A computer-aided error analysis of Saudi students' written English and an evaluation of the efficacy of using the data-driven learning approach to teach collocations and lexical phrases

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Dedication

To my mother, Turfah Hamad Alessa, who among many other things taught me to love science and knowledge

Abstract

The thesis reports on three corpus-based studies in a Saudi university context. The first study is a computer-aided error analysis (CEA) of a corpus of Saudi English majors' writing. The second and third studies employ the DDL approach to teach collocations and lexical phrases.

The errors in the Saudi learner corpus (SLC) were tagged following the Louvain Error Tagging Manual 1.2. The CEA revealed that the ten largest error subcategories were (Form, Spelling), then (Grammar, Verb Tense), (Lexical, Single), (Grammar, Articles), (Grammar, Verb Number), (Grammar, Noun Number), (Word Redundant, Singular), (Word, Missing), (Lexical, Phrase) and finally (Punctuation, Missing). These error types are analysed qualitatively to identify the linguistic features that seem to be problematic for Saudi EFL learners.

Multiword units are notoriously difficult for L2 learners, and the Saudi EFL context is no exception; in the second and third studies a number of collocations and lexical phrases were selected from the SLC to be taught using DDL paper-based and dictionary-based materials. The results showed that learners in general learn better under the DDL treatment. Learning gains as a result of the DDL instructional condition in short-term delayed posttests were not significantly better than the dictionary-based instructional condition in the case of collocations, but they were significantly higher for the lexical phrases. The DDL long-term delayed posttests results were significantly better than the dictionary results for both the collocations and lexical phrases. A questionnaire and retrospective interviews were used to investigate students' and teachers' attitudes and the results encouragingly revealed that they felt positive about the DDL materials. The data shed light on strengths and weaknesses of the DDL and the traditional approaches.

The thesis closes with a discussion of the pedagogical implications, particularly with reference to the use of corpus tools and corpus-based materials in the Saudi EFL context.

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All responsibility for any errors and/or omission, that may remain, lies with the author.

List of Abbreviations

BNC   British National Corpus
CA   Contrastive Analysis
CALL   Computer-assisted Language Learning
CEA   Computer-aided Error Analysis
CIA   Contrastive Interlanguage Analysis
CLC   Computer Learner Corpus
COCA   Corpus of Contemporary American English
CR   Consciousness Raising
DDL   Data Driven Learning
EA   Error Analysis
EFL   English as a Foreign Language
ELT   English Language Teaching
ESL   English as a Second Language
FL   Foreign Language
FLT   Foreign Language Teaching
ICLE   International Corpus of Learner English
KWIC   Key Word in Contexts
L1   First Language
L2   Second Language
LCR   Learner Corpus Research
SL   Second Language
SLA   Second Language Acquisition
SLC   Saudi Learner Corpus
TL   Target Language
UCLEE   Université Catholique de Louvain Error Editor
VLT   Vocabulary Levels Test
RQ   Research Question

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Chapter 1 **Introduction**

1.1 Background to the thesis

Corpora, in the broad sense of the term, have played a role in language teaching and learning since nearly 70 years. Most commonly, corpora have been utilized indirectly, particularly for identifying frequent linguistic items forms, and their meaning and usage features for collection in dictionaries and teaching syllabuses. Examples include *The teacher's word book of 30,000 words* (Thorndike & Lorge, 1944), and the General Service List (West, 1953). This practice continues today in the British tradition of lexicography, in particular, where almost all current major dictionaries and grammar book publishing houses use corpora and their products are corpus-based to some extent. Some of the recent advances in lexicography in the UK are attributed to the COBUILD project, which was a turning point in lexicography history, and to the work of the late corpus linguist John Sinclair (1987). In addition, recent lexicography projects of note feature corpus-based frequency lists, e.g. Routledge Frequency Dictionaries, the Academic Word List (Coxhead, 2000), the Phrasal Expressions List (Martinez & Schmitt, 2012), and the Phrasal Verbs List (Garnier & Schmitt, in press). We are indebted to corpus linguists for all of these projects and more, and there are many other avenues which can be explored by means of corpora. Fligelstone (1993) identified three aims of corpus-based linguistics in teaching: teaching about the principles and theory behind corpus linguistics, teaching to exploit corpora through theoretical and practical training in the use of corpus data, and exploiting corpora to derive or drive teaching materials. In the current thesis we are concerned with the last strand.

Applied corpus linguistics researchers started applying research methods already exploited in applied linguistics particularly in second language acquisition (SLA), such as Contrastive Interlanguage Analysis, longitudinal data analysis, individual case studies, (e.g., Hasko, 2013; Myles, 2008, 2015; Vyatkina, 2013) and fields like error analysis (e.g., Granger, Hung, & Petch-Tyson, 2002; Thewissen, 2013). Such methods were borrowed because they are readily applicable for applied corpus linguistics and learner and native corpora seemed to provide new avenues and lead to wider and more informed SLA investigations. The attention turned from corpus linguistics

to language pedagogy and how can corpus linguistics tools and techniques advance language learning. This venture is largely led by applied linguists and language teachers rather than corpus linguists (Boulton & Pérez-Paredes, 2014). Error-analysis studies of learner corpora are discussed in more detail in chapter two.

In the 1980s, during the early years of corpora development, a separate venture emerged, where language teachers and researchers working on corpus data saw a potential for corpus data in pedagogical applications. Such explorations were mainly led by the late Tim Johns, however, according to Boulton and Pérez-Paredes (2014), the first academic publication was that of McKay (1980) where the aim was exploring verb patterns in context via printed corpus materials. Ahmad, Corbett, and Rogers (1985) employed a more ambitious approach as students directly accessed an electronic corpus pursuing their own enquiries. In 1990 Johns proposed the term 'data driven learning' (DDL) (see also Johns & King, 1991).

Boulton and Pérez-Paredes (2014, p. 123) argue that it is possible today to find a hundred academic papers or so evaluating some aspect of a corpus to benefit L2 learners; although it is "clear that more diverse and rigorous research designs are needed to focus on the complex phenomenon covered". The second and third studies in this thesis address their plea by providing empirical results on the effectiveness of the DDL approach for learning two types of formulaic language: collocations and lexical phrases. Further details on the theoretical underpinning of DDL and its relationship to second language acquisition and language teaching along with an overview of its significant features and studies conducted to evaluate its effectiveness are presented in chapter three.

1.2 Computer learner corpora: a new field of linguistic research

Learner corpus research (LCR) is a relatively recent field of research. Granger (2002, p. 7) does not approve of defining computer learner corpora as "Electronic collections of learner data", and considers this definition a "fuzzy" one because, according to this definition, data types that are not corpora at all may be called corpora. Thus, she suggests, based on Sinclair (1996) definition of corpora, defining computer learner corpora as follows: "Computer learner corpora are electronic

collections of authentic FL/SL textual data assembled according to explicit design criteria for a particular SLA/FLT purpose. They are encoded in a standardised and homogenous way and documented as to their origin and provenance".

In a recent study, Granger (2008a, p. 338) defines computer learner corpora as "electronic collections of (near-) natural foreign or second language learner texts assembled according to explicit design criteria". According to Granger (2002), academics and publishers started building corpora of non-native varieties in the late 1980s and early 1990s. Their aims were often to improve our understanding of the system and process of second language acquisition, and/or the developmental stages of learners' interlanguage, and/or developing language teaching materials and methods to address more accurately the needs of language learners. Learner corpus researchers can achieve these aims by collecting samples of learners' output and then analysing them to examine the linguistic features they use, evaluating their development over time and investigating the linguistic items that seem to be problematic and have not been mastered. Furthermore, Granger asserts that LCR's power is evident in its links with a number of related disciplines- in particular, second language acquisition, foreign language teaching, sociolinguistics, cognitive linguistics, contrastive linguistics, lexicography, language testing, translation and natural language processing.

However, there are several issues that need to be considered when dealing with learner corpora because of the nature of data and the purposes of collecting it. As pointed out by Granger (2004), computer learner corpus research has been able to rely to some extent on the methods and analysis apparatus used in the field of corpus linguistics. The two main methods of analysis in corpus learner research are contrastive interlanguage analysis (CIA) and computer-aided error analysis (CEA) (cf. Granger, 1998a; Granger, 2002, 2009; Leech, 1998).

The first strand of learner corpus research is Contrastive Interlanguage Analysis studies. According to Granger (2009, p. 18), "Contrastive Interlanguage Analysis (CIA) involves quantitative and qualitative comparisons between native language and learner language (L1 vs. L2) and between different varieties of interlanguage (L2 vs. L2)". The majority of CLC research has been CIA studies. There are many studies covering different linguistic features, though it has been attested in the literature that some features have received more attention than others

The second strand is computer-aided error analysis studies. As its name suggests, computer-aided error analysis is an error analysis approach that relies on computer corpus annotation (Dagneaux,

Denness, & Granger, 1998). In comparison with CIA studies, a limited number of LCR studies involve CEA. Some articles are descriptions of error-tagging systems (Dagneaux et al., 1998; Díaz-Negrillo & Domínguez, 2006; Izumi, Uchimoto, & Isahara, 2004; J. C. P. Milton & Chowdhury, 1994; Nicholls, 2003), while others focus on specific error categories, such as lexical collocation errors (Chi, Wong, & Wong, 1994; Laufer & Waldman, 2011), lexical errors (Lenko-Szymanska, 2003) and tense errors (Granger, 1999). The limited number of CEA publications should not come as a surprise given the huge amount of time and energy required to tag errors and analyse the results in learner corpora.

Aston (1995, p. 261) asserts that "corpora constitute resources which, placed in the hands of teachers and learners who are aware of their potential and limits, can significantly enrich the pedagogic environment". Corpus data can feed mainly into the fields of materials and syllabus design and classroom methodology (Reppen, 2010, 2011). Granger (2009) talks about two types of usage of learner corpora: delayed pedagogical use and immediate pedagogical use. Delayed pedagogical use of corpora is not used directly by the learners who have produced them. Such projects are often built by publishers or researchers who want to describe a specific interlanguage and/or design tailor-made pedagogical materials, which will be of use to learners of similar profiles and the ones who produced the data in the first place (i.e., learners with the same mother tongue, same level of language proficiency). The more recent type of learner corpora is learner corpora for immediate pedagogical use. They are compiled by teachers or researchers and the learners who produced the corpus data are at the same time the users of the corpus-informed tools. The data can also be used later by other learner groups of similar profiles.

Learner corpora for delayed pedagogical use are large and allow for wider generalisability. *Longman's Learner Corpus* and *Cambridge Learner Corpus* are good examples of this type of learner corpora. They are ideal resources for designing "generic" ELT tools like EFL dictionaries, grammars or textbooks (cf. Gillard & Gadsby, 1998). Learner corpora for immediate pedagogical use are much smaller and their advantage over delayed pedagogical corpora is that "they are arguably more relevant" (Granger, 2009, p. 20), since learners use their own output. Mukherjee and Rohrbach (2006, p. 228) argue that "the localization of learner corpus compilation" is a very promising avenue in learner corpus research since:

> [F]irstly, the focus on their own students' output will involve many more teachers in corpus-based
> activities and that, secondly, the exploration of learner data by the learners themselves will motivate

many more learners to reflect on their language use and thus raise their foreign language awareness.

1.3 The value of multiword units for L2 learners

Today, it is widely accepted that a large proportion of the language we meet and use is made up of multiword units. Phraseological mastery is the key to native-like fluency and native-like accuracy. Knowing the most useful multiword units plays an important role in foreign language learning and teaching. Not only does "phraseology bind words, grammar, semantics, and social usage" (N. C. Ellis, 2008, p. 5), it also has a strong impact positively or negatively on the three elements of learners' language proficiency: complexity, accuracy and fluency (Housen & Kuiken, 2009). Meunier (2012, p. 111) states that the fact that language is highly formulaic by nature can be regarded as basically "bad news for second language (L2) learners, and for many nonnative L2 teachers alike". This difficulty stems particularly from phraseology not being subject to rule-based knowledge. Martinez and Schmitt (2012) pointed out the key reasons why formulaic sequences are so essential in language. They stated that formulaic language is pervasive in language output, and various studies have similarly produced high percentages. Furthermore, formulaic language fulfills a wide array of meanings and functions to the point where it has been claimed that there are conventionalized language patterns for all communication incidents. Formulaic language has also been found to have processing advantages for L1 and sometimes L2 speakers and it is often read more quickly. L2 learners' high competence in formulaic language use improves their language fluency and accuracy, and consequently, the perception of their L2 language proficiency.

Instruction can help and it has been shown to make a difference. The aim of language teaching is to improve learners' L2 language proficiency. Thus, it should focus on promoting learners' knowledge and use of multiword units. Meunier (2012, p. 112) summarized in three reasons why teaching multiword units is relevant in L2 teaching:

> (a) formulaicity is ubiquitous in language; (b) formulaic language use has been shown to be a marker of proficiency in an L2…; and (c) studies have demonstrated that L2 language learners find formulaicity particularly challenging as it is impossible for them to use the innate native intuition usually associated with formulaic language use….

1.4 English in the Saudi education system

In this section, given that these studies are located in Saudi Arabia, I provide an account of the Saudi education policy to enable the reader to better appreciate the nature of the participants' learning experiences both at school and at university.

In general, all school pupils in Saudi Arabia study English from grade four in primary school at nine or ten years of age until they complete their secondary school education. The participants in the current thesis had studied English from the first year of intermediate school aged about 13 years old. Primary school consists of six grades; intermediate and secondary school both consist of three grades. The Saudi educational system mandates the same curricula and textbooks for the whole country. Both state and private schools follow this system. The Ministry of Education is responsible for designing course books and revising them. Thus, we can say that the participants in the current thesis had received similar prior instruction, following the same syllabus and textbooks during their schooling.

Throughout their schooling, pupils have four English lessons a week of 45 minutes each. Based on my experience as an EFL teacher and learner, the grammar translation method is the dominant approach in English classrooms. Vocabulary teaching often consists of giving learners a list of the target lexical items, and the teacher explaining their meanings through translation into Arabic. Pupils are asked to memorize lexical items, sometimes by repetition, i.e. rote learning.

1.4.1 The target context

The study took place at the English Language and Translation Department at Qassim University. Recently, the department started following the semester system. Students have to study eight semesters to graduate with a bachelor degree in English language and translation. The undergraduate program consists of professional modules involving language and linguistics, literature, translation, foreign language teaching methodology and general modules such as Islamic culture, psychology, sociology, and the Arabic language. The target population of this study were sophomore students in their second year. Students at this level have taken modules on listening,

speaking, reading, grammar, vocabulary, translation, prose and other general modules. They are introduced to the writing module in the second semester. The writing textbook they are taught in the second semester is *Effective Academic Writing 1* (Savage and Shafiei, 2007), and in the third semester the next book in the series, *Effective Academic Writing 2* (Savage and Mayer, 2005). In *Effective Academic Writing 1*, students are introduced to the academic paragraph in the first unit. Then, the following five units present five different rhetorical modes: descriptive paragraphs, example paragraphs, process paragraphs, opinion paragraphs, and narrative paragraphs. In *Effective Academic Writing 2*, students are introduced to three and four paragraph essays. Then, they are taught descriptive essays, narrative essays, opinion essays, comparison and contrast essays, and cause and effect essays, respectively. At the time of data collection, they were studying the opinion essay. Examining the types of essays with which students were familiar was important for me to decide on an appropriate topic/genre when collecting the data for the first study.

All academic modules are taught over a fifteen/sixteen-week term followed by an achievement examination which is supposed to represent most of what has been covered during the semester. The reading and vocabulary modules are covered by *Interactions 1* (Kirn and Hartmann 2006), *Interactions 2* (Hartmann and Kirn, 2006), and *Mosaic 2* (Wegmann and Knezevic, 2005). These reading series are designed to prepare students for academic content. In the classroom, students are assigned to read selected passages from textbooks in different subjects, do comprehension exercises and study the new vocabulary found in the texts.

Besides this, students are given an intensive course in vocabulary before they are admitted into the department. In this course, the teacher presents new lexical items, synonyms, definitions and phrases based on general topics covered in the course material. In addition, students are familiarized with activities for improving dictionary-using skills. In particular, they are trained to be effective and practical users of a monolingual dictionary. By the end of this course, English majors are expected to able to use an English–English dictionary well, find the information quickly and use it in their English studies, check spellings, phonetic symbols, grammatical information, correct forms of idioms, phrasal verbs and collocations.

1.5 Significance of the present study

In this thesis I aim to provide a detailed description and discussion of an empirical computer-aided error analysis (CEA) of a learner corpus. The CEA will be conducted to identify the most common errors that Saudi university students in the Department of English Language and Translation at Qassim University make in writing. The results will give us authentic and accurate examples of these learners' erroneous usage of many linguistic features, which will be to some extent generalizable to any learner group from the same mother tongue and with the same language proficiency level. CEA is a comprehensive and systematic process which is labour intensive and time consuming, but it helps us to gain a clear understanding of what this group of learners can get wrong in the target language better than most of the other available resources. As pointed out by Granger and Tribble (1998), the process of selecting language items for form-focused instruction has long been based on teachers' and materials designers' intuitions. While this approach can be effective sometimes, it cannot provide a complete and detailed description of L2 learners' problems. Further, Rundell and Granger (2007) assert that experienced teachers will usually have some knowledge about the areas of difficulties for their L2 learners; however, good corpus data can pinpoint recurrent problematic areas.

Data from what turned out to be two of the most common error types, namely lexical single and lexical phrase, will be used as the basis for ELT materials that target these errors and which aim to provide learners with the information they need to achieve greater accuracy and fluency.

Recently, researchers have stressed the need to introduce multiword units to L2 learners. They have explicitly called for empirical research in this field to investigate the most effective methods for learning multiword units. Surprisingly, however, there are few empirical studies of this type:

> [An] issue that will need to be addressed in the future is the paucity of solid empirical studies reporting on formulaic-enhanced teaching practices. We desperately need studies that focus on questions such as: How many times do teachers draw learners' attention to the formulaic nature of language? What words or expressions do they use to refer to formulaicity? Which concrete exercises do they do in class with their students to promote the productive use of formulas? (Meunier, 2012, p. 123)

It is likely that rule-based grammar knowledge plays a relatively small role, while knowledge of memorized sequences plays a much larger role. If research confirms this, then it is important to know a range of effective ways of developing knowledge of the sequences, or multiword units (Nation & Webb, 2011, p. 175)

It was therefore essential for me to select potentially appropriate teaching methods and exercise types when designing my study to investigate the improvement of L2 learners' knowledge of multiword units. There was no guarantee at that point of the study that they would be effective for that purpose; nevertheless, it seemed a valid quest. Corpus data seemed a strong candidate because of its authenticity. The amount and quality of input is of immense importance (N. C. Ellis, 2002a, 2002b, 2003). Sinclair (2004a) stated that the language teaching practitioners realized that teaching of lexical and phraseological units needed a higher priority and they are best accessed through corpora to retrieve reliable information. Corpus data and sometimes dictionary data has been recommended for learning multiword units because of its efficiency in revealing the formulaic aspects of multiword units in context (Cheng, 2010; Gilquin & Granger, 2010; Greaves & Warren, 2010; Meunier, 2012). Corpora and their digital tools can compensate for the lack of authentic English inherent in foreign language learning contexts.

In the framework of the noticing hypothesis, Schmidt (1995, p. 20) claimed that "what learners notice in input is what becomes intake for learning". Although the role of noticing and the claim that it results eventually into uptake is debated in the literature on instructed input in L2 language teaching, its facilitative role is undeniable. Furthermore, some researchers attribute L2 learners' struggle with formulaic language to the fact that they are simply unable to notice them. Howarth (1996, p. 186) states that L2 learners' problems with multiword units are the result of "a lack of awareness of the phenomenon". Along the same lines, Wray (2002, p. 206) argues that learners are at a disadvantage when "trying to express ideas idiomatically" because of their weak ability to distinguish formulaic patterns from nonformulaic patterns. Thus, input enhancing techniques should be used by teachers to promote noticing. The use of corpus data can facilitate the typographical enhancement of multiword units, for instance, through the key word in context feature in concordances and through bold font.

1.6 Overview of thesis

The first chapter is an introduction that addresses the major bases underlying the three studies in the thesis and a description of the studies context. It includes a brief review of the role of error annotated learner corpora, the DDL approach and multiword units in the L2 learning field. The second chapter focuses on the computer-aided error analysis of a Saudi learner corpus of written English. A literature review of the studies addressing the effectiveness of the DDL approach is presented in the third chapter. The fourth and fifth chapters are detailed accounts of the methods used in the collocations and the lexical phrases studies, respectively, together with their results and the relevant discussion. The last chapter is the conclusion chapter.

Chapter 2 Computer aided error analysis of Saudi students' written English

2.1 Introduction

The first section in this chapter is an overview of the field of learner corpus and error analysis research. The second section provides an overview of computer-aided error analysis studies. The third section gives a description of error taxonomies in error analysis. This is followed by a review of studies of Arab learners' common errors in the fourth section, and research questions are presented in the sixth section. A detailed account of the current study methodology and findings is provided in the seventh section. The first subsection in the seventh section provides information about the target population. The second subsection describes the characteristics of the error tagging system employed in this study, and the rationale behind choosing this specific system. After that, the procedures followed in collecting and analysing the data are reported. In the fifth subsection, I will present the results of the CEA of the Saudi learner corpus (SLC). The findings of the CEA will be described and discussed quantitatively and qualitatively. The most frequent errors in the SLC will be illustrated in tables and graphs. The results will also be discussed in relation to the literature where possible.

2.2 Development of learner language and error analysis research

R. Ellis and Barkhuizen (2005) define error analysis (EA) as "a set of procedures for identifying, describing and explaining learner errors". Errors can occur in comprehension and production, but comprehension errors are often difficult to spot due to the near impossibility of detecting the exact linguistic source of an error. Thus, "EA is *de facto* the study of the errors that learners make in their speech and writing" (p. 51).

As a research tool for investigating L2 learner language, EA has a short history dating from the 1960s, when it was introduced as a superior, alternative approach to contrastive analysis (CA). However, CA itself was not a method for examining learner language; rather it involved comparing the system of the learner's L1 with that of the target language (TL). It was believed that errors were the product of a negative transfer, and CA was concerned with the identification of the mismatches between the L1 and the TL in order to predict what errors learners would make. Proponents of CA claimed that the differences in linguistic features between the mother tongue and the TL could be utilised in designing language teaching materials as according to the CA hypothesis: "Where two languages were similar, positive transfer would occur; where they were different, negative transfer, or interference, would result" (Larsen-Freeman & Long, 1991, p. 53). Researchers were concerned with cross-linguistic influence (i.e. language transfer) and the expected negative influence of the learner's first acquired language on his/her learning of the second language. A good example of a CA book is Stockwell, Bowen and Martin's *The Grammatical Structures of English and Spanish* (1965).

The dominance of the CA approach came at a time when structuralism and behaviourism were the influential paradigms. Hence errors were considered as something to be avoided at any cost. Language learning was thought to be a mechanical process of habit formation, thus errors were not to be accepted in the language classroom for fear of them becoming permanent in L2 learners' output due to repetition. Errors were not considered a normal transitional stage when learning a language, and teachers were advised to correct learners' errors immediately when they occurred during rote exercises (Larsen-Freeman & Long, 1991).

