonsOnline>

Text 1.5
"A Window Upon the World." By John E. Ruffle (Published: 1998), NetWord. Retrieved from the World Wide Web, Nov. 2004 <http://www.entourages.com/barbs/netword1.htm>

Text 1.6
"Circle in the Sand." By Dave Krane (Published: June 2002), Copyright 2002 by Kenn Brown, Planet Magazine: Wild Science Fiction & Fantasy on the Web, Issue No. 34, Vol. 9, No. 2. Retrieved from the World Wide Web, Nov. 2004: <http://www.etext.org/Zines/planet/pm34/pm34.html>

Text 1.7
"Worry about Winning not Petty Issues." By Steve Buffery (Published: Oct. 21, 2004), Slam Sport. Retrieved from the World Wide Web, Nov. 2004: <http://slam.canoe.ca/Slam/Columnists/Buffery/2004/11/01/696202.html>

Text 1.8
"SOCCER: 'Bergkamp' on Fergie list." (Published: Nov. 1, 2004), UTV News. Retrieved from the World Wide Web, Nov. 2004:
<http://www.utvinternet.com/newsroom/indepth.asp?pt=s&id=18441>

Text 1.9
"Kmart may have identity crisis with shoppers." By Amy Hoak (Published: Nov. 18, 2004), Herald and the Review: Online Edition. Retrieved from the World Wide Web, Nov. 2004:
<http://www.herald-review.com/articles/2004/11/18/news/money/1004047.txt>

Text 2.1
"The Dreaded CRS Disease: Kathy Nicolas Parent Trap." Monetary Herald (Published: Oct. 1, 2004). Retrieved from the World Wide Web, Nov. 2004:
<http://www.montereyherald.com/mld/montereyherald/living/9809147.htm>

Text 2.2
"Red Tape." By Pauline Hunt (Published: Oct. 30, 2004), NEC- Solnet News. Retrieved from the World Wide Web, Dec.2004:
<http://www.nec.ac.uk/solnet/news-item?news_item_id=101158>

Text 2.3
"Paint the Town Red." (Copyright 2004) by Government of Aruba. Produced by BC Pictures.com. Retrieved from the World Wide Web, Nov. 2004:
<http://www.aruba.com/msgbrd/read.php?f=2&i=50&t=50>

Text 2.4
"Customer Reviews." Bestsellers (*No publication or copyright date*) (*The text reviews Mary Lawson's Crow Lake* (Published2003)). Retrieved from the World Wide Web, Nov. 2004:
<http://www.bestsellersbooksales.com/0385337639.html>

Text 2.5
"Sin or Skin." (Copyright 1998), FAC Archives. Retrieved from the World Wide Web, Oct. 2004:
<http://www.ibae.org/html/fac139.html>

Text 2.6
"Analysis: UN and Iraq 'Talk Shop'." Greg Barrow (Published: May 4, 2002), BBC News. Retrieved from the World Wide Web, Nov. 2004:
<http://news.bbc.co.uk/1/hi/world/middle_east/1967535.stm>

Text 2.7
"Early American reproduction home in Dartmouth" By Laura McLean (Published: Oct. 9, 2004), South Coast Today: the Standard Times. Retrieved from the World Wide Web, Nov. 2004:
<http://www.southcoasttoday.com/daily/10-04/10-09-04/t03hh333.htm>

Text 2.8
"A Good Lecture." By Praveen (Published: Nov. 15, 2000), LiveJournal. Retrieved from the World Wide Web, Nov. 2004:
<http://www.livejournal.com/talkpost.bml?journal=praveen&itemid=20642>

Text 2.9
"Out of the Shadows." The Guardian (Published: Nov. 23, 2003). Retrieved from the World Wide Web, Nov. 2004:
<http://www.guardian.co.uk/g2/story/0,,401573,00.html>

Appendix C: Panel Members*

To help establish face validity, the following professors at the Department of English Language and Literature of the University of Bahrain have been consulted on the choice of texts to be included in the Inference Task:

1. Dr. Abdul-Fattah Al-Jabr
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Appendix D: The Results of the Chi-Square Test

The Chi-Square Test is applied to all of the following comparisons. The first comparison is explained. For the remaining comparisons, only the results are provided in the tables which show the pair of the compared techniques. There was no statistically significant difference except for comparisons No. 23, 31, 38, 44 and 45 (see subsections **3.6.4**, **4.1.4.3** and **4.1.4.4**).