However, in the 1960s, CA faced criticism. It was found that many of the errors predicted by CA did not occur, and furthermore, errors that were not supposed to occur were present in learner language (see Klein, 1986; Sridhar, 1980; Upshur, 1962). These findings, along with the rejection of behaviourism (see Chomsky, 1959) on which CA built its theoretical bases, led researchers at the time to look for another method for studying learner language. In addition, CA's close association with the structuralist approach to language, which was challenged and eventually seen as inefficient, contributed to its dismissal. Chomsky and DiNozzi (1972) questioned the

structuralist approach and claimed it could be efficient for phonology and morphology because both have a complete collection of units, but that it is insufficient for syntax since an infinite number of sentences can be produced, thus a complete collection is impossible (see Chomsky & DiNozzi, 1972; Mitchell, 1984). Most of all, CA did not involve identifying and describing performance errors in learners' production, which was what language practitioners were concerned with, rather it focused on predicting error occurrence based on the differences between the linguistic systems of the L1 and the L2.

Following this development, EA was the method that researchers turned to. Corder (1967) was the first to point out the significance of errors in the language learning process, and he believed learner errors were significant in three different ways:

> First to the teacher, in that they tell him, if he undertakes a systematic analysis, how far towards the goal the learner has progressed and, consequently, what remains for him to learn. Second, they provide to the researcher evidence of how language is learned or acquired, what strategies or procedures the learner is employing in his discovery of the language. Thirdly...they are indispensible to the learner himself, because we can regard the making of errors as a device the learner uses in order to learn. (p. 167)

Corder's ideas were influential to the EA paradigm, and a number of studies appeared in the late 1960s, the 1970s and early 1980s, such as Corder's *Error Analysis and Interlanguage* (1981), which aimed to compare the learners' interlanguage—that is, the learners' version of the target language (Selinker, 1972) with the target language—and Richards' *Error Analysis* (1974).

EA is associated with nativist theories of language learning which attribute the process of learning a language to the mental processes that occur in the mind. Furthermore, EA is also closely linked to the interlanguage theory. Indeed, as pointed out by R. Ellis and Barkhuizen (2005), it

> [b]ecame the testing ground for the respective claims of behaviourism and nativist learning theories...The closeness of the link between EA and interlanguage theory is demonstrated by the title that Widdowson gave to the posthumous 1981 collection of Corder's articles: *Error Analysis and Interlanguage.* (p. 56)

The interlanguage hypothesis was formulated by Adjemian (1976), Corder (1967) and Selinker (1972), among others. According to Adjemian (1976), the *sine qua non* of the interlanguage

hypothesis is that interlanguages are natural languages and, therefore, subject to language universals at any developmental stage, and consist of "a set of linguistic rules which can generate novel utterances" (p. 299).

According to Corder (1974), EA consists of the following stages: (1) collection of a sample of learner language; (2) identification of errors; (3) description of errors; (4) explanation of errors; and (5) error evaluation. These procedures are not straightforward and there are different problems associated with some of the stages. In particular, and of direct relevance to the purposes of the present study, are problems related to stages (2) and (3) (see section 2.3 below).

EA has been criticised in a number of aspects (e.g. Bell, 1974; Long & Sato, 1984; Schachter & Celce-Murcia, 1977; Van Els, Bongaerts, Extra, Van Os, & Janssen- Van Dieten, 1984). R. Ellis (2008b, p. 60) states that "[t]he criticisms levelled at EA fall into three main categories: (1) weakness in methodological procedures; (2) theoretical problems; and (3) limitations in scope". The first problem is discussed in section 2.3 below, while I focus on the other two drawbacks here.

Some researchers consider EA to be theoretically flawed because it considers a certain target language variety as its reference point. This is considered a problem because "it is not always clear what the learners' reference group is and that, in some cases (for example, a Hispanic living in an African American area of New York), they may be targeted on some non-standard variety" (p. 61). Moreover, Bley-Vroman (1983) argued that learner language should be studied as a variety in its own right, and accused EA of falling for the *comparative fallacy,* that is examining learner language solely in terms of the target language norms. James (1998, p. 17) responded to this criticism by pointing out that "as long as FL learners are prepared to see and call themselves learners, the assumption that they wish to conform [to the native speaker's standard] is surely a reasonable one to make".

Another frequent criticism is that EA fails to provide a complete picture of learner language, as it is important to see what learners can do correctly as well as what they do incorrectly. R. Ellis (2008b) referred to this criticism as "overstated", and as far back as 1971, Corder (1971) argued that learners' production should be examined in totality. Furthermore, R. Ellis (2008b, p. 61) contended

that "there is nothing to prevent the researcher doing this". In addition, EA is perceived as limited because most of the studies are cross-sectional, being collected at a single point in time, and therefore fail to provide a comprehensive view of learner language at different stages of development. However, as pointed out by R. Ellis (2008b), this problem is not "a necessary one", and EA can be used in longitudinal studies of learner language (e.g. Chamot, 1978, 1979).

The most serious criticism of EA is related to *avoidance*, defined as when learners avoid using structures they find difficult or are unsure of. A number of studies have provided evidence for L2 learners resorting to avoidance (e.g. Dagut & Laufer, 1985; Hulstijn & Marchena, 1989; Kellerman, 1977; Kleinmann, 1978; Schachter, 1974). Learners resorting to avoidance may lead researchers to conclude that they have no difficulty with these structures: "EA, which focuses exclusively on what learners do, has no way of investigating avoidance and is, therefore, seriously limited" (R. Ellis, 2008b, p. 62). However, there are researchers who argue that utilising some corpus tools and methods can help in investigating avoidance in learner language. This point is discussed in more detail in section 2.7.2.1 as one of the advantages of modern day computer tools and learner corpora. A further weakness attributed to EA is that of error taxonomies, which are often not data-driven, contain subjective characteristics and include overlapping categories (Abbott, 1980; Dulay, Burt, & Krashen, 1982).

Therefore, it is clear the heyday of EA was in the 1960s and 1970s, before it fell out of favour temporarily due to the criticisms highlighted above (see Hammarberg, 1974; Long & Sato, 1984; Schachter, 1974; Schachter & Celce-Murcia, 1977). However, studies in EA continued and responses to the criticism appeared in a number of studies (e.g. Abbott, 1980; Corder, 1971; Faerch, 1978; Zydatiss, 1974). Today, it seems that EA has had a rebirth following significant research in the past three decades, such as James (1998, 2013), Kellerman (1995), Kellerman and Smith (1986), and Odlin (1989) and the availability and advancement of tools for computer-based analyses of learner language (R. Ellis, 2008b).

2.3 Computer-aided error analysis

The roots of CEA are found in the methodology of EA, but the process claims to overcome the limitations of EA in several areas. For instance, since learners' output texts are computerised, they are more manageable than traditional EA data, and can be subjected to a wide array of software tools for corpus analysis, which results in systematic analysis and greater possibilities (Granger, 1998a). Furthermore, since learner corpora are systematic collections of data, given the strict design criteria that should be followed, CEA data and results can be considered representative, balanced and generalisable for similar environments (Granger, 2003; Nesselhauf, 2003, 2005). Moreover, CEA data can be viewed in a larger overall context of output, meaning "learner corpora give us access not only to errors but to learners' total interlanguage" (Granger, 1998a, p. 6).

Clearly, CEA opens doors for large and sophisticated EA, a possibility discussed in detail in section 2.7.3.1. Finally, as asserted by R. Ellis (2008b, p. 65) "error analysis continues to have a role to play in remedial approaches to the teaching of writing". For example, Ferris (2011) revived Hendrickson's (1978) call for researchers to examine L2 learners' errors to help decide which linguistic features to teach.

2.3.1 Overview of previous CEA studies

Given the limitations of space, it is not possible to cover many CEA studies. Instead, I will refer to two studies that are of particular interest to the present study, Dagneaux et al. (1998) and D. J. Lee (2007) as both utilised the same error tagging system as the one used in this study: Université Catholique de Louvain Error Editor (UCLEE). In Dagneaux et al.'s study, the data were collected from French speaking learners of intermediate and advanced levels. The learner corpus in Lee's study was compiled from Korean speaking EFL students who were at a high beginner/elementary level of English.

2.4 Error taxonomies in error analysis

Before conducting an EA, a workable definition of what is to be considered an error is essential. However, this is not a completely straightforward task. It has long been discussed in the EA literature that there are many problems and different arguments associated with defining, identifying, describing and explaining errors. One of the main difficulties is selecting the criterion of identifying an 'error', whether according to grammaticality or acceptability. If grammaticality is the criterion chosen, then following Corder (1971) and James (1998) we will consider the grammar of that language variety as the 'code', and errors can be defined as "breaches of rules of the code" (Corder, 1967, p. 101). Some researchers find this problematic because what is well-formed in one form of the target language might not be considered so in another form, and this particularly applies in the areas of semantics and phonology. On the other hand, acceptability depends on the subjective evaluation of the researcher and her/his stylistic judgments, rather than her/his grammatical ones. Thus, it is regarded as a highly subjective approach. However, as R. Ellis and Barkhuizen (2005) pointed out, the distinction between grammaticality and acceptability in the practice of EA can be blurred, as is evident in the definition of error used by Lennon (1991) in his own research: "A linguistic form or combination of form which, in the same context and under similar conditions of production, would, in all likelihood, not be produced by the speakers' native speaker counterparts" (p. 182).

Another difficulty related to the identification of errors is whether to restrict the analysis to absolute errors or include dispreferred forms. R. Ellis and Barkhuizen (2005, p. 59) argued that "[t]he distinction between absolute errors and not preferred forms is a continuous one with the result that deciding what to count as an error is likely to be at least partly subjective". Lennon (1991, p. 191) referred to two dimensions which are partly responsible in identifying errors—domain and extent—defining domain as "the rank of the linguistic unit which must be taken as context in order for the error to become apparent". This may include a word, a phrase, a clause, a previous sentence or extended discourse that might include the whole text. Extent refers to the rank of the linguistic unit (i.e., a morpheme, a word, a phrase or a sentence) that needs to be reconstructed to repair the error. Clearly, if the domain and/or extent are narrow, it is easy to identify the error, and conversely if the domain and/or extent were broad, identifying the error

would be much more difficult. In the following example from R. Ellis and Barkhuizen (2005, p. 59), the domain of the error is shown by [ ] while the extent is shown by italics: They [passed near a zoo and *stop*] in a forest.

Most researchers agree that describing errors is a comparative process (e.g. Corder, 1974, p. 128). Consequently, describing learners' errors involves explaining how the form used by the learner differs from the form used by a native-speaker counterpart. R. Ellis and Barkhuizen (2005, p. 60) described the two steps involved in describing learners' errors:

(1) The development of a set of descriptive categories for coding the errors that have been identified.

(2) Recording the frequency of the errors in each category.

James (1998, p. 95) argued that certain criteria should be taken into account when developing a system for describing learners' errors. The system of categories (referred to as a taxonomy) must be "well-developed", "highly elaborated" and "user-friendly" since errors are sometimes complex even when they are produced by beginners. Dulay et al. (1982) suggested that there are four types of error taxonomy: the comparative taxonomy, the communicative effect taxonomy, the linguistic taxonomy and the surface structure taxonomy. The first two types deal with error causes and error gravities, respectively, but for the purposes of the present study we are only concerned with descriptive taxonomies: the linguistic taxonomy and the surface structure taxonomy.

As indicated by its name, a linguistic taxonomy describes errors in terms of linguistic categories "based on the linguistic item which is affected by the error" (Dulay et al., 1982, p. 146). First, the system specifies the *level* of language the error is located in: grammar, lexis, discourse or text. Then there is a specification of the *category* to which the error belongs. For instance, if it is a grammatical error we have possible categories including auxiliaries, sentence complements and so on. James (1998) suggested a refinement to this system and argued that after establishing the level of the error, the next step should be specifying its *class*. For example, if it were a grammatical error, the classes would include noun, verb, adjective, adverb, preposition, conjunction, determiner, pronoun and so on. After that, "we need to assign a *rank* to the error, in terms of where it lies on the hierarchy of *units* that constitute its level" (p. 105). Therefore, if it is an error on the grammar level, and in the class of noun, we need to assign a rank to the error, for example, morpheme, word,

phrase, clause or sentence. Finally, we need to specify the grammatical *system* that is affected: tense, countability, voice, number and so on.

A linguistic taxonomy is often based on a classification system derived from the descriptive grammar of the target language, e.g. Quirk, Greenbaum, Leech, and Svartvik's *A Comprehensive Grammar of the English Language* (1985). R. Ellis and Barkhuizen (2005) argued that a descriptive taxonomy has an advantage over other types of taxonomy because "it utilises well-established grammatical categories and thereby maximises the practical applications (for example, for teaching)". They asserted that:

> The categories finally chosen for the analysis need to be data driven. That is, rather than start with a fully elaborated set of categories derived from a descriptive grammar, the analyst should develop categories (based on a descriptive grammar) to reflect the errors identified in the sample. (p. 60)

The aim is to minimise subjectivity in the process of error diagnosis and classification (Dagneaux et al., 1998; Dulay et al., 1982; James, 1998).

According to Dulay et al. (1982, p. 150), the surface structure taxonomy is based on "the ways surface structures are altered" in erroneous forms. They found four main ways in which learners alter target forms:

1) Omission: This should not be confused with ellipsis (E) and zero (Z) elements that are grammatical, whereas omission is ungrammatical.

     He'll pass his exam but I won't [pass my exam]. Ellipsis.
   * He'll pass his exam and I [Ø] too. Omission.

2) Addition: Dulay et al. (1982, p. 156) suggested that this is the "result of all-too-faithful use of certain rules". It includes the following three subcategories:

   a. Regularisation (for example, **buyed* for *bought*)
   b. Double-marking (for example, **He doesn't knows me*)
   c. Simple additions, which includes all additions not describable as regularisations or double markings

3) Misformation: the use of the wrong form of a morpheme or structure. It also has been divided into three subcategories:

a. Regularisation, for example, *Do they be happy?
(Ellis and Barkhuizen, 2005, p. 61)

b. Archiform, which Dulay, Burt and Krashen (1982, p. 160) defined as "[t]he selection of one member of a class of forms to represent others in the class", e.g. using only that from the set of this, that, these, those

c. Alternating forms (for example when in the learner's interlanguage he alternates between the correct use of negation *I don't play and the wrong one *I no play)

4) Misordering: the incorrect placement of parts of a word, a word, or words in an utterance (for example *He every time comes late home). Dulay et al. (1982, p. 163) attributed this type of error to "word-for-word translation of native language surface structures" when producing utterances in the target language.

James (1998) suggested adding another category to this taxonomy:

5) Blends: "It is typical of situations where there is not just one well-defined target, but two. The learner is undecided about which of these two targets he has 'in mind'" (p. 111). An example of this is *The punishment consists of a sentence to prison, which is a combination of the noun phrases a prison sentence and being sent to prison (Examples taken from James, 1998, pp. 106-113).

However, as pointed out by R. Ellis and Barkhuizen (2005):

> Such a taxonomy is, by itself, of less obvious practical use as grammar teaching is organised in terms of traditional descriptive categories. However, it may still be of pedagogic use in helping teachers to show learners how their productions deviate from target language norms. (p. 62)

The two taxonomies I have just described are not necessarily mutually exclusive. As R. Ellis and Barkhuizen (2005) and James (1998) point out, a multidimensional taxonomy is possible, even advantageous. A good example of such a taxonomy is found in Burt and Kiparsky (1972), *The Gooficon: A Repair Manual for English.* Errors in this taxonomy are primarily organised by means of linguistic categories, and the different types of errors within the linguistic category are distinguished through utilising surface structure categories. For instance, the linguistic category *English clauses* is subdivided into two surface structure categories, *missing parts* and *misordered parts*.

A number of recent studies have developed error taxonomies for their own purposes. In their study, Dagneaux et al. (1998) analysed the data of a 150,000-word learner corpus of English written by French learners of intermediate and advanced level. They used version 1.1 of the error tagging system developed at Louvain University by Dagneaux, Denness, Granger, and Meunier (1996), which is a descriptive system (for further details see section 2.7.3.2). The study aimed to examine the learners' rate of progress in a range of grammatical and lexical variables. They pointed out that the approach they used had helped them discover some of the persistent errors these learners made in writing.

Ferris and Roberts (2001) focused on five categories of errors to investigate the effect of explicit feedback on learners' ability to edit their written texts by themselves. The error categories they used were: verb errors in tense or form; noun ending errors (plural, possessive, missing or unnecessary); article errors (missing or unnecessary or incorrectly used); word order (wrong word choice or word form); and sentence structure (missing or unnecessary words, wrong word order, and sentence fragments). Clearly, this small number of error categories does not help in identifying other types of errors, such as stylistic and discourse errors. Chandler (2003) used a larger taxonomy with more than twenty error categories, such as verb tense, spelling, article, punctuation, wrong word, fragments and subject-verb agreement. However, while this study included more error categories than Ferris and Roberts, it was unable to cover all possible errors in a learner's written text. Furthermore, some categories overlap, thus we can conclude that it is not a definitive error taxonomy for EA.

There are also error taxonomies developed specifically for learners from a certain L1 background. Díaz-Negrillo and García-Cumbreras (2007) revealed the results of a four-year project to develop an error tagging system for use on English texts written by Spanish-speaking learners. The system consisted of an error taxonomy and software tools derived from it. The aim was to provide "a language-specific, fine-grained classification of errors" (p. 198). In addition, A. Y. W. Chan (2010) developed an error taxonomy for Cantonese ESL learners of English that covered four levels: morphological, lexical, syntactic and discourse errors. In her study, A. Y. W. Chan aimed to identify the errors commonly found in Cantonese ESL learners' written texts and to establish the

error taxonomy based on these written data. In both studies, the error taxonomy developed is local rather than universal, being appropriate for specific types of English learners. The argument has been made that they can be expanded and developed to suit other environments, but the task is far from straightforward. Another well-known annotated learner corpus is the Chinese Learner English Corpus (CLEC), which consists of one million words of essays written by Chinese L2 learners of English at five proficiency levels. The corpus is annotated using an error taxonomy that consists of 61 error types under 11 major categories (Gui & Yang, 2002). The aforementioned studies are by no means an exhaustive list of the studies on tagging errors of L2 learners from specific L1s. They merely represent a sample of the available ones.

2.5 Overview of studies of Arab learners' common errors in writing

2.5.1 Computer-based studies of Arab learners' common errors

To the best of my knowledge, it seems there is only one corpus-based EA project, the BUiD (The British University in Dubai) Arab Learner Corpus (BALC), which aims to examine Arab learners' spelling errors. This is a work in progress research project led by researchers at the British University in Dubai, The United Arab Emirates and the University of Birmingham, UK. According to Randall and Groom, the corpus consists of 1,865 texts written by first year university students and third year secondary school students (the last year of general schooling). Randall and Groom (2009) argued that:

> Such an analysis will assist in the design of pedagogic materials to improve the spelling and word recognition skills of Arab learners. Such language-specific programmes are important as it is clear from this and other analyses that different L1 language users have different problems when faced with English orthography. (p. 9)

2.5.2 Non computer-based studies of Arab learners' common errors

A number of studies have investigated Arab learners' errors in English, and while some have focused on certain error categories, others have tried to provide a comprehensive picture. Haggan (1991) analysed Arab learners' spelling errors according to eight categories: consonant doubling; other consonants; errors involving *schwa*; errors involving silent *e;* other vowels; letter misordering; unanalysable; and homophones. The subjects in her study consisted of two groups: first and fourth year university students who were all English majors. Haggan wanted to compare the spelling errors produced by the two groups, examine any improvement in the learners' ability to spell in English by comparing the production of the two groups and identify the spelling errors that seemed to be persistent in the learners' writing. For the first year students, the most frequent errors occurred in the other vowels category. The second most frequent error category was errors involving silent *e*, followed by consonant doubling, errors involving *schwa,* unanalysable, homophones, other consonants and finally letter misordering. For the fourth year students, the most frequent error category was also other vowels. The second most common error category was errors involving *schwa*, followed by other consonants, unanalysable, consonant doubling, errors involving silent *e*, letter misordering and finally homophones. Haggan concluded that mispronunciation and L2 learners lack of awareness of spelling rules and patterns are the major underlying causes.

In another study, Haded (1998) focused on Arab learners' errors in using six English tenses, excluding the future. The subjects were twenty students in their last year of high school. The percentage of errors in his study was calculated by dividing the number of errors per category by the number of items assigned for each tense category, then the result was multiplied by the number of participants. Finally, it was multiplied by a hundred to derive a percentage. According to his analysis, the most difficult tense is the past perfect 66.25%. The past progressive 63.75% came second, followed by the present perfect in third place with an error rate of 63%. The fourth tense error category is present progressive 61.25%, and the simple past, with an error rate of 47.5%, is fifth, and the present tense seems to be the lowest tense category in errors with an error rate of 24.5%.

In a project aiming to tackle the problems Arab learners of English have in using English articles, Kharma (1981) included learners at primary, secondary and university levels. In order to identify

the problematic areas, a fill in the blank test was administered and a sample of each student's writing collected and analysed. For the students at the primary and secondary levels, the easiest article was 'the', followed by 'a/an', while 'no article' seemed to constitute the greatest problem. In the case of university English majors, fewest errors occurred with the use of 'the', while errors in the use of 'a/an' were more frequent than that of 'no article', although less intensive. Other studies which focused on specific features or categories include errors related to the use of the English definite/indefinite articles (Willcott, 1978), spelling errors (Ibrahim, 1978) and stylistic errors (Doushaq, 1986).

M. S. Scott and Tucker (1974) examined Arab learners' errors on a larger scale. The subjects in their study were twenty-two L1 Arabic EFL learners enrolled in their first semester of an intensive English language course at the American University of Beirut. The learners needed to complete two, three or four semesters of intensive English courses to be able to enter the university. M.S. Scott and Tucker collected samples of the learners' oral and written output at the beginning and end of the semester to record any possible improvements and compare errors. They analysed errors according to fourteen categories: finite verbs, prepositions, articles, relative clauses, sentential complements, repetition of subject or object, nouns (wrong number and pronouns), wrong word, word order, quantifiers, adverbs, adjectives and genitive constructions. It was found that learners made most errors in the areas of verbs, prepositions and articles, while relative clauses errors were also frequent. However, none of these studies provided clear pedagogical implications or enough examples of Arab learners' errors for ELT practitioners to draw on in designing ELT materials.

To the best of my knowledge, the most comprehensive record of Arabic-speaking learners errors in English is Kharma and Hajjaj's *Errors in English Among Arabic Speakers: Analysis and Remedy* (1989, 1997). The authors claimed to be presenting problems and difficulties of Arab learners when learning English based on genuine data collected from actual students at different English proficiency levels. However, we are not provided with any further information about the processes of collecting the written texts, or analysing them. The book covers four major error categories—the sound system, vocabulary, the sentence and discourse—and each is further subdivided into many sections. In most cases, the authors tried to present the attested difficulty then identify its source, sometimes by comparing the linguistic system of the mother tongue and the target language, and suggested some teaching measures to help learners overcome these difficulties.

Most of these EA studies, which are not CEA, suffer from some methodological issues, and they are subject to the same problems and limitations of traditional EA. Furthermore, their contribution to ELT is also limited, as they do not provide enough information on the learning context, the learners' linguistic background or examples of the erroneous forms, instead presenting mere numbers of error frequency. In addition, we do not have access to errors in context or examples of learners' correct forms along with the wrong forms, mainly because the texts are not computerised. Information about the errors' original contexts and examples of correct usage can better pinpoint the difficulties the learners are facing. The error taxonomies used in these studies also suffer from a number of limitations, chief among them, their limited categories.

The present study is the first part of a larger project where the results of the detailed CEA were used in the next two studies for designing corpus-based materials. The aim of the second and third studies is to evaluate the efficiency and the outcomes of these materials and the DDL approach for ELT in the context of a Saudi university. The CEA in the present study is carried out to generate comprehensive lists of specific error types, and then compute and classify them in different ways. Furthermore, this method will enable us to view errors in their context and alongside non-error instances by using text retrieval tools. All of these features will help clarify precisely the types of difficulties Saudi learners in this study face in learning English, and eventually some of these findings are drawn on to devise more useful 'learner aware' and finely-tuned ELT materials. With the hope of providing a comprehensive and systematic view of the types of errors committed by English major Saudi university students, I analysed a corpus of written texts using the error tagging system developed by Dagneaux et al. (2005).

2.6 Research Questions

RQ1. What are the most common errors English majors at Qassim University make in writing?

a. What are the most and least frequent of the major error categories in the corpus?

b. What are the ten most frequent error subcategories?

c. What are the most common error subcategories in each of the eight major error subcategories?

While the research questions focus mainly on identifying error-type frequencies in the SLC, the selection process in the later stages of the project was based on the criterion of whether an error was likely to lead to a misinterpretation of the author's intended meaning by the reader. Consequently, collocations which are in the third most frequent error type in the SLC and lexical phrases which are in the ninth most frequent error category in the SLC were chosen. Llach (2011) stresses that:

> Because of their negative impact on communication, lexical errors are judged to be the most serious and severe of all types of errors among different types of judges. Lexical errors are considered to be very damaging to communication, because they affect the meaning of the message (p. 103)

2.7 The computer-aided error analysis of the Saudi Learner corpus

2.7.1 The Target Population

In Saudi Arabia, education is segregated according to gender, and Qassim University is no exception. That is, the Department of English Language and Translation has two sections in two separate campuses. However, it is worth mentioning that the two branches are managed by the same head and governed by the same regulations. The data of the present study were collected from the female section. The target population were students in the third semester in the English Language and Translation Department at Qassim University. The number of students in the third semester was almost 150. However, only 104 female students participated in the current study because of absence and elimination (to collect data from a homogenous group). For further detail, see Section 2.7.2.1.

This specific population was chosen for the present study for several reasons. Since this study is part of a large research project where I will first identify the types of written errors this specific population makes in the present study, teaching materials will be designed to remedy these difficulties and finally, the efficiency of these materials and their short and long term effects on improving learners' accuracy will be tested. Thus, this population was chosen and not a higher level population so that I would be able to use the remedial materials later and test their efficiency with the same group of students before they graduate, i.e. when they are in the fourth semester, but it was not feasible later and I used the teaching materials with another group in their fourth semester

from the same institution. Furthermore, the large number of students in this semester enabled me to divide them into an experimental group and a control group for the purposes of future research. One of the reasons students in the second and fourth semesters were not considered is the small number of the population in these semesters, almost 50-70 in each semester. I wanted to collect the data from a larger group of learners who were relatively familiar with academic essay writing and the student population in the third semester met all these requirements.

2.7.2 Data Collection

2.7.2.1 Data collection instruments

I was aware from the outset that in order for the data to have 'corpus status', very strict design criteria must be adopted. Therefore, I adhered as closely as possible to Atkins, Clear, and Ostler's (1992) corpus design criteria. As pointed out by Granger, Dagneaux, Meunier, and Paquot (2009), learner language data is by its nature highly heterogeneous. The importance of adopting a rigorous system for data collection has been emphasized by many researchers. R. Ellis (1994, p. 49) asserts "the importance of collecting well-defined samples of learner language so that clear statements can be made regarding what kinds of errors the learners produce and under what conditions". R. Ellis (2008b) also identifies a number of factors that should be considered when collecting samples of learner language. As shown in Table 2.1, these factors are mainly related to the learner, the language sample and the production process.

Factors	Variables	Description
Learner	Proficiency level	Elementary, intermediate, or advanced
	Other languages	The learners' L1; other L2s
	Language learning experience	This may be classroom or naturalistic or a mixture of the two.
Language sample	Medium	Learner production can be oral or written
	Genre	Learner production may take the form of a conversation, a lecture, an essay, a letter, etc.
	Content	The topic the learner is communicating about.
Production	Unplanned	The discourse is produced spontaneously.
	Planned	The discourse is produced spontaneously or under conditions that allow for careful online planning.

Table 2:1 Factors to consider when collecting samples of learner language (R. Ellis, 2008, p. 47)

R. Ellis (2008b, p. 47) states that "[u]nfortunately, many EA studies paid little attention to these factors, with the result that they are difficult to interpret and almost impossible to replicate". Similar to Ellis' list, Granger et al. (2009) recorded a number of variables in the *International Corpus of Learner English* that are relevant to the task and the learner, as shown in Figure 2:1.
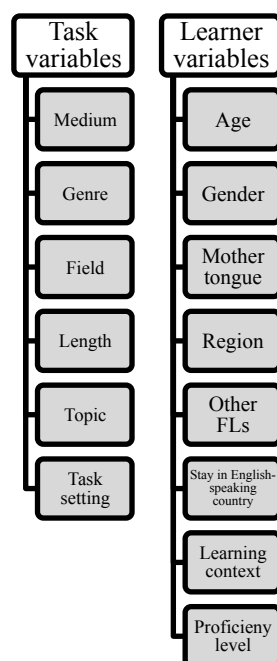
Figure 2:1 The International Corpus of Learner English (ICLE) task and learner variables (Granger, et al., 2009, p. 4)

Therefore, in the current study, in keeping with the general principles of corpus linguistics, the data were collected based on rigorous design criteria. Variables pertaining to the learner (age, language background, L1, L2 language proficiency, number of years learning the L2, learning context, etc.) and the language situation (medium, task type, topic, etc.) were taken into account in order to compile a homogeneous corpus. To control the variables related to the learners I administered a learner profile questionnaire (see Appendix 2A) to ensure that the data were collected from a homogenous group. The questionnaire included all the clear-cut variables, as it aimed to collect information about the learners' age, mother tongue, other foreign languages, and stay in English-speaking countries. The learners' gender and learning context were already known to me, and are described in Section 1.4.1 and 2.7.1. As for the learners' proficiency level, they were all sophomore English majors in the same institution.

The Saudi Learner Corpus compiled for this study consisted of about 16,023 words of English written by Arab undergraduate students (20-24 years old) whose English language proficiency varied a bit (Common European Framework of Reference levels mostly ranged from A2 to B2). Although the size of the corpus is relatively small, following D. J. Lee (2007, p. 93), the argument is that:

> There has been no uniformity of learner corpus size in CEA and a researcher must decide on the appropriate size of his/her corpus depending on his/her own research purpose…[and]…there is no 'magic number' in regards to corpus size and the appropriate size will depend upon what the analyst wishes to study.

Furthermore, Nelson (2010, p. 54) argues that "the purpose to which the corpus is ultimately put is a critical factor in deciding its size". Consequently, because the current CEA aim to investigate the relatively common errors of this specific group of students, I felt the size of this corpus was large enough to accommodate the purposes of the current research.

The corpus was collected from 104 female students studying in the third semester in the English Language and Translation Department at Qassim University. Students were asked to write an in-class essay on the topic: 'My high school experience'. Though it might be more appropriate to call students' writing task a 'composition' rather than an 'essay', given its length, the term essay was used because it is what the learners are accustomed to in the target context. It was a free composition and they were required to write for approximately 45 minutes without any access to

reference tools. The option of collecting samples of learners' written texts from previous exams scripts was not considered, for fear that the texts would not properly reflect the learners' natural language. Learners sometimes resort to avoidance, that is, they may avoid long or complex sentences and use only basic vocabulary and simple structures because they know they are being marked on grammar and accuracy (Kepner, 1991; Kleinmann, 1977, 1978; Perkins & Freeman, 1975; Schachter, 1974; Sheppard, 1992). In contrast, when informed they will not be marked, they would be expected not to follow this strategy.

The rationale behind choosing this topic was that I wanted a topic that was interesting, motivating and not threatening; a topic that every student would be able to, and hopefully want to write about. As pointed out by Ruth and Murphy (1988, p. 12):

> Students write best when they find something they want to say to someone. No matter how highly motivated they may be to perform well on a writing test, no matter how concerned they are to achieve a good score, they will not be able to do their best if they find the topic dull, confusing, or intimidating. They need to seize on the germ of an idea and begin writing with confidence if they are to generate a complete piece of writing in the time allowed.

In addition, I wanted to give students a topic on a genre with which they were familiar, that is, narrative essays. For instance, argumentative essays were avoided because not all students were familiar with their structure. Besides, after examining the writing textbook they had studied in the second semester and the one they were studying at the time of data collection, it was found that the argumentative essay had not been introduced. Furthermore, this topic was selected after examining previous exam scripts as well as the topics introduced in the writing textbooks, to ensure this exact topic had not been previously assigned to students. Sometimes when students are aware of the topics assigned for exams, they prepare in advance and memorize some sentences or complete essays about these topics for this purpose.

The topic used in the current study to collect samples of learners' written English was piloted with students in the second semester from the same department. They were given the same instructions as the ones given to the target population in the present study (see Appendix 2B). They were also given another piece of paper and asked to evaluate the topic: *How did you find the topic?* I wanted to ensure that it was an interesting and motivating topic and one about which at least the majority

of students had an opinion. The students' comments were generally encouraging, and they were able to produce complete texts within the allotted time. Thus, only minor changes in relation to essay instructions and topic prompt were made. A sentence explaining that the essay is not part of any test or course and will not be marked was added to the actual paper instructions, instead of just informing participants about it orally to put them at ease and let them be confident and reminded it is just for research purposes. Furthermore, because during piloting some students asked whether they are allowed to write about more than one aspect in their high school experience or what aspect they should focus on, so the topic prompt was modified to explain they can write about any aspect, and one or more than one aspect.

The length of the students' essays varied, depending on the students. On average, each essay is between twelve and eighteen sentences. All variables of the present corpus are constant: age (20-24 years old), gender (females), mother tongue (Arabic), knowledge of other languages (their second language is English), proficiency (ranges from A2 to B2), learning context (EFL), medium (writing), genre (essay writing), length (approximately 150-300 words), task type (in class writing task with no access to reference tools), task setting (not part of an exam and timed), topic (*My high school experience*). Table 2.2 presents an overview of the Saudi learner corpus. Here is a part of a typical student's essay :

> *I always remember My three-years in the high school that were the first stage of finding out My self. The teachers were directing us to think about out future, choose our increase Paths and try to increase our levels in the last year to register in the Collages witch we want. In this age, the teenagers need to someone who advise them they don't know what they want from the life or what they have to do to obtain a great future. So the high schools have to be as a institution to help them to be aware of their selves. But My high school was a best place to finding out My self. Every things was because of the good education, teaching and culturing I have got there.*

Number of texts	104
Token	16,023
Types	1,643
Type/Token Ratio	10.28
Average word length	4.07
Sentences	1,190
Average Sentence Length	13.43

Table 2:2 Overview of the Saudi Learner Corpus

2.7.2.2 Data collection procedure

According to the research policy at Qassim University, the head of the department should be contacted when a researcher wishes to conduct any type of research in that department. After gaining permission, I went to the female section and explained to the department coordinator and the teacher of the writing module the aim of the research and the type of data I needed to collect from students, and the data and materials already available in the department (i.e. previous exam scripts, textbooks, students' writing assignments) that I needed to get access to. At the time of collecting students' data, I presented the aim of the research as it appeared on the participant consent form: to study the characteristics of Saudi students' written English, as it is not advisable to draw learner attention in some types of research to the exact aim of the research, that is examining their errors (Mackey & Gass, 2005), since this could have affected their writing as they may have become overcautious and preoccupied with grammatical accuracy.

After explaining the general aim of the research to the students and the type of data that would be collected from them if they accepted to participate, I informed them of their rights as participants in the current study and their right to withdraw at any time. Also, I assured them of the confidentiality of all the submitted data, and the fact that only me (the researcher) would have access to these data which would only be collected for research purposes. In addition, they were advised that they were not part of any module and their work would not be assessed by the department. After that, I read and administered the participant consent form to be signed by the students with the help of one of the members in the department to speed up the process. Then, all the students who agreed to participate were given a learner profile questionnaire (Appendix 2A) which also was read and

explained to the students to avoid any possible ambiguity.

The writing task was the next on the list. Students were handed the papers with a prompt printed at the top (Appendix 2B). Again, I read it aloud and encouraged them to ask if anything was not clear. Students were given 45 minutes to write their essays. In the context of the present study, students take all their exams using pen and paper. With respect to the assignments, the students are often free to submit them handwritten or in an electronic format, although some lecturers only accept assignments in an electronic format. The decision was made to collect handwritten data for several reasons. Firstly, because it is a way of writing with which all the students are familiar and hopefully comfortable. Secondly, I did not want any technical problems to affect learners' performance. Thirdly and most importantly, I wanted to avoid the possibility of subjects consulting Google or any electronic reference and to prevent any access to grammar or spelling checkers which are often built into word processing programs.

2.7.3 Data Analysis

2.7.3.1 Data analysis instruments

For analysing learners' errors, the error tagging system developed by Dagneaux et al. (2005) at the University of Louvain was employed. Two computer-aided methods can be used to analyse learners' errors: the text retrieval method and the error tagging method. The former involves choosing a word, phrase, or grammatical structure that the researcher believes learners are using erroneously, and then searching the corpus for that item by using a concordancer. However, the error tagging method involves identifying all of the errors in the corpus. Nowadays, the majority of this process is carried out manually and can be partially aided by computer software. A text retrieval software tool such as WordSmith Tools (M. Scott, 1996, 1999, 2004, 2008) can be used for retrieval purposes.

In the current study, the decision was made to utilise the second method. An error tagged learner corpus has several advantages over traditional EA methods and the text retrieval method. Firstly, as pointed out by Dagneaux et al. (1998), this method of CEA gives a comprehensive analysis and deeper insights regarding the proportion of the major error categories in a given learner corpus in a way that other methods can never achieve. Here is an example from Dagneaux et al. (1998, p. 169) findings and the pedagogical implications of such findings:

The breakdown of the GV category brings out GVAUX as the most error-prone subcategory (41% of GV errors). A search for all GVAUX errors brings us down to the lexical level and reveals that *can* is the most problematic auxiliary. At this stage, the analyst can draw up a concordance of *can* to compare correct and incorrect uses of the auxiliary in context and thereby get a clear picture of what the learner knows and what he/she does not know and therefore needs to be taught.

Thus, non-errors can be examined along errors, and accurate accounts of learners' difficulties can be drawn up. This is a major advantage of CEA over traditional EA methods.

Secondly, a comprehensively error-tagged learner corpus displays all the errors of a certain learner population, both ones likely to occur and totally unforeseen ones. Thirdly, a comprehensively error tagged learner corpus spotlights non-native language forms, that are referred to sometimes as false friends and infelicities, which is what the retrieval method fails to do. For instance, a search for non-native connectors can uncover instances like those shown in the following sentences from Dagneaux et al. (1998, p. 172):

- Example 3. In this point of view, television may lead to indoctrination and subjectivity...
- Example 4. But at the other side, can we dream about a better transition...
- Example 5. According to me, the root cause for the difference between men and women is historical.

Fourthly, error tagging uncovers cases when the learner fails to supply the needed article, word, preposition, connector, conjunction, pronoun, etc. This is a result the retrieval method cannot achieve, since, as Dagneaux et al. (1998, p. 172) argue, "it is impossible to search for a zero form!". In the error tagging system, the zero form can be employed to code the error itself or its correction. In their study, Dagneaux et al. (1998, p. 172) revealed a very interesting finding using this zero form tagging technique:

...an interesting non-typical use of the subordinating conjunction that, was revealed in this way. In Example 6 use of that would be strongly preferred, in Example 7, it would usually not be included.
- Example 6. It was inconceivable *0 (that) women would have entered universities.
- Example 7. How do you think *that (0) a man reacts when he hears that a woman...

A fully error-tagged learner corpus will give access to comprehensive lists of specific types of errors, and help researchers compute and sort them in different ways and examine them in their original contexts and compare them with instances of non-errors. As this method is very efficient in

revealing the areas of difficulty for English learners, it is highly informative to ELT materials designers; it can help them to devise materials that can increase learners' accuracy and fluency in English.

Consequently, based on the drawbacks of traditional EA methods and the text retrieval method (see Section 2.2), in the current study, following D. J. Lee (2007, p. 95), the decision was made to adopt the error taxonomy of Dagneaux et al. (2005) for the following reasons:

1) "It is necessary to do error tagging based on a standardised system of error tags in order to identify the common errors..[Saudi university]... students make in writing in their entirety;

2) It is helpful to use a semi-automatic error tagging and correction-inserting software program, such as *UCLEE*, which speeds up the unavoidable manual work involved in CEA;

3) It is necessary to use a predominantly descriptive error taxonomy to ensure consistency of analysis which enables researchers working independently on a range of language varieties to conduct fully comparable analysis;

4) Since descriptive categories may not be enough to ensure consistency, an error tagging manual, which provides sufficient definitions, descriptions and illustrations of the error tagging procedures, is necessary;

5) It is also essential to use the descriptive system to avoid the high degree of subjectivity associated with diagnostic error categories".

6) *UCLEE* is also a multidimensional error tagging system, since it combines the features of linguistic taxonomy and surface structure taxonomy (see section 2.4), Thus, it is more informative (James, 1998).

2.7.3.2 Description of the error tagging system

The error tagging system is hierarchical. There are eight major error categories and 56 error tags in total (Dagneaux et al., 2005), see Table 2.3. The first category involves formal errors (F), whereas the second is devoted to grammatical errors (G). The third category deals with lexico-grammar errors (X), which consist of errors where the morpho-syntactic properties of a word have been violated. The fourth error category of lexical errors (L) involves the semantic (conceptual, collocational, or connotative) properties of words or phrases. The fifth error category (W) deals with three error subcategories: word redundant, word missing and word order. The sixth error category (Q) involves punctuation errors. The seventh error category (S) is devoted to unclear or

incomplete sentences. The final category (Z) deals with register problems, questions of political correctness and stylistic problems. In accordance with the hierarchical properties of the error tagging system, each category is broken down into a number of subcategories.

There are 56 error tags in total. The first letter of the tag indicates the major error category: F stands for form, G for grammar, X for lexico-grammar, L for lexis, etc. The second letter generally denotes the sub-category, while the following letter gives more precision about the type of the error. For instance, for the category (G), to distinguish word classes that begin with the same letter, one or two additional letters are added: A stands for articles, ADJ for adjective, ADV for adverb, etc. The following letters indicate the type of error: O stands for order, CO for complementation, PR for dependent preposition, etc. Table 2.3 shows each of the 56 error categories in the taxonomy.

To help in identifying the type of the error and to ensure consistency, the error tagging system includes an error tagging manual (Error Tagging Manual Version 1.2, Dagneaux et al., 2005), shown in Appendix 2C. This manual defines and gives descriptions and illustrative examples of the error tagging procedures. It also offers clear guidelines on which code to assign to particular errors, and warning boxes where necessary to warn the annotator about exceptions. These features can help the annotators when they face a fuzzy error to choose the corresponding tag and can enhance consistency so that all analysts using Dagneaux et al. (2005) taxonomy and following their manual will assign the same tags to the errors they are annotating and finally arrive at the same results. Furthermore, the error tagging work is aided by a specially designed software tool, the *UCLEE*. As explained in Section 2.7.4, the *UCLEE* software can speed up the inevitably long process of inserting the error tags and their corrections into the learner text files. After error codes are inserted they can be searched and counted, and comprehensive lists of error types can be obtained and errors can be examined in context.

Major categories	Sub-categories
Form (F)	Morphology (FM), Spelling (FS), Regional spelling (FSR): 3
Grammar (G)	Determiners: Demonstrative determiners (GDD), Possessive determiners (GDO), Indefinite determiners (GDI), Determiner other (GDT), Articles (GA), Nouns: Noun case (GNC), Noun number (GNN), Pronouns: Demonstrative pronouns (GPD), Personal pronouns (GPP), Possessive pronouns (GPO), Indefinite pronouns (GPI), Reflexive and reciprocal pronouns (GPF), Relative and interrogative pronouns (GPR), Unclear pronominal reference (GPU), Adjectives: Adjective order (GADJO),Adjective number (GADJN), Comparative Superlative (GADJCS), Adverbs: Adverb order (GADVO), Verbs: Verb number (GVN), Verb Morphology (GVM), Non-Finite/Finite verb forms (GVNF), Verb voice (GVV), Verb tense (GVT), Auxiliaries (GVAUX), Word class (GWC):25
Lexico-grammar (X)	Erroneous complementation of adjectives (XADJCO), Erroneous complementation of conjunctions (XCONJCO), Erroneous complementation of nouns (XNCO), Erroneous complementation of prepositions (XPRCO), Erroneous complementation of verbs (XVCO), Adjectives with the wrong dependent prepositions (XADJPR), Nouns used with the wrong dependent preposition (XNPR), Verbs used with the wrong dependent preposition (XVPR), Nouns: uncountable/ countable (XNUC): 9
Lexis (L)	Lexical single (LS), False Friends (LSF), Lexical phrase (LP), Lexical Phrase, False friends (LPF), Lexis, Logical connectors: Single Logical Connectors (LCLS), Complex Logical Connectors (LCLC), Coordinating conjunctions (LCC), Subordinating conjunctions (LCS): 8
Punctuation (Q)	Punctuation confusion (QC), Punctuation lexical (QL), Punctuation missing (QM), Punctuation, redundant (QR): 4
Word redundant/ missing/wrong order(W)	Word Order (W), Word redundant (WRS/WRM), Word missing (WM), Word order (WO): 4
Style (S)	Sentence Incomplete (SI), Sentence Unclear (SU):2
Infelicities (Z)	Z (infelicities): 1

Table 2:3 The 56 error categories (adapted from Dagneaux et al., 2005)

2.7.3.3 Text retrieval tools

WordSmith Tools is a computer software suite that assists in the text analysis of either a single text or a large corpus (see M. Scott, 2010). In the current study, WordSmith Tools version 5 (M. Scott,

2008) was used for counting, sorting and retrieval purposes. The main components of WordSmith Tools are a concordance program, a wordlist program, and a keywords program. WordSmith Tools is widely used in corpus research and is popular among corpus linguists because of its efficiency and user-friendly interface.