Key:

C : Number of correct guesses.
PC: Number of partially correct guesses.
W : Number of Wrong guesses.

Techniques from 2-6: The optional techniques (see the top of the tables in Appendices A.3., A.4 and A.5).
Technique 7 : Re-reading the text/paragraph.
Technique 8 : Relating the idiom to a piece of information provided in the text.
Technique 9 : Reading the whole text.
Technique 24: B reading the text.

Part I

Comparisons of the Guessing Techniques (in the Individual-Technique Use)

1. Comparison No.1:

The numbers, 2 and 3 under *Techniques* in the table below refers to optional Technique 2 (idiom-keyword guessing) and optional Technique 3 (sentence-dependent guessing).

	Techniques		Statistical Test		
	2	**3**	**D.F**	**Chi-Square Value**	**P- Value**
C	15	22	2	2.132	0.344
PC	8	8			
W	20	25			

* Significant at $\alpha = 0.05$

The results of the Chi-square test shows no significant difference between the number of rates that resulted from the subjects' use of technique No.2 and the number of rates that resulted from using technique No.3 (when each of the techniques was used alone to guess the meaning of a sample idiom).

2.

	Techniques		Statistical Test		
	2	4	D.F	Chi-Square Value	P- Value
C	15	6	2	0.147	0.929
PC	8	4			
W	20	10			

* Significant at $\alpha = 0.05$

3.

	Techniques		Statistical Test		
	2	5	D.F	Chi-Square Value	P- Value
C	15	12	2	0.995	0.608
PC	8	11			
W	20	24			

* Significant at $\alpha = 0.05$

4.

	Techniques		Statistical Test		
	2	6	D.F	Chi-Square Value	P- Value
C	15	5	2	0.700	0.705
PC	8	3			
W	20	11			

* Significant at $\alpha = 0.05$

5.

	Techniques		Statistical Test		
	3	4	D.F	Chi-Square Value	P- Value
C	22	6	2	0.731	0.694
PC	8	4			
W	25	10			

* Significant at $\alpha = 0.05$

6.

	Techniques		Statistical Test		
	3	5	D.F	Chi-Square Value	P- Value
C	22	12	2	2.825	0.244
PC	8	11			
W	25	24			

* Significant at $\alpha = 0.05$

7.

	Techniques		Statistical Test		
	3	6	D.F	Chi-Square Value	P- Value
C	22	5	2	1.189	0.552
PC	8	3			
W	25	11			

* Significant at $\alpha = 0.05$

8.

	Techniques		Statistical Test		
	4	5	D.F	Chi-Square Value	P- Value
C	6	12	2	0.180	0.914
PC	4	11			
W	10	24			

* Significant at $\alpha = 0.05$

9.

	Techniques		Statistical Test		
	4	6	D.F	Chi-Square Value	P- Value
C	6	5	2	0.256	0.880
PC	4	3			
W	10	11			

* Significant at $\alpha = 0.05$

10.

	Techniques		Statistical Test		
	5	6	D.F	Chi-Square Value	P- Value
C	6	5	2	0.492	0.782
PC	4	3			
W	10	11			

* Significant at $\alpha = 0.05$

Part 2

Comparisons of the Guessing Techniques (in the Combined-Technique Use)

11.

	Techniques		Statistical Test		
	2	3	D.F	Chi-Square Value	P- Value
C	23	36	2	1.881	0.390
PC	9	16			
W	25	25			

* Significant at $\alpha = 0.05$

12.

	Techniques		Statistical Test		
	2	4	D.F	Chi-Square Value	P- Value
C	23	8	2	1.721	0.423
PC	9	1			
W	25	11			

* Significant at $\alpha = 0.05$

13.