2.7.4 Data Analysis Procedure

As explained in Section 2.7.2.2, the written texts compiled for the current corpus were originally handwritten by learners, that is, they were not in an electronic format. Consequently, the first step in analysing the data was to transform the handwritten texts into electronic documents. This is inevitably a time-consuming process, and caution should be exercised so that no changes or modifications are added to the original texts either manually or automatically. Thus, checking and re-checking was essential in the process to ensure the handwritten texts were accurately transcribed. After that, I reviewed the original papers and identified the errors, underlined them and wrote the corrections. In the correction process, I tried not to change the original words/expressions as much as possible, and in accordance with the manual, I chose the most plausible one when there is more than one possible correction. For instance, when there are two corrections, the one that entails fewer changes to the original expression and follows the style of the writer is chosen, e.g. *My father and my mother gave me (XNUC) many advice $much advice$ in this stage /My father and my mother gave me (WRS) many 0 advice in this stage*. In this example the first correction is selected since it is closer to the original intended expression. The next stage was writing the appropriate code above or next to the errors. Finally, the tags and corrections needed to be added to the electronic documents, which is a very time-consuming and painstaking process. For that purpose, they have to be in an electronic format compatible with the *UCLEE* software tool which can help speed up the process . *UCLEE* is a kind of MS Windows error editor and among its tools, on the upper left-hand side, there is the tab 'tags'. By clicking on it, a list of tags will appear, and then the researcher can insert the appropriate tag in the appropriate place in the text file. Figure 2:2 shows an example of tagging an error. The error in the sentence: *'I do not forget my days at high school',* is in the choice of the auxiliary. Thus, it is tagged (GVAUX), and the correction is *will not*. Figure 2:3 shows how the correction is inserted using the correction box: the correction is identified by the presence of dollar signs.
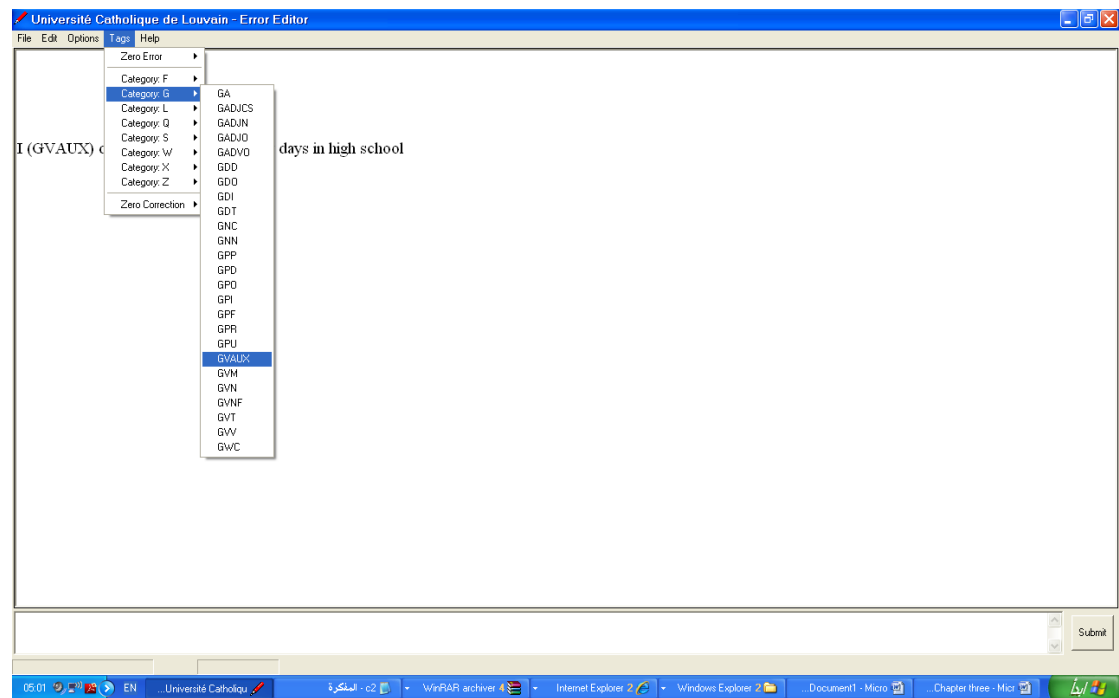
Figure 2:2 An example of using the error tagging window
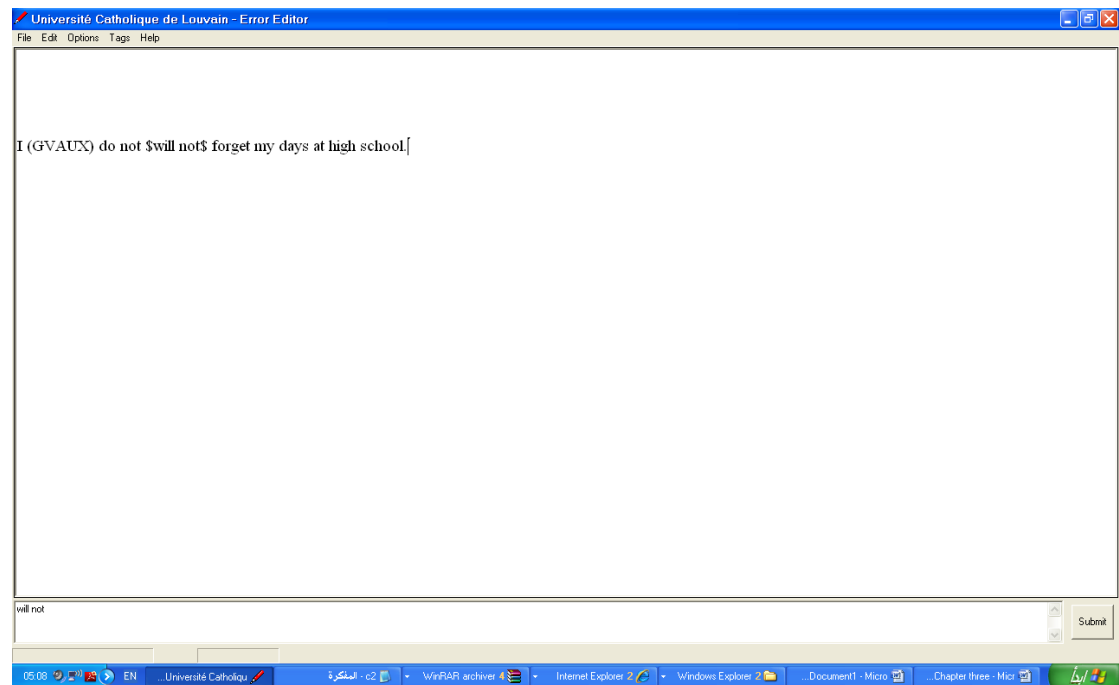
Figure 2:3 An example of using the correction box

According to the *Error tagging manual version 1.2.* (Dagneaux et al., 2005), a number of principles should be adopted when annotating errors. The first principle is: "Do not tag on the basis of the corrected/targeted word/phrase, but on the basis of the incorrect word/phrase only" (p. 7). For instance, the sentence: *The main feature of a campus like Louvain-la-Neuve is the conviviality* should be corrected to *The main feature of a campus like Louvain-la-Neuve is its conviviality*. The error should be tagged (GA) (misuse of article) rather than (GDO) (misuse of a possessive determiner). The correction is inserted between the two dollar signs. *The main feature of a campus like Louvain-la-Neuve is (GA) the its conviviality* (Dagneaux et al., 2005, p. 7). However, there is an exception: (GNC) is used to tag both erroneous uses of the Saxon genitive and erroneous uses of phrases which should be a Saxon genitive, for example:

Behind the (GNC) Berlin's wall $Berlin Wall$ (GNC) The car of my sister $My sister's car$ (Dagneaux et al., 2005, p. 7)

Here are examples of adhering to this principle and its exception in the current CEA:

...my (FS) Frinds $friends$ (LCLS) then and (GPP) I 0 (GVT) felt $feel$.. (LCLS for misuse of single logical connector rather than LCC for misuse of coordinating conjunctions).

...(GNC) The life of school $school life$...

...(FS) theis $this$ (GNC) year $year's$ choice...

The second principle is "place the tag immediately before the error (word or phrase) that needs to be corrected" (Dagneaux et al., 2005, p. 8). The tag is inserted immediately before the error. For example, *This type of exchanges* is tagged and corrected as *This type of (GNN) exchanges $exchange$*. However, there are two exceptions to this rule:

> "1- The tags (X*CO) and (X*PR) should be placed in front of the word that triggers the complementation rather than the erroneous complementation.
>
> e.g. *Students have the* (XNCO) *possibility to leave $possibility of leaving$*.
>
> *It should be a (XNCO) way to help $way of helping$ people to reconcile themselves with society.*
>
> *(XADJPR) representative for $representative of$ their own identities*
> *Women decided to take advantage of the situation and (XVPR) pressure the*

government in $pressure the government into$ recognizing the role that women played in society in general.

2. The tag (XNUC) should be placed in front of the incorrect article rather than the noun.
e.g. (XNUC) an information $a piece of information$" (p. 8)

Here are some examples of following this principle and its exceptions in the current CEA:

...this grade was (GA) a the best grade in my life ...

...(LCLS) despite $although$ there were a lot of subjects...

...I felt (XADJPR) happy for $happy about$...

...our (XNUC) homeworks $homework$ (FS) togather $together$...

My father and my mother gave me (XNUC) many informations $many pieces of informations$ (LS) in at this stage

The third principle is: "Place the correction immediately after the erroneous word / phrase. For retrieval purposes, the corrected form is preceded and followed by a $ sign. If there is more than one possible correction, choose the most plausible one" (p. 8). The following are examples of errors that have been tagged in the present CEA, keeping this principle in mind:

My (GNN) teacher $teachers$ and my (GNN) frend $friends$ (FS) frend $friend$ were very (FS) lovly $lovely$, (GWC) kindly $kind$ and helpful.

The new teachers were very nice and I hope to become (LS) same $like$ (GPP) her $them$. Now, I remember what I (GVM) doing $was doing$ in my high school...

The fourth principle is:

"When there are two types of errors in the same word/phrase, double tag this word/phrase. Corrections should be inserted as follows:

they (GVN) puts forward $put forward$ (LP) puts forward $ maintain$
rather than
(GVN) (LP) they puts forward $maintain$ (LP) puts forward $maintain$

Other examples:
informatoins
There is a problem with the spelling and countable/ uncountable nouns. It
should be tagged:
(FS) *informatoins $informations$* (XNUC) *informatoins $ information$*" (Dagneaux et al., 2005,
p.9).

Here are some examples following this principle from the current data:

*My (GNN) teacher $teachers$ and my (GNN) frend $friends$ (FS) frend $friend$ were very (FS)
lovly $lovely$, (GWC) kindly $kind$ and helpful.*

I had a lot of good (LS) remmbers $memories$ (FS) remmbers $remembers$ in high school...

I'm very (FS) Quite $quite$ (LS) Quite $quiet$, shy, and my personality is very...

I felt (FS) unhappyness $unhappiness$ (GWC) unhappyness $unhappy...

The fifth principle is:

"Use the 'zero' (0) to indicate a **missing word** or a correction that consists of **the deletion of a
word/phrase**. Even if more than one word has been added or deleted, only **a single (0)** should be
used.

e.g. *not only does* (GA) *0 the economy take over...*
in order to avoid (GDI) *any 0 conflicts.*
They are doing everything possible (WRM) *they can 0...*" (Dagneaux et al., 2005, p. 9)

The following are examples from the present CEA :

There were (GA) a 0 good teachers and ..

(FS) Fienlly $finally$, (GA) the 0 high school is ..

*The friends in class (GVT) are $were$ smart, lovely and (GVT) have had (GA) a 0 good (FS)
behaivour $behaviour$...*

The sixth principle is:
"Do not tag errors resulting from the correction of a previous word. E.g.

cigarette $cigarettes$ is dangerous for your health
only GNN, not GNN + GVN

(possible compromise: *$cigarettes are$* as a correction)

he is an amoral
GWC only; not GA + GWC

Some people argue that the primary cause of (GDD) such $this$ a worrying situation is…
GDD only; not GDD+GA (a)

There are social reasons besides $ there are also social reasons$
LCLS; not LCLS + WO

exceptions

Correcting a **tense error** may lead to the need for other tense changes even though in the actual context there is no error. In such cases, all auxiliaries and tense forms that need changing should be tagged separately.

e.g. *What* (GVAUX) *shall $would$ we think for example if we* (GVT) *see saw English people driving on the right ?"* (Dagneaux et al., 2005, pp. 9-10)

The following is an example of adhering to this principle in the current CEA:

...(GA)the 0 (GNN) subject $subjects are$ is easier than the first year...

And to its exception:

I (GVAUX) do not $was not$ afraid when I (GVT) get got the result ...

I found the tagging manual very informative and explicit. The warning boxes were very helpful and the principles they outline have been applied very carefully where appropriate. However, given the flexibility of the error tagging system, I decided to eliminate the category (FSR): Regional spelling. This manual states that "instances of American spelling in an overall British text (or of British spelling in an overall American text) should thus be tagged FSR" (Dagneaux et al., 2005, p. 14). The decision was made to omit this category from the present CEA because this type of error was not attested in the learners' written texts. Learners were found to be consistent in their spelling throughout their essays, that is students used either British or American spelling throughout their texts. Furthermore, this type of error is not recognised as an error in the context of this study. Two other error categories were eliminated from the error taxonomy: LSF (Lexical single, False friends)

and LPF (Lexical phrase, False friends). Both categories are the result of the influence of learners' mother tongue, and given the inevitable subjectivity in the process of classifying the source of errors and the effect of the L1, both types of errors were excluded from the current CEA. It is well for an error taxonomy to be completely descriptive (Granger, personal communication; Thewissen, personal communication). (See section 2.4 and 2.7.3.1 for further details on the advantages of a descriptive error taxonomy)

In his study, D. J. Lee (2007) found the two categories (SI) sentence incomplete and (WM) word missing to overlap. He writes that in the sentence *Everybody better than me*, where the verb 'is' is missing, it is difficult to decide which category to assign to this error, (WM) or (SI). He contends that

> [a]ccording to the error tagging manual, the (WM) category is for errors involving the omission of words, such as the omission of independent prepositions (e.g. *I will give all my love (WM) 0 to my mom*.) or the omission of verbs after auxiliaries (e.g. *I don't (WM) 0 do well (WM) 0 in science*.). In contrast, the (SI) category includes sentences that are deliberately incomplete such as verbless sentences (e.g., (SI) Another example. $Another example is$ Yesterday we spoke about the Gulf War..., Dagneaux et al., 1996, p. 27) (D. J. Lee, 2007, p. 107).

Lee decided to assign all the cases of verbless sentences to the category (SI), rather than (WM). In the present CEA, following the error tagging manual version 1.2, the (WM) category involves "the omission of words. However, not all cases where a word is missing are to be labeled WM. This category involves all missing words, EXCEPT: pronouns (GP*), dependent prepositions (X*PR), articles (GA), auxiliaries (GVAUX), connectors (LC*)..." (Dagneaux et al., 2005, p. 37). For the (SI) category "[t]his subcategory includes fragments such as verbless sentences. It is sometimes possible to provide a potential correction. When no correction can be provided, we use the $?$ symbol for correction". Under the provided examples, Dagneaux et al. warn the annotator: "Do not confuse WM and SI. SI is used in the case of sentence fragments where a finite verb is missing" (Dagneaux et al., 2005, p. 39). Thus, in the current CEA, when the missing word is a finite verb or when the sentence is a sentence fragment, the error is tagged as SI. However, one must keep in mind the following:

> [t]he reason why finite verbs are so important is their unique ability to act as *the sentence-root*. They can be used as *the only verb* in the sentence, whereas all the others have to depend on some other word. Indeed, every word-class except finite verbs needs to depend on some other word, so

finite verbs really stand out. (Hudson, 2010, p. 257, emphasis added)

The following are examples from the current CEA of errors tagged as SI or WM:

But, the teacher said (QM) 0 $:$ "No (SI) you very late $you are very late$.

(SI) When I didn't the full marks $when I did not get full marks$...

(SI) They still in my mind $they are still in my mind$ and each day changes my personality.

(SI) and the result, no (FS) attendence $attendance$ today $and the result is no attendance today$.

...because I (GVT) need $needed$ self-confidence. (WM) 0 To Study all the days (GWC) special $specially$ Math was very (GWC) tired $tiring$ for me.

My parents were (WM) 0 of no help. I was pressured to get higher grades to follow my father's path.

...but I (LS) lost $wasted$ my time (WRS) in 0 (GWC) think $thinking$ (WM) 0 how can I make good (GNN) friend $friends.

After that, I finished that stage and I (LS) took got excellent (WM) 0 $grades$ almost 99%.

2.7.4.1 Ensuring Reliability

To enhance reliability, a sample of 20 papers out of 104 texts comprising the corpus were annotated by a second annotator who is also a native speaker of Arabic, proficient in English and holds a PhD degree in English Language and Translation. The fact that both the first and the second analysts were both native speakers of Arabic with competence in English matched Dagneaux et al. (1998, p. 165) recommendations: "In our experience efficiency is increased if the analyst is a non-native speaker of English with a very good knowledge of English grammar and preferably a mother tongue background matching that of the EFL data to be analyzed".

The second analyst was first trained on a sample written by the same group of students in the current study but on a different topic. This sample was collected from their previous unseen midterm exam, that is, it was a recent sample of their written English. This was done to ensure the texts she is trained on were at roughly the same level of English language proficiency and with

similar types of errors as featured in the SLC. After a number of training sessions and when I believed that she had understood the error tagging system in detail, I gave her the current sample. A few disagreements emerged between the two analysts. For instance, the first analyst analysed the sentence: *I surprised from its rules,...* as: *I (GVV) surprised $was surprised$ (LS) from by its rules,...*;Whereas the second analyst analysed it as: *I (GVAUX) 0 was surprised (LS) from by its rules,..* Another example is the sentence: *It was very good from all of points..*, which the first analysed as: *It was very good (LP) from all of Points $ in all respects$ (FS) Points $points$,..*; whereas the second analyst analysed it as: *It was good from all (WRS) of 0 Points (FS) Points $points$,....* .

Figure 2:4 shows the total number of errors identified by each analyst for the eight major error categories. H is the first analyst and K is the second analyst. The following are the eight categories: F=Form, G=Grammar, X=Lexico-Grammar, L=Lexis, W=Word Redundant/missing/Word Order, Q=Punctuation, S=Style, Z=infelicities.
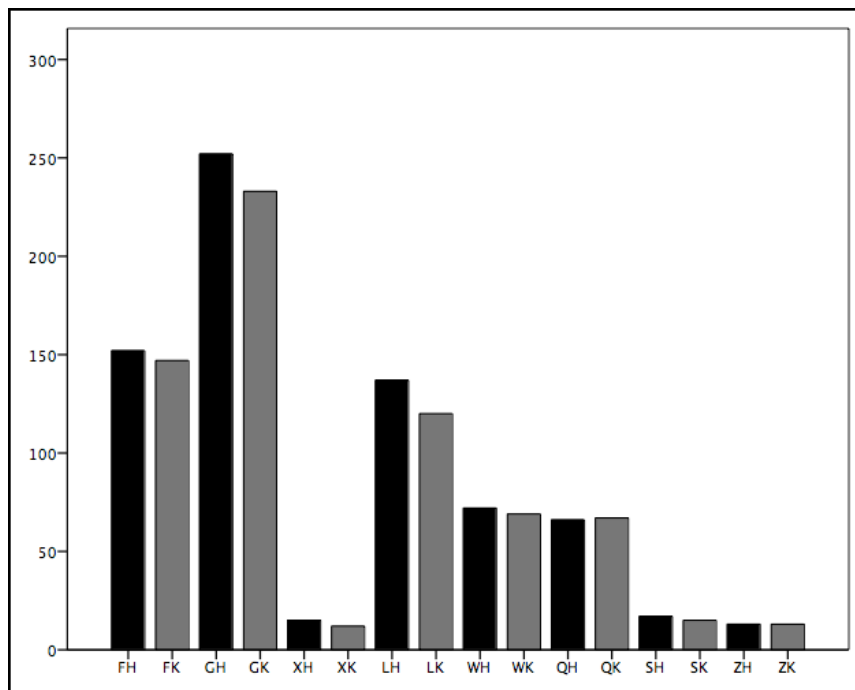
Figure 2:4 The two analysts' total number of errors in each category

Spearman Correlation coefficients were computed for all eight major categories and the total number of tags used by the taggers. Spearman correlation coefficient was used because data were not normally distributed. A *p* value of less than .005 (05/10 = .005) was required for significance. The results of the correlational analyses are presented in Table 2.4. The results show that all the eight correlations were statistically significant and were greater than or equal to .62.

Total Errors	.970, p< .0001
Form	.954, p< .0001
Grammar	.822, p< .0001
Lexico-Grammar	.858, p< .0001
Lexis	.934, p< .0001
Word	.712, p< .0001
Punctuation	.985, p< .0001
Style	.624, p< .003
Infelicities	.922, p< .0001

Table 2:4 Correlations for the total errors and all eight categories of errors

The results of the interrater analysis are Kappa = 0.945 with $p < 0.0001$. The results are statistically significant and the *K* value is high. This indicates a good level of agreement between the two analysts. The percentage of agreement between the two analysts in identifying errors and coding them was 93.50%.

In addition, deciding whether an expression was appropriate was not always a straightforward task for me, a non-native analyst. Thus, I can only claim to having detected the errors that are obviously incorrect to me.

2.7.5 Quantitative Findings

A total of 3,348 errors were identified and coded as a result of the analysis of the error-tagged SLC. Of the 56 error categories in the *UCLEE Manual version 1.2.*, 44 were found in the SLC, whereas twelve categories (GADVO, GADJO, GPI, GPU, GDT, XPRCO, XADJCO, XVCO, XCONJCO) were not found or excluded. The FSR (Form, Regional, Spelling), LSF (Lexical single, False friends) and LPF (Lexical phrase, False friends) error categories were excluded for reasons given earlier (see Section 2.7.4). Table 2.5 presents the number of errors and the proportion of errors in

each subcategory in the SLC, and Table 2.6 shows the normalised frequency and cumulative percentage for all error categories in the SLC.

Based on a frequency count, it was found that the category Grammar (G) was the most common error type (1239/ 37%). Form (F) errors were the second most common error type (786/ 23.5%), followed by Lexis (L) errors (469/ 14%). Word redundant/ word missing/ word order (W) came in fourth place (374/ 11.5), followed by Punctuation (Q) errors (270/ 8%), Style (S) (114/ 3.4%), Infelicities (Z) (50/ 1.5%) and finally Lexico-grammar (X) (46/ 1.4%). Figure 2:5 shows the breakdown of the major error categories.

Major Categories	Form	Grammar	Lexico-Grammar	Lexis	Punctuation	Word	Style	Infelicities
Sub-categories	FS:774 23.12	GVT:341 10.2	XVPR:30 0.9	LS:279 8.33	QM:112 3.35	WRS:141 4.21	SU:60 1.79	Z:50 1.49
	FM:12 0.36	GA:232 6.93	XADJPR:5 0.15	LP:122 3.64	QR:72 2.15	WM:125 3.73	SI:54 1.61	
	FSR: 0 excluded	GVN:146 4.36	XNPR:5 0.15	LCC:34 1.02	QC:62 1.85	WO:62 1.85		
		GNN:145 4.33	XNUC:5 0.15	LCLS:18 0.54	QL:24 0.72	WRM:46 1.37		
		GWC:85 2.54	XNCO:1 0.03	LCLC:12 0.36				
		GPP:72 2.15	XPRCO:0	LCS:4 0.12				
		GVM:70 2.09	XADJCO:0	LSF:0 excluded				
		GVAUX:30 0.9	XVCO:0	LPF:0 excluded				
		GADJCS:22 0.66	XCONJCO:0					
		GVV:17 0.51						
		GNC:16 0.48						
		GVNF:15 0.45						
		GPR:13 0.39						
		GDD:12 0.36						
		GDO:12 0.36						
		GPF:3 0.09						
		GPD:2 0.06						
		GDI:2 0.06						
		GPO:2 0.06						
		GADJN:2 0.06						
		GADVO:0						
		GADJO:0						
		GPI:0						
		GPU:0						
		GDT:0						
Total	786	1239	46	469	270	374	114	50
%	23.48	37.01	1.37	14.01	8.07	11.17	3.41	1.49

Table 2:5 Frequency of all the error categories in the Saudi Learner Corpus

Order	Error category	Error type	Number of occurrences	Percentage （%）
1	F	FS	774	23.12
2	G	GVT	341	10.19
3	L	LS	279	8.33
4	G	GA	232	6.93
5	G	GVN	146	4.36
6	G	GNN	145	4.33
7	W	WRS	141	4.21
8	W	WM	125	3.73
9	L	LP	122	3.64
10	Q	QM	112	3.35
11	G	GWC	85	2.54
12	Q	QR	72	2.15
13	G	GPP	72	2.15
14	G	GVM	70	2.09
15	Q	QC	62	1.85
16	W	WO	62	1.85
17	S	SU	60	1.79
18	S	SI	54	1.61
19	Z	Z	50	1.49
20	W	WRM	46	1.37
21	L	LCC	34	1.02
22	X	XVPR	30	0.9
23	G	GVAUX	30	0.9
24	Q	QL	24	0.72
25	G	GADJCS	22	0.66
26	L	LCLS	18	0.54
27	G	GVV	17	0.51
28	G	GNC	16	0.48
29	G	GVNF	15	0.45
30	G	GPR	13	0.39
31	F	FM	12	0.36
32	G	GDD	12	0.36

Order	Error category	Error type	Number of occurrences	Percentage （%）
33	G	GDO	12	0.36
34	L	LCLC	12	0.36
35	X	XADJPR	5	0.15
36	X	XNPR	5	0.15
37	X	XNUC	5	0.15
38	L	LCS	4	0.12
39	G	GPF	3	0.09
40	G	GPD	2	0.06
41	G	GDI	2	0.06
42	G	GPO	2	0.06
43	G	GADJN	2	0.06
44	X	XNCO	1	0.03
45	F	FSR	0	0
46	G	GADVO	0	0
47	G	GADJO	0	0
48	G	GPI	0	0
49	G	GPU	0	0
50	G	GDT	0	0
51	X	XPRCO	0	0
52	X	XADJCO	0	0
53	X	XVCO	0	0
54	X	XCONJCO	0	0
55	L	LSF	0	0
56	L	LPF	0	0

Table 2:6 The frequency and percentage of all error subcategories in the SLC
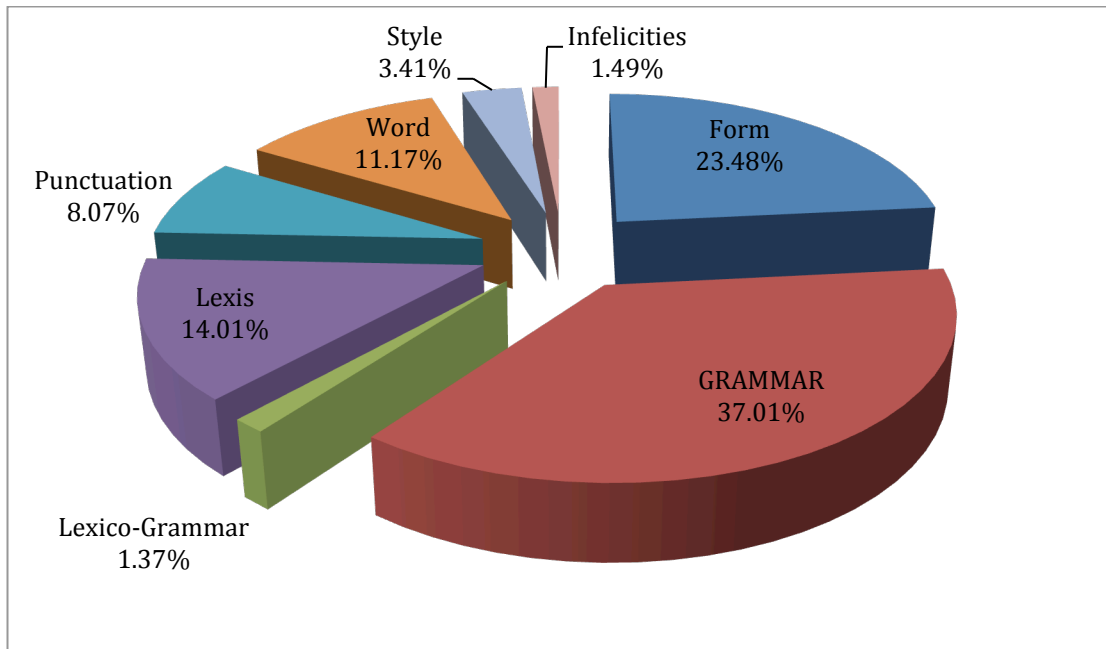
Figure 2:5 Breakdown of the major error categories

Regarding the most common errors of the subcategories in the SLC, a further analysis of error subcategories showed that FS (Form, Spelling) was the largest error subcategory (774/ 23.12%) in the SLC. The second largest subcategory was GVT (Grammar, Verb Tense) (341/ 10.19%), followed by LS (Lexical, Single) (279/ 8.33%), GA (Grammar, Articles) (232/ 6.93%), GVN (Grammar, Verb Number) (146/ 4.36%), GNN (Grammar, Noun, Number) (145/ 4.33%), WRS (Word Redundant, Singular) (141/4.21%), WM (Word, Missing), (125/3.73%), LP (Lexical, Phrase) (122/ 3.64%), and finally QM (Punctuation, Missing) (112/ 3.35%). Figure 2:6 shows the percentage of the ten most frequent error categories.
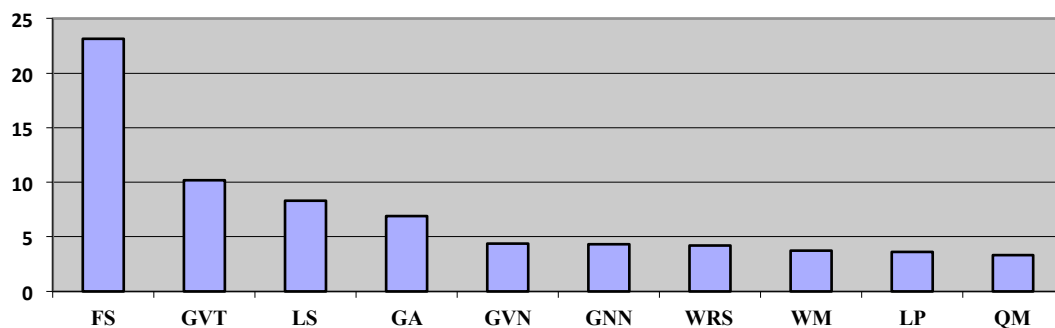
Figure 2:6 The percentage of the ten most frequent error categories

2.7.5.1 Grammar errors

A close examination of the subcategories of the (G) Grammar category revealed that the order of the grammatical areas of difficulty for the Saudi students is as follows: Verbs (619/ 49.95%), Articles (232/ 18.72%), Nouns (161/ 12.99%), Pronouns (92/ 7.43%), Word class (85/ 6.86%), Determiners (26/ 2.1%), Adjectives (24/ 1.94%), and finally Adverbs (0/ 0%). Consequently, we can conclude that the three most problematic areas are: verbs, articles and nouns, respectively. These three categories account for 81.66 percent of the total number of grammatical errors. Figure 2:7 presents the breakdown of the grammatical error (G) category.
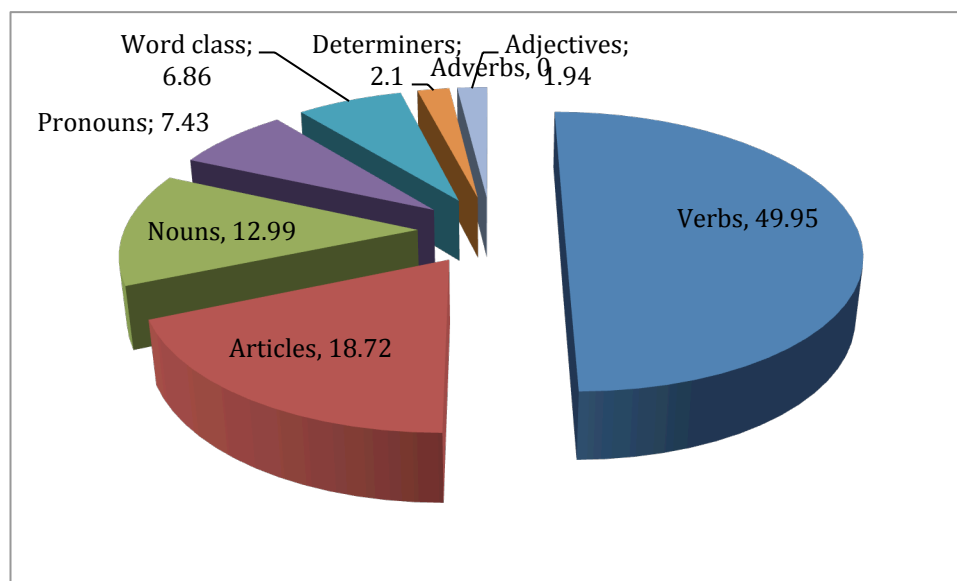
Figure 2:7 Breakdown of the grammatical error (G) category

A further analysis of the GV (Grammar, Verbs) category showed that GVT (Grammar, Verb Tense) is the most frequently occurring error of the GV errors (341/ 55.09%). The second largest subcategory is GVN (Grammar, Verb Number) (146/ 23.59%). The third largest subcategory is GVM (Grammar, Verb Morphology) (70/ 11.31%), followed by GVAUX (Grammar, Verbs Auxiliaries) (30/ 4.85%), GVV (Grammar, Verb Voice) (17/ 2.75%), and finally GVNF (Grammar, Non-Finite/Finite Verb Forms) (15/ 2.42%). Figure 2:8 shows the breakdown of the verb error (GV) category.
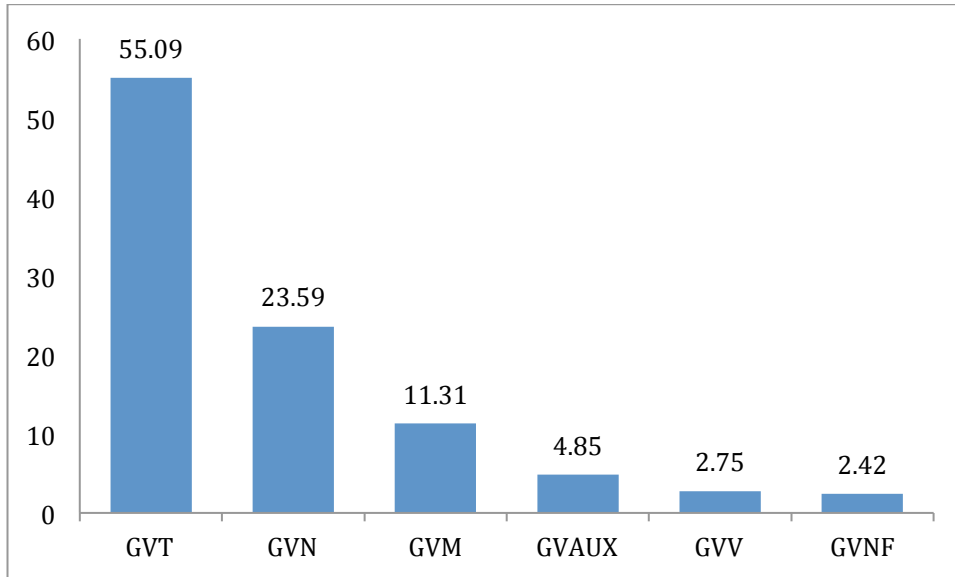
Figure 2:8 Breakdown of the verb error (GV) category

A closer look at the various subcategories in GN (Grammar, Nouns) revealed that GNN (Grammar, Nouns Number) was the largest subcategory (145/ 90.06%), while the second category was GNC (Grammar, Nouns Case) (9.94%). Figure 2:9 shows the breakdown of the noun error (GN) category.
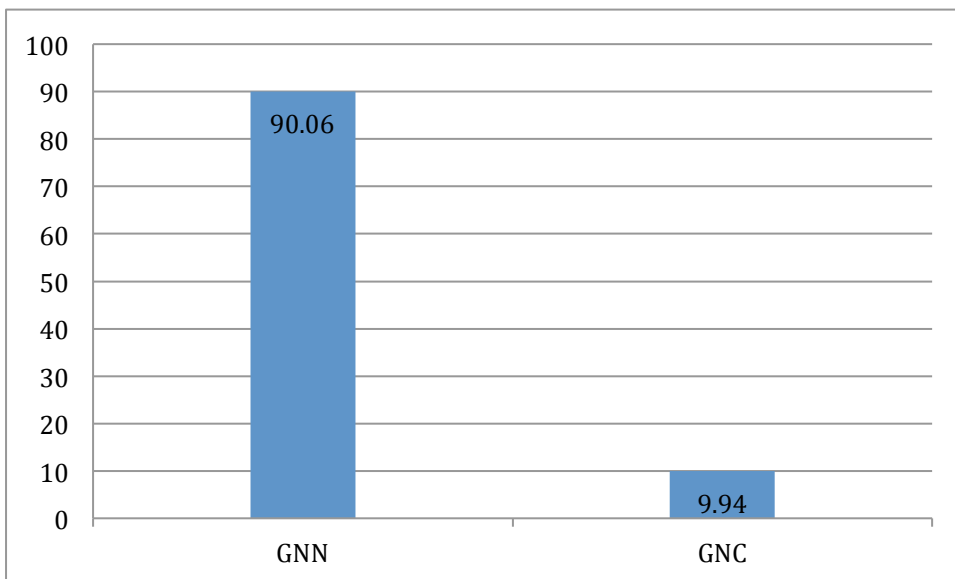
Figure 2:9 Breakdown of the noun error (GN) category

The breakdown of the GP (Grammar, Pronouns) errors showed that GPP (Grammar Personal Pronouns) (72/ 78.26%) is the highest occurring error subcategory in the GP category. A likely cause might be the fact that students were writing about their own experience and thus using the personal pronouns frequently. The second most frequent error is GPR (Grammar, Relative and Interrogative Pronouns) (13/ 14.13%). In third position is the error category GPF (Grammar, Reflexive and Reciprocal Pronouns) (3/3.26%). Together in fourth position are the error categories GPD (Grammar, Demonstrative Pronouns) (2/ 2.17%) and GPO (Grammar, Possessive Pronouns) (2/2.17%). Neither of the error subcategories GPI (Grammar, Indefinite Pronouns) or GPU (Grammar, Pronominal Reference) occurred in the SLC. Figure 2:10 summarises the results for the pronouns error subcategories.
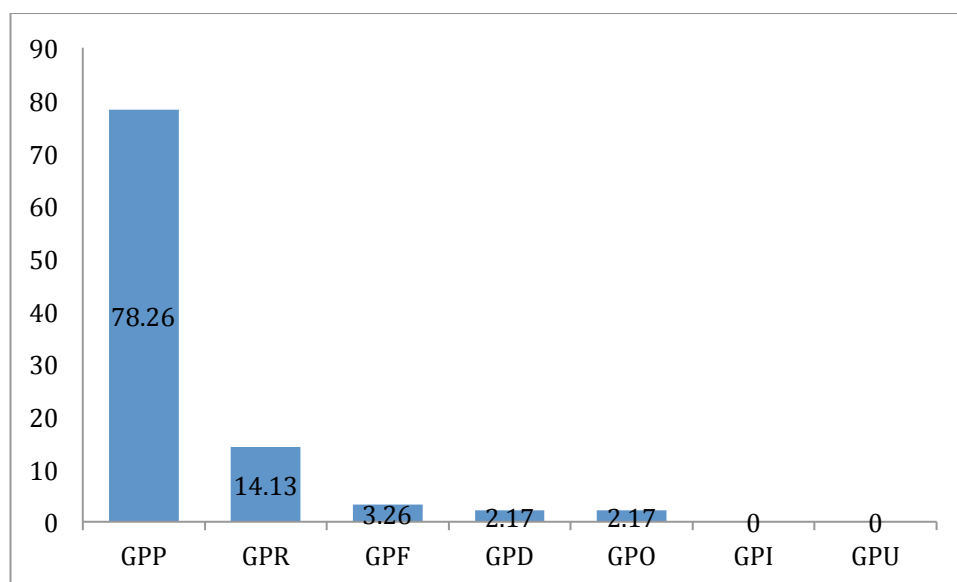
Figure 2:10 Breakdown of the pronoun error (GP) category

For the GD (Grammar, Determiners) error category, both GDD (Grammar, Demonstrative Determiners) and GDO (Grammar, Possessive Determiners) occurred at the same frequency (12/ 46.15%). The error category GDI (Grammar, Indefinite Determiners) (2/ 7.69%) ranked second, while the error GDT (Grammar, Determiner Other) was not found in the SLC. Figure 2:11 presents the results of the GD category.
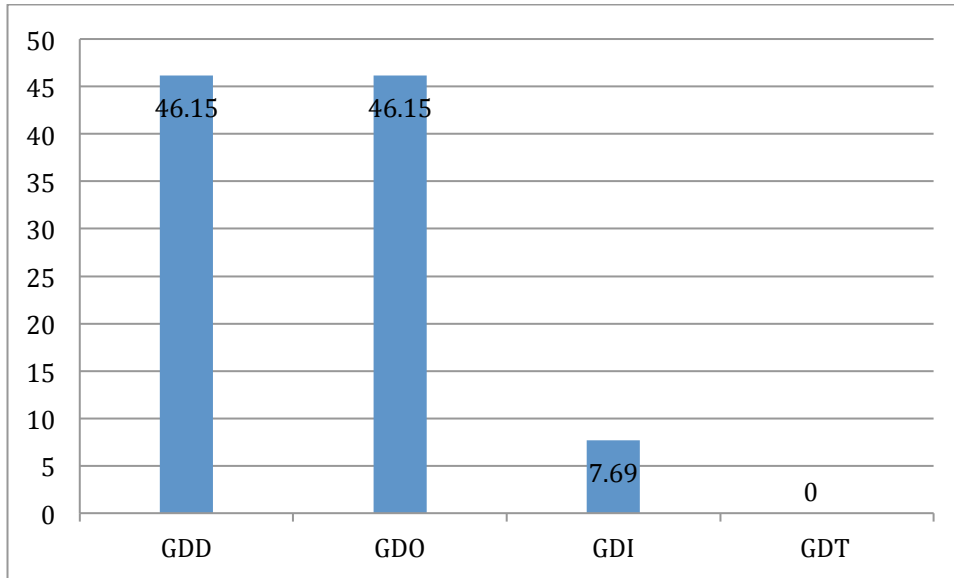
Figure 2:11 Breakdown of the determiner error (GD) category

For the GADJ (Grammar, Adjectives) category, which consists of three subcategories GADJCS, GADJN and GADJO, the most common error was GADJCS (Grammar, Adjective Comparative/Superlative) (22/ 91.67%). The second most common error was GADJN (Grammar, Adjective Number) (2/8.33%). The error category GADJO (Grammar, Adjective order) was not found in the SLC. Figure 2:12 shows the breakdown of the GADJ error category.
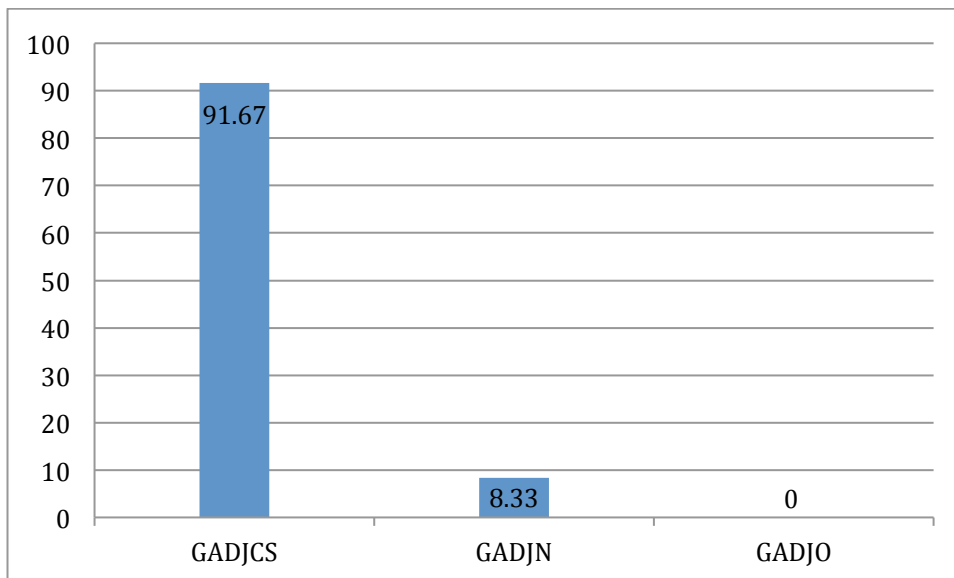
Figure 2:12 Breakdown of the grammar adjectives (GADJ) category

The category GA (Grammar, Articles) was the second most frequent error in the Grammar (G) category (232/ 18.72%). However, there are no further subcategories in the GA category. The subcategory GWC (Grammar, Word Class) was also the fifth most frequent error in the Grammar (G) category (85/ 6.86%) with no further subdivisions. In the GADV (Grammar, Adverbs) category, there is one type of error, GADVO (Grammar, Adjectives Order) and no errors belonging to the GADVO were found in the SLC.