	Techniques		Statistical Test		
	2	5	D.F	Chi-Square Value	P- Value
C	23	16	2	0.177	0.915
PC	9	8			
W	25	19			

* Significant at $\alpha = 0.05$

14.

	Techniques		Statistical Test		
	2	6	D.F	Chi-Square Value	P- Value
C	23	17	2	1.482	0.477
PC	9	10			
W	25	14			

* Significant at $\alpha = 0.05$

15.

	Techniques		Statistical Test		
	2	7	D.F	Chi-Square Value	P- Value
C	23	5	2	2.625	0.269
PC	9	6			
W	25	12			

* Significant at $\alpha = 0.05$

16.

	Techniques		Statistical Test		
	2	8	D.F	Chi-Square Value	P- Value
C	23	0	2	5.669	0.059
PC	9	2			
W	25	7			

* Significant at $\alpha = 0.05$

17.

	Techniques		Statistical Test		
	2	9	D.F	Chi-Square Value	P- Value
C	23	7	2	0.556	0.757
PC	9	3			
W	25	5			

* Significant at $\alpha = 0.05$

18.

	Techniques		Statistical Test		
	2	**24**	**D.F**	**Chi-Square Value**	**P- Value**
C	23	5	2	5.273	0.072
PC	9	4			
W	25	1			

* Significant at $\alpha = 0.05$

19.

	Techniques		Statistical Test		
	3	**4**	**D.F**	**Chi-Square Value**	**P- Value**
C	36	8	2	4.587	0.101
PC	16	1			
W	25	11			

* Significant at $\alpha = 0.05$

20.

	Techniques		Statistical Test		
	3	**5**	**D.F**	**Chi-Square Value**	**P- Value**
C	36	16	2	1.679	0.432
PC	16	8			
W	25	19			

* Significant at $\alpha = 0.05$

21.

	Techniques		Statistical Test		
	3	**6**	**D.F**	**Chi-Square Value**	**P- Value**
C	36	17	2	0.348	0.840
PC	16	10			
W	25	14			

* Significant at $\alpha = 0.05$

22.

	Techniques		Statistical Test		
	3	**7**	**D.F**	**Chi-Square Value**	**P- Value**
C	36	5	2	4.788	0.091
PC	16	6			
W	25	12			

* Significant at $\alpha = 0.05$

23.

	Techniques		Statistical Test		
	3	**8**	**D.F**	**Chi-Square Value**	**P- Value**
C	36	0	2	8.662	0.013*
PC	16	2			
W	25	7			

* Significant at $\alpha = 0.05$

24.

	Techniques		Statistical Test		
	3	**9**	**D.F**	**Chi-Square Value**	**P- Value**
C	36	7	2	0.007	0.997
PC	16	3			
W	25	5			

* Significant at $\alpha = 0.05$

25.

	Techniques		Statistical Test		
	3	**24**	**D.F**	**Chi-Square Value**	**P- Value**
C	36	5	2	2.937	0.230
PC	16	4			
W	25	1			

* Significant at $\alpha = 0.05$

26.

	Techniques		Statistical Test		
	4	**5**	**D.F**	**Chi-Square Value**	**P- Value**
C	8	16	2	2.132	0.344
PC	1	8			
W	11	19			

* Significant at $\alpha = 0.05$

27.

	Techniques		Statistical Test		
	4	**6**	**D.F**	**Chi-Square Value**	**P- Value**
C	8	17	2	4.236	0.120
PC	1	10			
W	11	14			

* Significant at $\alpha = 0.05$

28.

	Techniques		Statistical Test		
	4	**7**	**D.F**	**Chi-Square Value**	**P- Value**
C	8	5	2	4.118	0.128
PC	1	6			
W	11	12			

* Significant at $\alpha = 0.05$

29.

	Techniques		Statistical Test		
	4	**8**	**D.F**	**Chi-Square Value**	**P- Value**
C	8	0	2	5.898	0.056
PC	1	2			
W	11	7			

* Significant at $\alpha = 0.05$

30.