2.7.5.2 Form errors

The second largest error category was Form errors (F). This category consists of three subcategories: FM (Form, Morphology), FS (Form, Spelling), and FSR (Form, Regional Spelling). The same analysis that was carried out on the Grammar (G) category was repeated on all the major error categories, and it revealed that FS was the most frequent error in this category (774/ 98.47%), followed by FM (12/ 1.53%), while I excluded the FSR type (see Section 2.7.4 for further details). Figure 2:13 presents the breakdown of the Form errors.
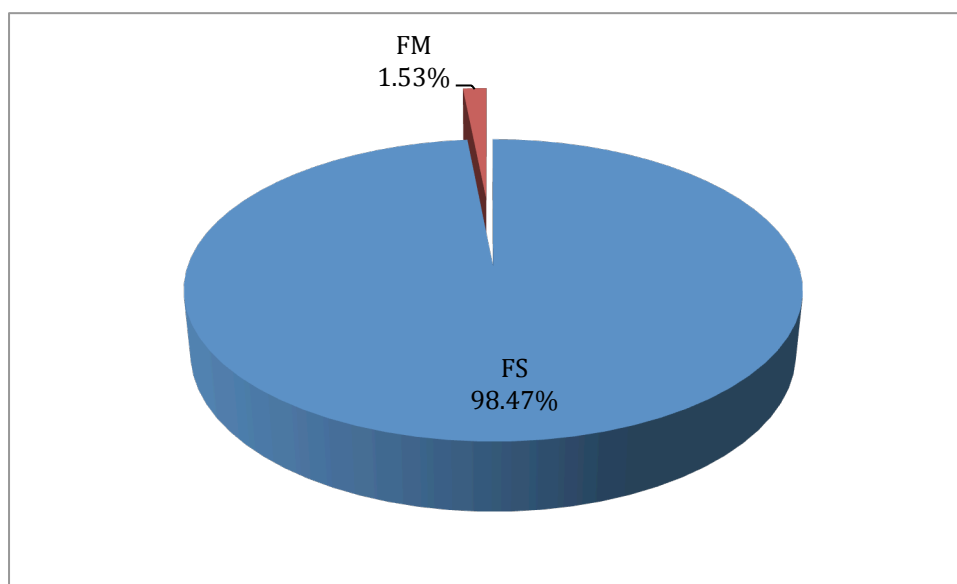
Figure 2:13 Breakdown of the form (F) error category

2.7.5.3 Lexis errors

The third largest error category was the Lexis errors category (L). This category consists of eight subcategories: LS (lexical, single), LSF (False Friends), LP (lexical, phrase), LPF (Lexical phrase, False friends), and the connectors LCLS (Single logical connectors), LCLC (Complex logical connectors), LCC (Coordinating conjunctions), and LCS (Subordinating conjunctions). The most frequent error in this category was found to be LS (279/59.49%). The second most common error was LP (122/26.02%). The third most occurring error was LCC (34/7.25%), followed by LCLS (18/3.84%), LCLC (12/2.56%), and finally LCS (4/0.85%), while LSF (0/0%) and LPF (0/0%) were excluded. Figure 2:14 summarises the results of the lexis (L) category.
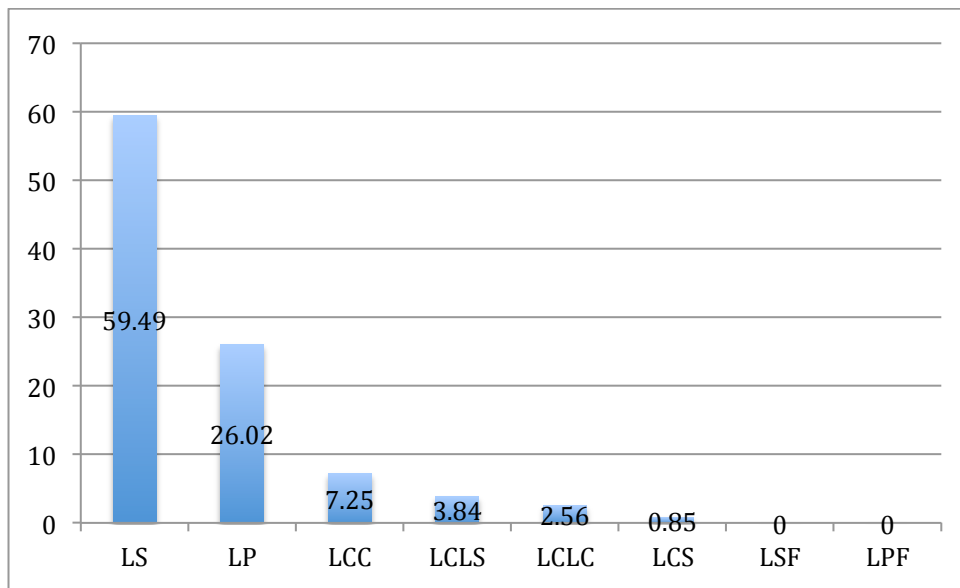
Figure 2:14 Breakdown of the lexis (L) category

2.7.5.4 Word errors

The word category (W) contains four error subcategories: WRS (Word redundant, Singular), WRM (Word redundant, Multiple), WM (Word missing), and WO (Word order). The most common error in the word category is WRS (141/37.70%). The second most frequent error is WM (125/33.42%), followed by WO (62/ 16.58%), and finally WRM (46/12.30%). Figure 2:15 presents the results of the analysis of the word category.
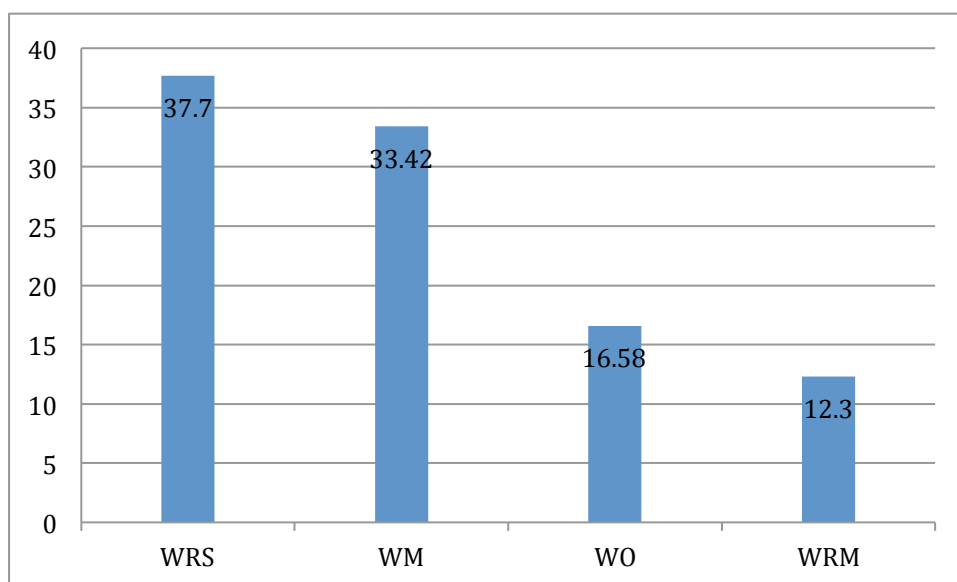
Figure 2:15 Breakdown of the word error (W) category

2.7.5.5 Punctuation errors

The punctuation errors subcategory was the fifth largest error category in the SLC. It consists of four error subcategories: QM (Missing punctuation), QR (Redundant punctuation), QC (Confusion of punctuation marks), and QL (A Punctuation mark instead of a lexical item). The most common error of these in the SLC is QM (112/41.48%), followed by QR (72/ 26.67%), then QC (62/22.96%), and finally QL (24/8.89%). Figure 2:16 shows the breakdown of the Punctuation error (Q) category.
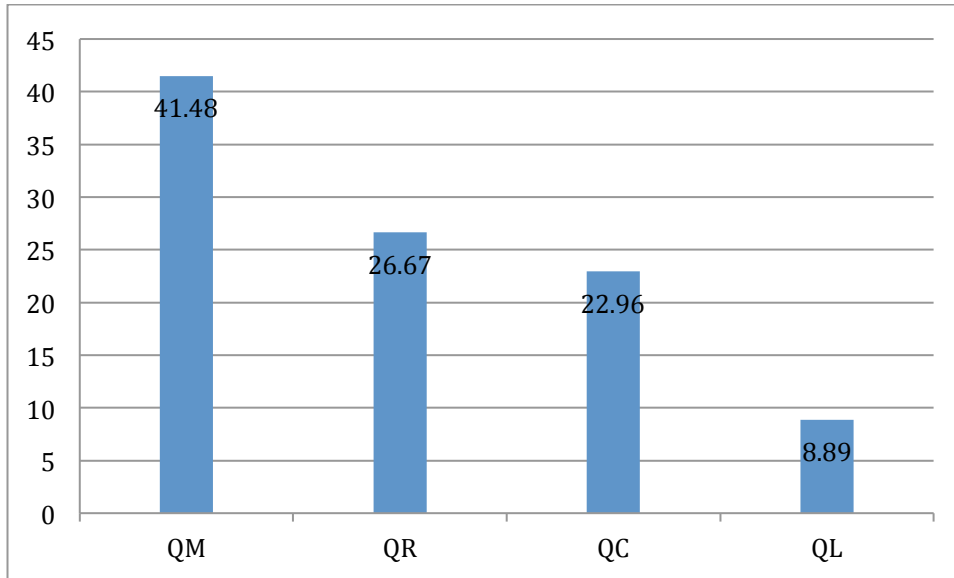
Figure 2:16 Breakdown of the punctuation error (Q) category

2.7.5.6 Style errors

Style errors came in sixth position. This category includes two error types: SU (sentence unclear) and SI (sentence incomplete). The largest in the SLC was SU (60/52.63%), while SI scored (54/47.37%). Figure 2:17 presents the breakdown of the style error category.
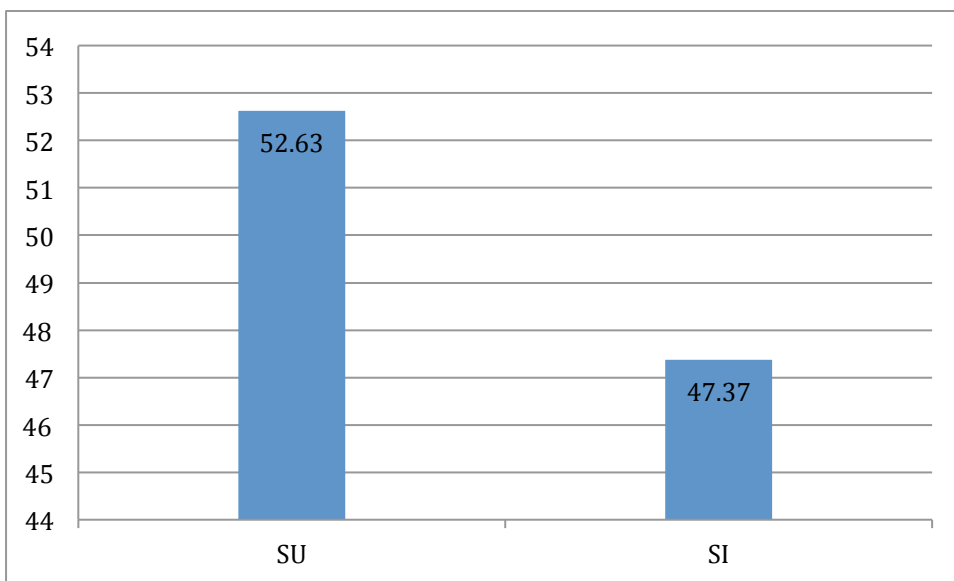
Figure 2:17 Breakdown of the style error (S) category

2.7.5.7 Infelicities errors

The infelicities error category includes register problems, questions of political correctness and stylistic problems. There were 50 occurrences of these types of errors in the SLC, and this category constituted 1.50% of all the major error categories in the SLC.

2.7.5.8 Lexico-grammar errors

The lexico-grammar (X) error category includes nine subcategories: XADJCO (erroneous complementation of adjectives), XCONJCO (erroneous complementation of conjunctions), XNCO (erroneous complementation of nouns), XPRCO (erroneous complementation of prepositions), XVCO (erroneous complementation of verbs), XADJPR (adjectives used with the wrong dependent preposition), XNPR (nouns used with the wrong dependent preposition), XVPR (verbs used with the wrong dependent preposition), and XNUC (nouns: uncountable/countable). The most common error of these subcategories is XVPR (30/65.22%). Three subcategories shared second position: XADJPR, XNPR and XNUC (5/10.87%). XNCO came in third position (1/2.17%). Four error subcategories were not found in the SLC: XPRXCO, XADJCO, XVCO and XCONJCO. Figure 2:18 summarizes the results of the Lexico-grammar (X) category.
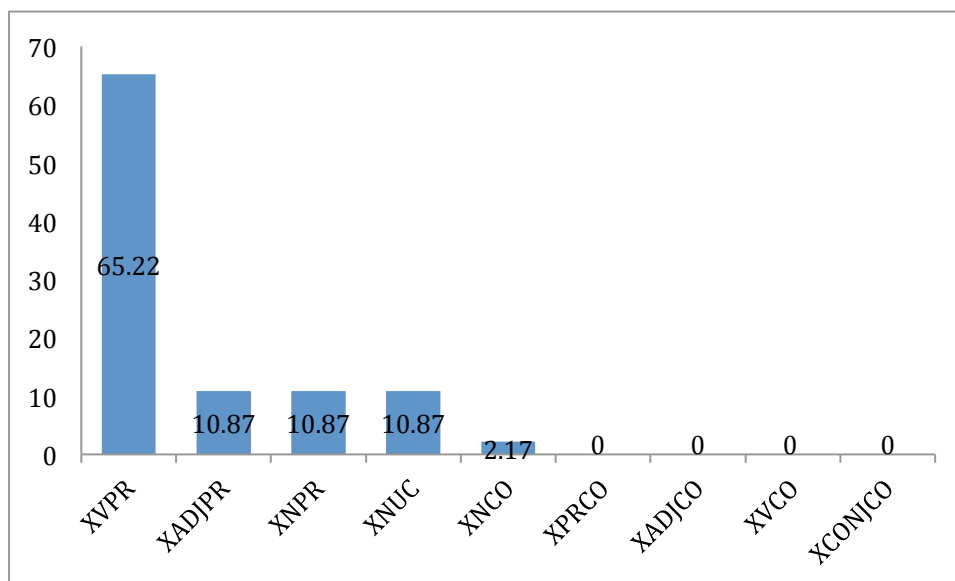
Figure 2:18 Breakdown of the lexico-grammar (X) category

2.7.6 Qualitative Findings

A qualitative analysis was conducted on the findings to provide further insights. Meunier (1998, p. 36) asserted the importance of qualitative analysis of learner corpora, stating that "quantitative measures are essential in language analyses but they are not sufficient. Surface differences- or similarities- between aspects of native and non-native language always require further qualitative investigation". In the following sections, the qualitative investigation will cover the ten most frequent error subcategories in the SLC. The insights drawn from these analyses will inform the design of the DDL materials in a later stage of this project.

2.7.6.1 The FS (Form, Spelling) error category

The FS category includes all spelling errors, the misuse or omission of capital letters, word coinages that are created from scratch, rather than those that are the result of morphological processes, borrowings, homophones, and the misuse or omission of hyphens/blanks in compound words. This error category is responsible for 774 of all error occurrences, that is 23.12% of all the error subcategories in the SLC. Obviously, it is a large group of errors. However, it is a result that most EFL teachers of Arabic students would predict, as argued by Al-Shabbi (1994), Al-Kasimi, Topan, and Khan (1990), and (Beck, 1979). Al-Shabbi (1994) specifically states that "error-analysis studies in the Arab World reveal that spelling is the most prevalent error in the English writing of Arab students" (p.21).

Bowen, Madsen, and Hilferty (1985, p. 284) argue that the system of English spelling is particularly problematic for foreign learners of English whose L1s have a precise correlation between pronunciation and spelling, like Spanish, Turkish or Arabic. Haggan (1991) adds two factors to the reasons for the prevalence of spelling errors among Arabic-speaking EFL students. First, the scripts of Arabic and English differ. Second, Arabic-speaking EFL students have "to cope with the intricacies inherent in the English spelling system, and to particular spelling difficulties arising out of lack of phonological correspondences between English and Arabic (e.g. the phoneme /p/ is missing in Arabic)" (p.47). Another highly likely cause could be L2 learners not receiving sufficient exposure to L2 words in their written form. In a study of the sources of spelling errors in EFL Arab college students, Aljarf (2011) attributes Arab learners' spelling errors to five causes: ignorance of spelling rules, transfer of the Arabic spelling system, mispronunciation,

overgeneralisation, and communication breakdown. In what follows, I will present some examples from the SLC that appear to stem from each one of these causes.

An overarching underlying cause of Arab learners' spelling errors seems to be the one identified by Ryan (1997), who following a series of experiments noted that Arab learners seem to preserve the consonant segments of words and make errors on vowels, that can be incorrect, omitted or showing up in the wrong place of the word. Ryan argued that "[t]he problem seems to take the form of ignoring the presence of vowels when storing vocabulary and also an almost indiscriminate choice as to which vowel to use when one is needed" (p. 189). A large number of the examples from the SLC below seem to stem from this difficulty.

According to Aljarf (2011), "Errors attributed to ignorance of the English spelling rules are those in which phonics, orthographic and morphological rules were ignored such as rule of adding an -*s* to a word ending in -*y*; adding -*ing* to a word ending in the vowel *e*" (p.5). This is probably a result of the lack of spelling instruction in the context of the present study. Haggan (1991) also contends that the "lack of awareness of spelling rules and regular spelling patterns were both strong contributory factors underlying spelling errors even by [university] Fourth Year students" (p. 45). The following are examples from the SLC of spelling errors caused by ignorance of English spelling rules:

…(FS) scientistic $scientific$ section. (FS) at At the (FS) biggining $beginning$, it was   so difficult for me...

When I was (FS) studing $studying$ in (GA) a 0 high school I was (GA) 0 an (FS) exlent $excellent$ student.

 ...because I (LP) felt in strong things $had strong feelings$ and (FS) happyness $happiness$.

I (LP) have late $used to be late$ to history class for I felt (FS) unhappyness $unhappiness$ (GWC) unhappyness $unhappy$ and it...

... to write about (FS) every thing $everything$ but I (FS) cann't $can't$ (FS) becaues $because$ I don't have any...

I (FS) studed $studied$ very hard and I (GVAUX) am did not sleep at night. I (FS) staied $stayed$ in my room (LP) just for $in order to$ study.

Regarding the second reason, transfer of the Arabic spelling system, as mentioned above, the Arabic spelling system differs from the English spelling system. In Arabic, as Aljarf (2011) noted, "[t]here is a one-to-one correspondence between phonemes (spoken sounds) and graphemes (written symbols). Each consonant and each vowel has only one sound. Arabic has no double letters, no silent letters, no consonant and vowel digraphs, and no hidden sounds" (p.8). This explains why some Arabic-speaking EFL students tend to spell English words with a non-phonetic spelling the way those words are pronounced. For example, Arab students may delete final silent vowels or reduce double consonants. The following are examples of such cases from the SLC:

...Mathematics $mathematics$, (FS) letruers $literature$, English, (FS) Giographi $geography$... etc. In the second year..

It was how we can (LS) out $take out$ the steam from (GA) 0 a small (FS) piep $pipe$ ...

I liked to (FS) descover $discover$ everything in life (QR) . 0 and ...

(GADJCS) nice more $nicer$ than (FS) intermediat $intermediate$ (LCC) or and (FS) elmantry $elementary$ (FS) scool $school$

(FS) On one day, I was very late. I (FS) nocked $knocked$ (GA) a the door and opened (WRM) the door it.

...and all the students (LP) conected together $had good relations$ (FS) conected $connected$. When the final exam came I (GVT) feel $felt$ sad because I moved to....

The third cause of spelling errors, as pointed out by Aljarf (2011), is mispronunciation. It contributes to the rate of spelling errors, as students spell English words the way they pronounce them. Haggan (1991) also argues that mispronunciation contributes to spelling errors among Arab EFL students, even at advanced levels. Some spelling errors from the SLC seem to be caused by mispronunciation:

...happy and (GVT) thank $thanked$ me for my (GWC) honist $honesty$ (FS) honist $honest$ and gave (GPP) 0 me a full mark for this.

The (FS) Teacher $teacher$ asked (GPP) 0 me to write (GA) 0 a (FS) sentince $sentence$ and I (FS) wrot $wrote$ one (QM) 0 $.$ She came and saw it...

....my mother began (GVNF) to take $taking$ (LP) an appointment in midicen $medical appointments$ (FS) midicen $medicine$ (QM) 0 $.$ (FS) somedays $some days$ she stayed all...

... have to (FS) dell $deal$ with (GPP) it $them$. One of the most (FS) beutfull $beautiful$ moments (WO) that time was $was that time$...

When I was in high school I was a very (FS) noty $naughty$ girl. I used to talk while the teachers speak...

my (FS) cheer $chair$ next to my (FS) frind $friend$ ....

$.$when I was in (FS) highschool $high school$ (QM) 0 $,$ I was (FS) bright and (FS) fany $funny$ (QM) 0 $.$ also...

....like meeting friends and cousins and (FS) cuntino $continue$ doing my role as a family middle daughter...

Finally, I appeared (LS) on $in front of$ (FS) audionece $audience$, but my (GWC) read $reading$ was ...

The fourth factor that affects Arab EFL spelling is overgeneralising some features of English spelling such as adding silent letters, or doubling consonants in words that are not spelled with double consonants. The following are examples from the SLC of such cases:

I hope to (FS) returne $return$ to this school (WRM) for me 0 ...

...because it is a basic step in my education, and I (FS) tooke $took$ (GA) 0 an important (FS) disation $decision$ (QR) . 0...

I met new teachers and good students. I made a strong (FS) realationshipe $relationship$ with (LS) whole $all the$ (GNN) student ...

Communication breakdown was found to be the fifth cause of spelling difficulties. When students are unable to hear or identify all the phonemes in the words they hear, their spelling ability will

inevitably be affected. For instance, the phoneme /p/ is missing in Arabic. Thus, it is difficult for Arab EFL students to hear or identify this phoneme and differentiate the phoneme /p/ from the phoneme /b/. This difficulty results in a number of spelling errors. The following are examples of such cases from the SLC:

...popular in my (FS) scool $school$ for acting (QC) ! $.$ that thing (GVT) makes $made$ me more (FS) broued $proud$ of (FS) my self $myself$ and (GVT) makes $made$ me believe that I can do ...

We (GVM) was take $used to take$ about seven (GNN) class $classes$. That was (FS) poring $boring$ and (GWC) tired $tiring$ and I don't (GVT) don't like $did not like$...

My friend and I were sharing (FS) every thing $everything$ (QC) . $,$ (FS) blaying $playing$ together in the break (WRS) time 0 and having (GA) a 0 breakfast.

The (FS) Petter $better$ the teaching of teacher and the fewer the (WRS) the 0 student of class

She told us about it. She said that "who (GVN) want $wants$ to teach my (FS) supject $subject$ just (WM) 0 for one day (QM) 0 $?$' Then I said ...

I (FS) particebat $participate$ (GVT) particebat $participated$ in school (GNN) activity $activities$..

All (GA) 0 the (GNN) student $students$ (GVT) wear $wore$ uniform (LCS) 0 $which$ (FS) i I (FS) brefer $prefer$ (GPD) that 0 and (GPP) I 0 (FS) likt $like$...

Also, in (FS) tha $that$ stage I (LP) was always doing $I used to practice$ my (FS) hoppies $hobbies$ (SU) that were very much $?$ that help me to be (GA) 0 a useful ....

Although spelling errors represent a large group in the CEA of the SLC, these errors are mechanical errors. Therefore, there is a high possibility that Saudi EFL students can improve their spelling ability with further exposure to English and lots of practice of writing in English. On the other hand, they are not expected to easily overcome lexical and grammatical errors. Lexical and grammatical errors are far more likely to fossilise than spelling errors.

2.7.6.2 The GVT (Grammar, Verbs, Tense) error category

This error category is the second largest in the SLC. It accounts for 10.19% of all the errors in the SLC, with 341 errors in total. This category consists of any misuse of tense or aspect. Biber et al. (1999) point out that from a structural point of view, English verbs are inflected for only two tenses: present and past. In English, the present tense is unmarked morphologically, apart from the suffix *(e)s* on the third person singular, and the past tense for regular verbs is marked with the suffix *–ed*.

> Simple present tense referring to the present time has two major meanings: to describe a state existing at the present time, and to describe present habitual behaviour.
>
> Simple present tense referring to a state existing at the present time:
>
>
> I **want** a packet of crisps.
> Economists **fear** interest rate rise.
>
> Simple present tense referring to present habitual behaviour:
>
> There's this one bloke, he **walks** around with a grenade tied to his neck.
> He **dances** and **moves** about a lot.
>
> In addition, the simple present can report on an action ongoing at the time:
>
> Here **comes** your mother (pp. 453-454).

After examining the GVT category's errors, it was found that a few errors in the SLC were cases where the simple present tense should have been used

e.g. ...(LS) The person One (GVT) passed $passes$ many (GNN) stage $stages$ (LS) on in (Z) his his/her life (QC) , $.$ I...

...(GA) The 0 high school is interesting (FS) becus $because$ it (GVT) is including $includes$ (GNN) subject $subjects$ ...

...(GA) The 0 graduation is (GA) 0 a (FS) dreem $dream$ for anybody. I will
(FS) hop $hope$ (GVT) will hope $hope$ my graduation in college (GPP) it's is (GVT) it's $will be$ (GADJCS) more best a day $a better day$.

A larger number of GVT errors in the SLC involve cases where the present tense was used when

the past tense should have been used. Past tense is used:

> i. to describe something which happened at a definite time in the past or a series of actions (He heard about the exam last week, She gave Jason a present ages ago), ii. to describe something which could not happen (or would be unlikely) in the present or future. (Leech, Cruickshank, & Ivanič, 2001, p. 374).

In the following examples from the SLC, there are cases where the students have opted to use the present tense, although there are time adverbials that refer to the past tense: *e.g. after two years.* More striking are the cases where the student uses the past tense in the first part of the sentence but does not remain consistent and uses the present tense in the second part.

e.g. I (FS) descovered $discovered$ (GA) 0 a (FS) Senice $science$ (GWC) Senice $scientific$ theory (GPR) that $which$ I (GVT) notice $noticed$ ...

...sat in the nice place with our teachers. The (LP) leader's teacher $headmistress$ (GVT) give $gave$ the (GWC) excellence $excellent$ and ideal girl (GA) 0 a certificate of ..

When I finished my first year I felt calmer, (GA) the 0 I (GVT) choose $chose$ science section, (FS) Because $because$ I was and still love math and English...

When I was in high school, I used to hate English language (QC) , $.$ when (FS) The the exam time (GVT) comes $came$ I (GVT) feel $felt$ (FS) That $that$ (GVT) I'm not going $I was not going$ ...

Similarly, a number of errors were also associated with instances where the present perfect tense should have been used. According to Biber et al. (1999), the present perfect "designates events or states taking place during a period leading up to the specified time" (p. 460). They explain that the perfect aspect in English is marked by the auxiliary verb *have +ed*-participle.

.... (FS) depende $dependent$ on myself. If I (FS) chatt $chat$ with my friend while the lecture (GVT) was started $has started$ and I

I think it's (FS) asuccessful $a successful$ experience. I hope to be there now to see what (GVT) is happened $has happened$ (LS) in to the school and my (GNN) teacher $teachers$.

In addition, some cases were found in the SLC where the students used the present perfect tense

instead of the past perfect tense. The Saudi EFL students' confusion between these two tenses was very clear in the attested instances. This noticeable difficulty can be explained by the fact that no perfect tense system formally exists in Arabic (Alkhuli, 1999; Farghal & Shunaq, 1999). The following are some examples from the SLC of the Saudi EFL students' errors:

I was a teenager and (GVT) have just came $had just come$ (LS) came $finished$ (WRS) from 0 the (FS) intermediat $intermediate$ school...

I have had a difficult situation in my life. It was after I (GVT) have finished $had finished$ the first year in the secondary school.

There were also some cases where confusion between the past perfect tense and simple past tense was attested. These are some examples from the SLC where the past perfect tense was used instead of the simple past tense:

After six (GNN) month $months$, (FS) My my mother (GVT) had lost $lost$ a lot of her (FS) whaight $weight$. It was very (GWC) hardly $hard$ for her...

I was very sad in the first week. Then I sat with five girls. They (GVT) had became $became$ (GVM) had became $had become$ my best friends. Then my life changed...

...(FS) matterial $material$ with me and bringing them to my friends but (QR) , 0 something (GVT) had happened $happened$ (XVPR) happened with $happened to$ me which made (GPP) 0 me change my mind ...

In addition, there were also cases where the students opted to use the past continuous tense instead of the simple past tense or vice versa. This also indicates that they have some difficulties in differentiating between these two tenses. Biber et al. (1999, p. 460) point out that "[t]he progressive aspect designates an event or state of affairs which is in progress, or continuing, at the time indicated by the rest of the verb phrase". In English, the progressive aspect is marked by the auxiliary verb *be + ing*-participle.

...I (GVT) have had great friends. We (GVT) was helping $helped$ (FS) eachother $each other$ (QR) . 0 And we ...

... the books (FS) ware $were$ big and (GVT) include $included$ many chapters. I (GVT) was study $was studying$ many subjects. The (FS) devlopment $development$ system helps ...

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I (GVT) was needing $needed$ to (FS) successed $succeed$. I (FS) studed $studied$ very hard and I...

I (GVT) was feeling $felt$ (LP) a big rest $at ease$ at high school.

... student in all the subjects so (QR) , 0 I was popular and loved by most of the students. I (GVT) was enjoying $enjoyed$ (FS) hidding $hiding$ (FS) forbedin $forbidden$ (FS) matterials $materials$...

There were also cases where the past continuous was used instead of the past perfect tense, as in the following examples from the SLC:

... same friends, hobbies and (FS) basicly $basically$ everything. High school came and my sister (GVT) was just starting $had just started$ college.

Regarding the simple future tense, there were cases where the present continuous tense or simple present tense was used where the simple future tense should have been used or vice versa. According to Biber et al. (1999, p. 456), "there is no formal future tense in English. Instead, future time is typically marked in the verb phrase by modal or semi-modal verbs such as *will, shall* or *be going to*". The following are some examples of Saudi EFL students' errors from the SLC:

I feel more happy and (FS) intersted $interested$ when I study. I am (FS) tooking $talking$ (GVT) am tooking $will talk$ about one school (QL) , $where$ (WRM) the school 0 I ...

I will (FS) hop $hope$ (GVT) will hope $hope$ my graduation in college (GPP)it's is (GVT) it's $will be$ (GADJCS) more best a day $a better day$.

2.7.6.3 The LS (Lexical Single) error category

The (LS) error category is used for conceptual, collocational or connotative lexical errors in single words only. In addition, solid and hyphenated compounds are included in this category. There were many errors of this type in the SLC, and it proved to be the third most frequent error type (279 occurrences/8.33% of all the error types). There were also a wide range of misused verbs and nouns in the SLC, as well as some cases of misused independent prepositions. 91/32.62% of these

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errors were collocation errors. The collocation status was judged by finding the collocation in at least two collocation dictionaries from the following: *Oxford Collocations Dictionary for students of English*, *Macmillan Collocations Dictionary*, and *Longman Collocations Dictionary and Thesaurus*. Errors in collocation usage were established using the same collocation dictionaries and the British National Corpus (BNC). The potential effect of L1 was attested in 63% of these collocation errors. The process used here to detect potential transfer errors is back translation, a method advocated, among others, by Granger (2008b) as one way of assessing the potential influence of the learners' L1 phrasicon on learners' L2 performance. Word combination errors were translated back into the learners' L1 and in cases where an L1 equivalent to the error could be found, the word combination was classified as a potential transfer error. I and another native speaker of Arabic examined the errors and marked the ones we considered to be affected by Learners' L1 (Arabic). The interrater reliability was .98.

Because of the prevalence of collocation errors and the wide influence of learners' L1 in their errors, the decision was made to focus on verb-noun collocation errors in the next study in which teaching materials were designed and evaluated, (reported on later in this thesis; see section 4.8 for further details on reasons for choosing verb-noun collocations). As pointed out by Laufer and Waldman (2011, p. 665), the causes of the problematic usage of collocations seem also to be attributed to "the inherent nature of collocations, the nature of communication in an L2, and the nature of some teaching practices that stress input-based learning and refrain from explicit vocabulary teaching", and neglecting the issue of teaching formulaic language patterns. In addition, the difficulty learners face in collocation production is mostly because corresponding collocations in L1 may often contain one word (or more) that is different from the word form in L2. Similarly, semantically transparent collocations might go unnoticed in input because they are composed of frequent words. L1 transfer influence on L2 learners' production and their failure to notice constraints on word sequences indicate that unlike native speakers, learners build L2 output from individual words rather than from prefabricated chunks (Kjellmer, 1991; Wray, 2002). According to Sinclair (1991), L2 learners are often functioning on the open choice principle rather than on the idiom principle.

In their discussion of seemingly appropriate teaching techniques for L2 formulaic language production, Laufer and Waldman (2011, p. 666) argued for preemptive Focus on Form (R. Ellis,

Basturkmen, & Loewen, 2001), which directs learners' attention to specific structure or lexis since it can raise L2 learners' awareness of the importance and the difficulty of formulaic language patterns. They call for communicative, task-based teaching aided by form-focused instruction, either Focus on Form or Focus on Forms, that sheds light on the target items and let learners "practice them out of an authentic, communicative context". The Focus on form task should emphasize on "production and crosslinguistic comparison". Calls for adding the production element in formulaic language teaching tasks are justified by the nature of formulaic language patterns and the fact that they might not be problematic sometimes when perceived receptively in input, while production seems indeed problematic. The crosslinguistic instruction is stressed because of the pervasive influence of learners' L1 on learners' output and the persistence of L1 induced errors, according to Laufer and Waldman (2011). Further details on the teaching tasks in both the collocation and lexical phrases studies are presented in chapter four and chapter five.

Below are some examples from the SLC.

...in the (FS) Collages $colleges$ (GNN) collages $college$ (FS) witch $which$ we want (QM) 0 $.$ (LS) In At this age, (GA) the 0 teenagers need (WRS) to 0 someone who (GVAUX) 0 can advise...

Since a year I discovered (GA) 0 an (LS) beautiful $interesting$ thing. It was how we can (LS) out $take out$ the steam from (GA) 0 a small (FS) piep $pipe$ (QC) ?! $.$ I studied this...

I hope to (FS) returne $return$ to this school (WRM) for me 0 (LS) for to correct my (FS) mestake $mistake$.

... I (GVT) feel $felt$ (FS) That $that$ (GVT) I'm not going $I was not going$ to (LS) do $make$ it.

(LS) In on that day I couldn't sleep (LS) in at (GA) the 0 night (QM) 0 $.$ I was very ...

On the other hand I (GVT) have had (FS) alot $a lot$ of good (LS) remmbers $memories$ (FS) remmbers $remembers$ in high school...

2.7.6.4 The GA (Grammar, Articles) error category

The (GA) error category proved to be the fourth most common error type (6.93%) of all the error categories in the SLC. A further analysis revealed that of the 232 erroneous occurrences, 'zero form' errors were the most common (50.8 %). There were two types of omission:

(i.) Omission of the indefinite article (a/an, 28.4%, 4.7% of all article errors respectively) as in:

....(GNN) subject $subjects$ became (GADJCS) more easy before $easier than$ the first year. But this year was (GA) 0 a hard year in my high school experience.

... that (LS) made $gave$ me (GA) 0a very great personality.

...I found (GA) 0 an (XNPR) answer of $answer to$ this question.

(ii.) Omission of the definite article (the, 17.65%) as in:

First, I will talk about (GA) 0 the positive points...

Secondary school (GVN) have has three levels (QC) , $.$ (GA) 0 the first level is general (QM) 0 $.$

Obviously, the omission of 'a/an' was more frequent (33.1%) than the omission of 'the' (17.65%). The second most frequent GA error type was the misuse and insertion of the indefinite article 'a/an' (27.96%) of all article errors as in:

In fact (GDD) this $that$ grade was (GA) a the best grade...

In the final year (QM) 0 $,$ we (GVT) have had a very (GA) a 0 difficult exam...

The third most frequent error type was the misuse and insertion of the definite article 'the' (20.25%). Interestingly, of all these cases of misuse of the definite article 'the', there were no instances where 'the' had been inserted in place of 'a/an', whereas there were cases in the SLC where 'a/an' was mistakenly inserted in place of 'the'.

Some of the GA error types were unsurprising. Crompton (2011, p. 10) summarised the most expected difficulties for Arab EFL learners in using English articles, which were originally pointed out by Kharma and Hajjaj (1997) and Smith (2001):

- Because of the absence of an indefinite marker in Arabic, initial underuse of (*This is book*) is to be expected and is likely to be followed by overuse (*These are a books*)
- Differing patterns of definiteness for the nouns in genitive constructions are likely to transfer (*Car the teacher*)
- In a range of idiomatic uses learners are likely to "reinstate" definite articles omitted in English (*I went to the bed*)
- Proper nouns in Arabic often contain the article (*He lived in the India*)

Kharma and Hajjaj (1997) add four other likely transfer problems:

- non-ellipsis of articles in compound noun phrases (*the salt and the pepper*)
- use of the definite article (obligatory in Arabic) in generic plural noun phrases (*The horses are useful animals*)
- use of the definite article for abstract nouns (*All men fear the death*)
- use of the definite article for mass nouns (*The milk is nutritious to the body*).

Saudi EFL students' difficulties with the indefinite article *a/an* are noticeable in the SLC. A further analysis of the error types in the GA category reveals that the omission of *a/an* was the most common error type (33.1%) of all article errors. The second most frequent error type was the insertion of *a/an,* where no article is needed (23.69%). For example, *When I (LS) entered $joined$ (GA) a 0 high school, I was very afraid and (GWC) exciting $excited$...* According to Biber et al. (1999, p. 260), the indefinite article *'a/an' is* used with singular countable nouns. The indefinite article "narrows down the reference of the following noun to a single member of a class and is often used to introduce a new specific entity in discourse".

1. ***A cat*** *was the victim of a cruel attack when she was shot in the neck by* ***a pellet*****.....*The pellet*** *went right through* ***the cat'***s *neck and came out the other side...*
The indefinite article can also be used where the noun phrase does not refer to any specific entity.
2. *I'm looking for* ***a millionaire***, *she says, but I don't see many around.*
3. *I feel terrible. I need* ***a friend***.
4.*Police are looking for* ***a scruffy man aged 17 to 21*** (Biber et al., 1999, p. 260).

In examples 2 and 3, the indefinite article is attached to a non-specific new entity, whereas it is attached to a particular newly introduced entity in example 4. The indefinite article can also be used to classify an entity, as in example 5, or generically, as in example 6 to refer to something

typical of any member of a certain class:

5. *My husband is **a doctor**.*
6*. **A doctor** is not better than his patient* (Biber et al., 1999, p. 260).

A close examination of the omission of the indefinite article reveals that it was mostly omitted before a countable indefinite noun as in:

...when I was (GA) 0 a (FS) chield $child$...
I wish (GVM) to became $to become$ (GA) 0 a teacher in the same school...

Another frequent error type was the omission of the indefinite article in the pattern a + adverb + adjective + noun, as in:

It was (GA) 0 a very good stage.
I had (GA) 0 a very good experience.
... I (LS) stayd $spent$ (GA) 0 a very wonderful time...

As for the use of the definite article, Biber et al. (1999, p. 263) explain that the definite article *'the'* is used with countable and uncountable nouns: "It specifies that the referent of the noun phrase is assumed to be known to the speaker and the addressee. The knowledge could be based on the preceding text in which case we speak of anaphoric reference", as in:

1. ***A doctor** was allowed to carry on working after telling fellow general practitioners **he** had contracted Aids, health officials revealed yesterday. ... **The doctor**, who died last summer,...*

In many cases, however, the connection is inferred rather than signalled by repetition. This is known as indirect anaphoric reference, as in:

*2. He found **her blue Ford Escort** in the car park. **The vehicle** was locked and **the lights** were off.* (Biber et al., 1999, pp. 263-264)

In 2, once a car has been introduced, one can refer to things connected with the car as contextually given. Thus, one can say that the use of the definite article is partly dependent on the preceding text and partly on general pragmatic knowledge. Example 2 also indicates how a subsequent reference to the same entity may appear in the form of a semantically related word with a definite reference, *'the vehicle'*.

Reference can also be established through something following later in the text. This is called

cataphoric reference, as in:

3. *Another potential voter starts to tell him about **the car that went through his garden wall.***
4. ***The patterns of industrial development in the United States** are too weird to be categorized easily.* (Biber et al., 1999, p. 264)

There is also what is called situational reference where the definite article is attached to an entity known by the shared situational context of the speaker and the hearer. Situational reference may rely on the immediate speech situation (as in 5) or the larger shared context (as in 6):

5. *I think there's somebody at the door now.*
6. *A. He's a farmer.*
   B. But how can he make money like that?
   C. Cos they get money off the government don't they, farmers? (Biber et al., 1999, p. 264)

A further analysis of the omission of the definite article in the SLC (20.25% of all article errors) showed that students did not write the definite articles in places where it should have performed the roles described by Biber et al. above. For instance, there were cases where students seemed to misunderstand the anaphoric reference of the definite article and did not use it, as in:

One day our teacher (FS) give $gave$ us homework and she said every student (WM) 0 $has to$ do (GA) 0 the homework (LP) in hersilve $ by herself$ in (FS) hersilve $herself$. ...I (GVM) was take $took$ the homework from my friend (QR) . 0 And (LS) no $did not$ think about (GA) 0 the teacher...

Erroneous instances also resulted from misunderstanding the cataphoric reference, as in:

and (GA) 0 the (XNPR) number $number of$ (LS) material $subjects$ we were taught (GVAUX) 0 was...

Further, there were many cases where the definite article was omitted although it refers to an entity known to be unique, as in:

...(GA) 0 a computer room (LCC) and $which$ (GPP) it's is conected (LS) with to (GA) the internet...

...what I (GVT) want $wanted$ (XVPR) want $wanted to$ be in (GA) 0 the future.

There were also a number of cases where 'the' should have been used before superlatives or ordinals, as in:

..(XVPR) connect another pipe on $connect another pipe to$ (GA) 0 the first (FS) piep $pipe$..
...(GA) 0 the first level is general...
...after (FS) That $that$ day I (FS) desided $decided$ to be (GA) 0 the best student in the class.

Before describing Saudi EFL students' errors in the use of the zero article, it is appropriate to describe the usage of the zero article in English. According to Biber et al. (1999, p. 261):

> [c]orresponding to the indefinite article with singular countable nouns, we find the zero article with uncountables (1) and with plural countable nouns (2 and 3):
>
> 1. *We have **wine** on the table girls, drink it.*
> 2. *Two of his cousins are **teachers**, his sister's a teacher.*
> 3. *Inside the house Mr Summers found a family of **cats** shut in the bathroom.*

The reference in the above instances is to an indefinite number or amount. Zero-article noun phrases often express non-specific or generic reference, for instance: "*Beer is, quite rightly, Britain's favourite Friday night drink*" (Biber et al., 1999, p. 264).

There were a total of 102 (43.96%) instances of unnecessary insertion of *a/an* and *the* of all article errors in the SLC where the zero article should have been used. The most common one was the unnecessary insertion of *a* (54/23.27%), followed by the unnecessary insertion of *the* (47/20.25%), and finally, there was only one case of unnecessary insertion of *an* (.42%). The following is an example from the SLC:

(LS) In At this age, (GA) the 0 teenagers need (WRS) to 0 someone who (GVAUX) 0 can advise them (QM) 0 $.$...

There were many cases like the above in the SLC, where the reference is to plural and unspecific nouns. Thus, *the* was not needed. In addition, there were instances where *a/an* had been mistakenly inserted before an uncountable noun, as in:

The friends in class (GVT) are $were$ smart, lovely and (GVT) have had (GA) a 0 good (FS) behaivour $behaviour$ (GVAUX) have $were$ (LP) good behaivour $well behaved$

Some errors involved the unnecessary insertion of *a/an* or *the* before nouns where the focus was on the type of institution rather than on a specific institution, as in:

...(FS) bat but in (GA) the 0 college we have to (FS) depent $depend$ about 70 (FS) persent $percent$ on ourselves..

2.7.6.5 The GVN (Grammar, Verb, Number) error category

This error category is the fifth most common error category in the SLC, accounting for 146/ 4.36% occurrences of all errors in the SLC. The GVN includes all errors of concord between a subject and its verb. As Biber et al. (1999, p. 180) noted, the subject and the verb phrase agree in number and person in English. Most of the errors of this type in the SLC were cases where students chose to use the single form of a modal or an auxiliary, while the plural form is the appropriate one, as in:

All steps (GVN) was $were$ alright (QR) , 0 but the funny moment was when I wanted to put the water...

...some of them (GVN) is are difficult and some (WRM) of them 0 (GVN) is are easy...

(FS) all All the (FS) peaple $people$ (GVN) has $have$ (FS) alot $a lot$ of experiences.

All the teachers in high school (GVN) was $were$ friendly.

A few errors in this category were cases where the students chose the plural form of a modal or an auxiliary instead of the singular one, as in:

Secondary school (GVN) have has three levels ...

(LCC) And 0 every high school (GVN) have has to help (GDO) their its (GNN) student $students$ to make their (GNN) dream...

I (GVT) enter $entered$(LS) enter $joined$ (WRS) to 0 a new school which (GVN) have has (GVT) have had (GA) a 0 new friends, teachers and subjects too.

Only 18 cases out of 146 in this category were instances where students did not add the -*s* form to the verbs to indicate the present tense, as in:

...''who (GVN) want $wants$ to teach my (FS) supject $subject$ just (WM) 0 for one day (QM) 0 $?$''

(FS) every $Every$ experience (GVN) give $gives$ me a lesson (LS) for in (GA) the 0 life.

Because the department (GVN) need $needs$ (GA) a 0 high marks to join...

2.7.6.6 The GNN (Grammar, Noun, Number) error category

This is the sixth most frequent error type in the SLC. This error type is responsible for 145/ 4.33% of all errors in the SLC. It consists of errors resulting from the addition/omission of the plural morpheme. Errors in this category can be one of two types: singular for plural or plural for singular. Most of the errors in this category (130 out of 145) were of the first type, that is, they were cases of using singular noun phrases instead of plural ones. Only 15 cases out of 145 were cases of the second type. The following are examples of this error category from the SLC:

...in the first year because we were studying (GNN) subject $subjects$ like history

I'm a strong person. So, I tried and tried to study very well and made (GNN) relationship $relationships$ (LP) made relationship $made friends$ with some students.

When the second (GNN) years $year$ started, I was excited and afraid at the same time because I wasn't sure If...

I was (GA) 0 a shy (GNN) girls $girl$. I never (GVT) ask $asked$ my teacher (FS) any thing $anything$.

2.7.6.7 The WRS (Word Redundant, Singular) error category

This is the seventh most common error category in the SLC, accounting for 141/ 4.21% of all errors in the SLC. This category involves the unnecessary repetition of words. The main category WR has two types, WRS and WRM. The former is for single redundant words and the latter is for multiple redundant words. Most of the errors in the present category are unnecessarily inserted prepositions. The following are examples of this type:

(WRS) On 0 one day I was sitting in math class.

...(Z) have to $should$ be (WRS) as 0 (GA) a 0 (GNN) institution $institutions$ to help them (WRS) to 0 be aware of (GPF) their selves $themselves$.

I learned many things which (LS) made $helped$ me (WRS) to 0 become ready to (XVPR) study in $study at$ university.

It seems that the unnecessary insertion of these prepositions in learners' production is the result of the effect of their L1 Arabic, since in Arabic these exact prepositions are used in these positions.

2.7.6.8 The WM (Word Missing) error category

This category is for errors involving the omission of words. This error category is the eighth most common in the SLC, with a total of 125, i.e. 3.73% of all errors in the SLC.

the students (GVAUX) 0 are between 15 and 19 years $ (WM) 0 old .

This experience changed me to (WM) 0 $become$ more (GWC) expertness $experienced$..

2.7.6.9 The LP (Lexical Phrase) error category

The LP error category is the ninth most common in the SLC, accounting for 122/3.64% of all the errors in the SLC. LP includes three types of errors: errors in (semi-) fixed multi-word expressions and idioms, or when the learner uses a paraphrase instead of the corresponding English LP, and errors in phrasal verbs. The influence of learners' L1 seemed to lead to 61% of the errors in this category. The same procedures described in section 2.7.6.3 were used to identify transfer errors, and the interrater reliability was .97. The same underlying causes and pedagogical recommendations presented in section 2.7.6.3 apply here. The following are some examples of this category:

It was very good (LP) from all of Points $in all respects$ (FS) Points $points$, my friends, my teachers, my marks,...

...$which$ I (GVT) notice $noticed$ (GPP) it 0 (LP) from long-term $a long time before$.

... (SI) I eager to meet them $I am eager to meet them$ (LP) as fast as possible $as soon as possible$.