	Techniques		Statistical Test		
	4	**9**	**D.F**	**Chi-Square Value**	**P- Value**
C	8	7	2	2.657	0.265
PC	1	3			
W	11	5			

* Significant at $\alpha = 0.05$

31.

	Techniques		Statistical Test		
	4	**24**	**D.F**	**Chi-Square Value**	**P- Value**
C	8	5	2	8.429	0.015*
PC	1	4			
W	11	1			

* Significant at $\alpha = 0.05$

32.

	Techniques		Statistical Test		
	5	**6**	**D.F**	**Chi-Square Value**	**P- Value**
C	16	17	2	0.963	0.618
PC	8	10			
W	19	14			

* Significant at $\alpha = 0.05$

33.

	Techniques		Statistical Test		
	5	**7**	**D.F**	**Chi-Square Value**	**P- Value**
C	16	5	2	1.726	0.422
PC	8	6			
W	19	12			

* Significant at $\alpha = 0.05$

34.

	Techniques		Statistical Test		
	5	**8**	**D.F**	**Chi-Square Value**	**P- Value**
C	16	0	2	079.5	0.079
PC	8	2			
W	19	7			

* Significant at $\alpha = 0.05$

35.

	Techniques		Statistical Test		
	5	**9**	**D.F**	**Chi-Square Value**	**P- Value**
C	16	7	2	0.579	0.749
PC	8	3			
W	19	5			

* Significant at $\alpha = 0.05$

36.

	Techniques		Statistical Test		
	5	**24**	**D.F**	**Chi-Square Value**	**P- Value**
C	16	5	2	4.488	0.106
PC	8	4			
W	19	1			

* Significant at $\alpha = 0.05$

37.

	Techniques		Statistical Test		
	6	**7**	**D.F**	**Chi-Square Value**	**P- Value**
C	17	5	2	2.863	0.293
PC	10	6			
W	14	12			

* Significant at $\alpha = 0.05$

38.

	Techniques		Statistical Test		
	6	**8**	**D.F**	**Chi-Square Value**	**P- Value**
C	17	0	2	7.091	0.029*
PC	10	2			
W	14	7			

* Significant at $\alpha = 0.05$

39.

	Techniques		Statistical Test		
	6	**9**	**D.F**	**Chi-Square Value**	**P- Value**
C	17	7	2	0.163	0.922
PC	10	3			
W	14	5			

* Significant at $\alpha = 0.05$

40.

	Techniques		Statistical Test		
	6	**24**	**D.F**	**Chi-Square Value**	**P- Value**
C	17	5	2	2.443	0.295
PC	10	4			
W	14	1			

* Significant at $\alpha = 0.05$

41.

	Techniques		Statistical Test		
	7	**8**	**D.F**	**Chi-Square Value**	**P- Value**
C	5	0	2	2.709	0.258
PC	6	2			
W	12	7			

* Significant at $\alpha = 0.05$

42.

	Techniques		Statistical Test		
	7	9	D.F	Chi-Square Value	P- Value
C	5	7	2	2.649	0.266
PC	6	3			
W	12	5			

* Significant at $\alpha = 0.05$

43.

	Techniques		Statistical Test		
	7	24	D.F	Chi-Square Value	P- Value
C	5	5	2	429.5	0.066
PC	6	4			
W	12	1			

* Significant at $\alpha = 0.05$

44.

	Techniques		Statistical Test		
	8	9	D.F	Chi-Square Value	P- Value
C	0	7	2	6.436	*0.040
PC	2	3			
W	7	5			

* Significant at $\alpha = 0.05$

45.

	Techniques		Statistical Test		
	8	24	D.F	Chi-Square Value	P- Value
C	0	5	2	10.142	*0.006
PC	2	4			
W	7	1			

* Significant at $\alpha = 0.05$

46.

	Techniques		Statistical Test		
	9	24	D.F	Chi-Square Value	P- Value
C	7	5	2	2.232	0.328
PC	3	4			
W	5	1			

* Significant at $\alpha = 0.05$