2.7.6.10   The QM (Punctuation Missing) error category

This is the tenth most common error category in the SLC. Obviously, this error type is devoted to errors of missing punctuation marks. The following are some examples from the SLC:

When I was in high school (QM) 0 $,$ I (LS) got had a good experience.

... to register in the (FS) Collages $colleges$ (GNN) collages $college$ (FS) witch $which$ we want (QM) 0 $.$ (LS) In At this age, (GA) the 0 teenagers need...

When I was in high school(QM) 0 $,$ the subjects were easier than in college.

However (QM) 0 $,$ I remember (GA) 0 a special day when I had to move to another school.

2.8 Conclusion

In the second, third, fourth and fifth sections of this chapter, I presented a detailed review of previous studies that are most relevant to the topic of the present work, including a discussion of the history of error analysis in the field of applied linguistics, available learner corpora of Arabic learners of English and previous studies on the most common errors of Arab/Saudi learners of English. The seventh section dealt with the methodology used in this study where I reported the methods, procedures and principles that were used to collect and analyse the data. Starting from section 2.7.5, I presented and discussed the results of this study and compared them to previous studies. In the next chapter, I will introduce concordancing and Data Driven Learning, their basic concepts, literature, and existing studies on learning outcomes via the DDL approach. The DDL approach is the backbone of the teaching materials used in the collocations and lexical phrases studies (covered in chapters four and five).

Two of the most frequent types of errors in the SLC were selected to be taught using two different types of instructed input: corpus-based and dictionary-based, in order to gauge the effectiveness of these two instructional conditions. The first error type is the collocations errors that were the third most frequent error subcategory in the SLC (see section 2.7.6.3) and lexical phrases errors, which were the ninth most frequent error subcategory in the SLC (see section 2.7.6.9). The seriousness of lexical errors and their impact on communication success (see sections 2.6 and 4.4), the importance of formulaic language patterns (see sections 1.3 and 1.5), the attested struggle in the literature of L2 learners when using multiword units (see section 4.3), and the scarcity of empirical studies investigating methods and tasks for learning formulaic language sequences (see section 4.4) are among the main underpinnings of the empirical studies reported in chapters four and five.

Chapter 3 An Introduction to Data-Driven Learning

3.1 Introduction

This chapter presents a brief introduction to concordancing and Data-Driven Learning (DDL) by first reviewing the basic concepts of the approach and its underpinning principles. The second section of this chapter discusses and provides examples of various types of DDL activities. The chapter ends with an overview of the existing research on the learning outcomes of the DDL approach in its soft version.

3.2 Theoretical underpinnings of DDL

Pedagogical uses of corpus data and tools in the form of DDL in particular are compatible with various contemporary theories of language acquisition and approaches to language teaching in applied linguistics. The list includes 'noticing' 'language awareness' 'consciousness raising' 'discovery learning' and 'learner autonomy' (see Aston, 1995; Batstone, 1996; Bernardini, 2001; Carter, 2003; Gavioli & Aston, 2001; Johns, 1991a, 1991b; Leech, 1997; Rutherford, 2014; Schmidt, 1990; J. Willis, 1998).

'Noticing' plays a facilitative role in SLA, effective yet not sufficient on its own (e.g., Batstone, 1996; Fotos, 1993; Schmidt, 1990, 1995, 2001, 2012). Research in the field of lexical acquisition has shown that 'noticing' is a necessary condition to learn new vocabulary (Nation, 2001a). Furthermore, some studies argued that learners tend not to notice formulaic language patterns by themselves (Wray, 2002). Schmidt (2001, p. 26) contends that "noticing requires of the learner a conscious apprehension and awareness of input". Noticing takes place when the learner pays conscious attention to the target language item. Corpus output and tools can enhance input for learners to facilitate noticing. Corpus data in the form of key word in contexts (KWIC), for instance, can make language features more noticeable for learners. The many typographical enhancement techniques (such as italics, bolding, colour coding, underlying or highlighting)

offered by corpora can promote noticing and consequently facilitate intake which is an essential preceding stage for language uptake.

Along similar lines to those of the noticing theory, it has been proposed that learners' 'language awareness', which can be defined as "the development of an enhanced consciousness of and sensitivity to the forms and functions of the language" (Carter, 2003, p. 64), can be prompted by the use of concordance lines. This is because corpus data can be used to focus on language items, whether grammatical or lexical. Learners can focus on the meaning, form, structure and usage and all the aspects seen in concordance examples. The target language item can be examined by learners in authentic contexts produced by native speakers of the language which can highlight important aspects about the language item for learners.

'Consciousness raising' (CR) can be defined as "the drawing of the learners' attention to features of the target language" (Rutherford, 1987, p. 189), and Richards and Schmidt (2002, p. 109) point out that CR refers to "techniques that help learners pay attention to language form assuming that an awareness of form can contribute indirectly to language acquisition". The use of corpus data and concordances can encourage students to infer the meaning of collocations and lexical phrases and note their form and usage from authentic examples. Concordance examples can help learners differentiate between their way of using lexical items and the way of native speakers. They can also expose learners to many meanings and different usage of the target lexical item through authentic concordance examples. DDL tasks are often designed to promote noticing, language awareness and consciousness raising, unlike mechanical drills and artificial tasks. DDL is an effective mean of CR because the aim of DDL tasks is often to create awareness of a form, and also to exhibit the function and contexts associated with the item.

In addition, it is argued by some researchers that DDL enhances 'learner autonomy' as learners in the paradigm of DDL are described as researchers who read and examine corpus data and formulate hypotheses and test them in the classroom often with the aid of their teacher, rather than being spoon-fed the information. Through DDL learners learn to rely on themselves and it trains them to read and exploit the language themselves. Through using corpus data and doing DDL tasks learners can reach a stage of trusting themselves and learning to observe the language and absorb its natural patterns. DDL tasks cannot lead immediately to complete autonomy on the part of learners, but particularly in traditionally taught contexts, it is an effective task to use in order to

improve learner autonomy.

Perhaps the most distinctive feature of the use of corpus tools and the DDL approach is that learners are encouraged to discover language patterns by themselves, fitting well with the tenets of 'discovery learning'. The 'discovery learning' concept is closely tied with corpus-based pedagogy which stresses learners' role as researchers while the teacher acts as research facilitator or advisor.

The advantage of such learner-centred discovery learning is that the learners are given access to authentic language in real contexts, rather then invented simplified examples. They are challenged to construct generalizations and note language patterns in natural contexts. This is of paramount importance, especially in EFL contexts. Bolitho et al. (2003) contend that language discovery is the cornerstone of language awareness. Van Lier (2001) gives an example of a language awareness teaching activity and he showed that corpus data can efficiently achieve this aim:

> ...using data provided or collected, learners observe and analyse patterns of interest and come up with descriptions or tentative rules, usually in group work. In most cases the data are from authentic sources... Teachers can also use concordancers with authentic texts in order to raise awareness of grammatical, stylistic and lexical features.... (Van Lier, 2001, p. 164)

In the context of teaching formulaic language patterns, Jaen (2010) nicely summarized the strength of the DDL approach for this purpose:

> It is widely acknowledged today that one of the most valuable resources we now have at our disposal to expose students to authentic input and encourage them to explore the language inductively are concordances. It is also worth mentioning that they are particularly helpful in our case since they provide the necessary contextualization which we did not have a priori due to our selection process based on frequency lists of isolated items. We believe that Data-Driven Learning is an approach particularly suitable not only to help students notice and explore linguistic patterns which are made salient by the concordance because of their frequency and stability, but also to make them aware of the combinations which are not naturally used by native speakers (Jaen, 2010, p. 18)

The DDL approach has a strong connection with the lexical approach. The lexical approach uses the lexicon as the basis of language instruction by emphasizing the inter-connectedness of syntax and lexicon. D. Willis (1994, p. 63) argues that:

> A lexical based approach is likely to be more powerful than a structural approach in three ways:

1. [I]t offers more powerful generalizations.
2. [T]he fact that a lexical description depends on a more powerful generalization means that the learner will have more evidence on which to base useful generalizations about the language.
3. ...words are more amenable to learner analysis and discovery than 'structures.' (pp. 63-65)

According to Sinclair and Renouf (1988, p. 148), a lexical syllabus would focus on "(a) the commonest word forms in a language; (b) the central patterns of usage; (c) the combinations which they usually form." Indeed, as Murison-Bowie (1996, p. 185) contends:

> in using corpora in a teaching context, it is frequently difficult to distinguish what is a lexical investigation and what is a syntactic one. One leads to the other, and this can be used to advantage in a teaching/learning context

Sinclair and his colleagues' proposal for a lexical syllabus is followed by Lewis (1993, 1997), who provides strong support and practical advice for the lexical approach in language teaching. In her paper on formulaic sequences in second language teaching, Wray (2000, p. 469), summarized Willis's view on teaching formulaic sequences. His view stresses noticing and presenting language patterns in their natural contexts, features which are often distinctive in DDL tasks:

> Willis (1990) is less interested in word strings per se than in the ways in which certain words figure within them. He favours 'procedures which make [the] patterns salient'…. He believes that 'we need to help students to notice patternings and to speculate about them'.... His approach introduces formulaic sequences incidentally, as part of the body of data used to demonstrate words in their customary usage.

3.3 Key concepts of classroom concordancing and DDL

Tribble and Jones (1997) define concordancing as "software [that] enables you to discover patterns that exist in natural language by grouping text in such a way that they are clearly visible…The real value of the concordancer lies in this question of visibility" (p.3). Figure 3:1 contains concordances for the word *depend-* :

Valle Crucis . The truce , after all , did not	depend	all on one man 's goodwill . The sun was high and
. Any increased concentration among defence suppliers will	depend	crucially on the attitudes of individual governments . Past
and people on whom those with little power and authority can	depend	for safeguards while at the same time suffering imposed
of Commerce as its members , promotes non-law instruments which	depend	for their effect upon contractual incorporation . The
because they are not reported to the police . Many crimes	depend	for their success on being undiscovered , such as fraud and
Lectures make less use of the feed-back function of speech but	depend	heavily on the speech characteristic of needing less
. Whether I play (at Beckenham) or not will	depend	how my foot feels and also on practice possibilities , " he
skills as it is on these the employees must primarily	depend	in preventing violence . This should be the main focus of the
and late life , have depended in the past and will	depend	in the future on collective measures to control the physical and
well it works . They are normative because the assessment will	depend	inpart on the value judgements adopted by the assessor .

Figure 3:1 Concordances of the word 'depend' extracted from the British National Corpus (BNC)

In the ESL literature, a number of researchers have proposed similar definitions of classroom concordancing. Tribble and Jones (1997) describe concordancing as "locating all the occurrences of a particular word and listing the contexts" (p.2), while Levy (1990) provides the following definition: "a collection of all the occurrences of a word, each in its own textual environment together with references and word frequencies" (p.178).

Data-Driven Learning is an approach first advocated and developed by Tim Johns (1986, 1991a, 1991b, and elsewhere). Johns and King (1991) defined DDL as: "The use in the classroom of computer-generated concordances to get students to explore the regularities of patterning in the target language, and the development of activities and exercises based on concordance output" (p. iii).

Tribble and Jones (1997, p. 38) identified two major principles as general principles underlying DDL activities. Firstly "discovery learning". That is, language data under study is presented in a way that leads language learners to discover new knowledge by themselves rather than being spoon-fed. DDL is often considered a form of inductive learning as learners are taking part in the learning process and not merely being passive recipients of information, which is what can happen

in a rule-based approach. Nevertheless, DDL has its own distinguishing features which distinguish the DDL approach from other inductive learning methods. Secondly, the language data is used to represent authentic language.

I now describe the distinguishing features of the DDL approach in more depth. Firstly, language data are presented as concordance lines, in the distinctive KWIC (keyword in context) format. These concordance lines are extracted from a corpus using concordancing software tools such as *WordSmith*, *AntConc* and *Micro-concord.* These tools can be used among many other things as frequency counters and keyword highlighters. As can be seen in Figure 3:1, when learners cast their eyes along the middle column of the concordance lines, they can recognize the regularities of patterning of the word *depend* and its different possible collocations. The KWIC format enables learners to see what words/types of words precede and succeed the target word, in this case *depend*. The principle of making the invisible visible or more visible is essential in the learning process as it is what stimulates the learning sequence "Identify-Classify-Generalise" (Johns, 1991b, p. 4).

Secondly, the DDL activities aim to provoke learners' 'noticing' and 'consciousness-raising' when they are engaged in the discovery process which may lead to deeper cognitive processing, and consequently, better learning and long term retention (Laufer & Hulstijn, 2001). Furthermore, O' Sullivan (2007, p. 277) contends that a number of cognitive skills can be stimulated and sharpened through corpus use: "predicting, observing, noticing, thinking, reasoning, analyzing, interpreting, reflecting, exploring, making inferences (inductively or deductively), focusing, guessing, comparing, differentiating, theorizing, hypothesizing and verifying". This is why, in his 1997 paper, Johns (1997, p. 101) described the role of the learner "as 'linguistic researcher', testing and revising hypotheses, or as a 'language detective', learning to recognize and interpret clues from context ('Every student a Sherlock Holmes')". DDL activities can equip language learners with a plethora of inductive learning strategies since in the DDL approach the underlying assumption is that, as pointed out by Johns (1991a, p. 30), "effective language learning is a form of linguistic research, and the concordance printout offers a unique way of stimulating inductive learning strategies". Exposing language learners to authentic language data and encouraging them to notice and analyze regularities and patterns of language use will allow them to understand the fuzziness of language, where there are many typical or common uses one should be familiar with, rather than rigid rules to be remembered and followed (Boulton, 2009a). These analytical skills and inductive strategies that learners acquire through DDL are transferrable, and transferability is seen as an

important principle in the DDL approach as emphasized by Johns (1991a, p. 29): "transfer[ability] in the sense that the inductive strategies developed in the classroom for 'puzzling out' how the language works should be equally applicable outside the classroom". Thus, we can conclude that the DDL approach aims to have a wider impact that goes beyond the language classroom.

Thirdly, based on discovery learning principles which are central to the DDL approach, as discussed above, the learner's role during DDL activity can take a new direction, that of the "linguistic researcher" or "language detective" (Johns, 1997, p. 101). That is, in the DDL classroom, learners take charge of their learning as they are at the centre of the learning process. However, although Johns (1991a, p. 30) describes the DDL approach as trying to provide "direct access to language data" and "cutting out the middleman", these principles are not always followed. To illustrate, Johns himself (Johns, 1988, pp. 21-24) outlined six main approaches to DDL which range from "pre-classroom" applications for the teacher herself/himself when s/he uses the corpus as a language reference or to obtain examples for illustration purposes; to prepared printouts which involve either closed-ended tasks, in the sense that the result is known to the teacher, or open-ended investigations; to when the corpus can be used hands-on either as a consulting resource or as a part of planned activities. DDL tasks can be deductive or inductive. There are no strict measures in designing DDL tasks that cannot be subjected to modifications on the part of teachers or materials designers.

Fourthly, the teacher's role in the DDL classroom can be differentiated from the role s/he would normally adopt in non-DDL classrooms. Johns summed up the teacher's role as "research director and research collaborator rather than transmitter of knowledge" (Johns, 1988, p. 14), and later added that the teacher's main role has been refined to "director and coordinator of student-initiated research", a role that "can be difficult for teachers to come to terms with" (Johns, 1991b, p. 3). These descriptions of the teacher are not meant to diminish her/his essential role in the DDL classroom, they rather imply that s/he has to take on further responsibilities and learn more skills to be able to handle the requirements of the DDL activities. Some of the teacher's responsibilities before and during learners use DDL materials are selecting the language features for study, choosing the concordance lines (in the case of the soft version of the DDL) or the corpus itself for hands-on consulting (in the case of the hard version of the DDL, see section 3.4.1 and 3.4.2 for a

discussion of the soft and hard DDL versions), asking the right questions and giving accurate directions when learners exploit concordance lines along with monitoring students while making valid inferences and drawing appropriate conclusions about the target language items. Johns (1991a, p. 30) describes the DDL approach as an "attempt to cut out the middleman as far as possible and to give the learner direct access to the data". The "middleman" of course refers to the teacher, however in the DDL approach the computer is not considered "a surrogate teacher or tutor, but as a rather special type of informant"(Johns, 1991b, p. 1); hence, it cannot replace the teacher and her/his presence is indeed a vital one in the DDL classroom.

The final distinguishing feature of DDL is the fact that the input is derived from authentic language samples in contrast to other inductive teaching approaches that rely on conventional prescriptive language descriptions "more often based on the 'armchair intuitions' of the grammarian [rather] than on any close analysis of data" (Johns, 1991b, p. 3) along with examples concocted on the spur of the moment by teachers. Johns (1991a, p. 31) argued that "The evidence thrown up by the data has left no escape from the conclusion that the description of English underlying our teaching, whether homemade or inherited from other teachers and linguists, needs major reassessment".

3.4 Classroom concordancing versions and DDL activities

In this section, a number of classroom concordancing types will be described. Classroom concordancing here refers to the pedagogical applications of concordances in language learning contexts. Leech (1997, p. 10) identified two main ways of employing DDL. The first is the 'soft version'. In this paradigm, learners are not provided direct access to corpus data, rather they work on pre-prepared materials designed by their teacher. The second type is the 'hard version'. This version, in contrast to the 'soft version', allows for direct access to corpus input and learners are exposed to that input and expected to derive insights about language from their exploration and apply it to the available data.

In the soft version, the responsibility of accessing the corpus, then choosing the relevant concordance lines, designing concordance-based tasks and activities and finally transferring these data to printouts to be exploited and examined by learners, is the teacher's. The learners' responsibility is obviously to study these concordances and arrive at the appropriate conclusion

about the targeted language feature, which is often already known to the teacher (Bernardini, 2004; Granger & Tribble, 1998; Osbourne, 2000; Tribble & Jones, 1997). In the hard version, on the other hand, students are more in charge of the learning process. They carry out autonomous concordancing themselves through accessing a corpus and a concordancing program using computers, CDs or web-based tools. Consequently, with such responsibility learners are expected to have the skills necessary to work on computers and corpus tools and software. Tasks and activities in the hard version framework can be designed by the teacher (Tognini-Bonelli, 2001), incorporated into a CALL program/s (Braun, 2007; Cobb, 1997a, 1997b, 1999; Cobb, Greaves, & Horst, 2001; Cobb & Horst, 2001; Horst, Cobb, & Nicolae, 2005; Huang & Liou, 2007; Hughes, 1997; Johns, Hsingchin, & Lixun, 2008; Lin, 2008; Liou et al., 2006; J. Milton, 1998), or the focus points can be chosen by the learners, either with or without the instructor's guidance (Bernardini, 2002).

Accordingly, Gabrielatos (2005) talks about three combinations of classroom concordancing: teacher-centred, learner-centred and the combined type. As its name suggests, the teacher-centred type is where the teacher determines the target of the lesson, selects the materials and manages the process, whereas in the learner-centred type, the learner takes responsibility of all the three stages as s/he is provided direct access to the corpus while the teacher acts as a guide and the computer as a facilitator. The third kind is a combination of the previous two as the teacher and the learner make the decisions collaboratively. In the following two sections, I will discuss both versions of DDL: soft and hard with illustrated examples where possible.

3.4.1 The soft version

The soft version of DDL involves activities designed by the teacher for learners to work on concordance output. For teachers to design such activities, they often need a computer, a concordance program and a printer to prepare paper-based DDL activities. The process starts with the teacher choosing the language items to be studied based on her/his students' problems and enquiries, error analysis of their spoken or written output, or language points taken from the syllabus or textbooks. Then, the teacher chooses a selection of concordance lines that seem to best highlight the target language pattern in line with Johns (1991b, p. 4) method: "all the citations shown in the handout are authentic, there is in this handout a degree of 'rule-hiding' in the

selection of citations, the categories adopted, and the sequencing of citations within each category". When the class carry out the DDL activity, the teacher takes the students through the concordance output and directs their noticing and discovery process via carefully prepared prompts and questions that normally accompany the concordance printouts. Despite the dominant role of the teacher during all this preparation, the student's role should not be underestimated as s/he is still at the centre of the learning process.

There are many possible shapes and forms for paper-based DDL materials; it is unfeasible to try to present all of these types here. However, the most frequently used and recommended models will be presented below, all of which can be modified for different language teaching purposes.

3.4.1.1 Activities for deducing the meaning of the keyword

The skill of deducing the meaning of unfamiliar words by means of contextual clues is often encouraged by teachers in second language learning contexts. It is a useful asset in language learning as it enables learners to deal with texts above their existing lexical threshold and expand their vocabulary in the process. However, this is not always a straightforward task even for native speakers if contextual information is lacking. Concordance lines can therefore increase the chances of successful deduction as they provide several examples of the exact word in several contexts simultaneously. The figure in Appendix 3A shows an example of this type of activity. The keyword has been replaced by a nonsense word *speg.* As Tribble and Jones (1997, p. 39) explain, each line taken in isolation only provides the learner with partial information about the characteristics of this word, e.g. syntactic information that it is a noun. However, the available contexts taken together can assist the reader in narrowing down his/her guess to "some sort of food or drink", enabling him/her to finally arrive at the right guess, "milk".

Gabrielatos (2005, pp. 14-15) also gives an example of a similar task, where students are asked to infer the meaning of the unknown lexis from concordance output. As in Tribble and Jones' (1997) example, the figure in Appendix 3B illustrates an activity for inferring the meaning of a missing lexical item *hammer* and its polysemes from diverse, multiple contexts.

The activities in Appendix 3A and 3B might not be suitable for lower-level students. Thus, Tribble and Jones (1997) advise that teachers should examine concordance printouts carefully and put themselves in their students' position so as to decide whether deducing the missing word meaning

is an attainable aim, given the students' language proficiency level and the clues provided by the concordance examples. They further point out the fact that "[e]ven if a particular concordance does not enable you to pinpoint meaning it will reveal all sorts of other information about the keyword: grammatical features, common collocations, different meanings, idiomatic and metaphorical uses, stylistic features, connotations" (p. 40), meaning this type of activity can be used by teachers in flexible ways with a range of different goals.

3.4.1.2 Activities for recognizing grammatical features

Many of the grammatical features of a word can be identified from the word's surrounding context. Given this, using concordance input can assist in teaching grammar. The activity shown in Appendix 3C can help learners decide what type of preposition follows the words *interested* and *depend*. In the first set of examples it would be apparent to students that *interested* often comes in the form '*interested in + something*'; however, in example number five another form is presented where *interested* is not followed by a preposition. In example number six yet another case is shown where *interested* is followed by an object *me*. Other possible combinations of prepositions/words with *interested* can also be integrated in the DDL sheet, depending on the learners' language proficiency level and the lesson's purposes.

Krieger (2003) argued that teaching grammar should be illuminated by corpus-based language studies. Following this line himself, he designed a DDL activity based on the findings of a corpus-based study by Mindt (1997) about the structural uses of *any*. Mindt distinguished the uses of *any* and gave examples for each type, a division originally devised by Tesch (1990). The first type is, according to Mindt (1997, pp. 43-44), generally used in affirmative and declarative sentences when the referent existence is presupposed and it accounts for more than 50% of all cases of *any* based on the findings of her work on an English native speakers corpus, e.g. *I thought **any** fool would know*. The second type occurs in negative and declarative sentences and it applies to a referent whose existence is not presupposed and it accounts for almost 40% of instances, e.g. *I shan't get **any** scripts from the assistants before then*. The last type occurs in affirmative and interrogative sentences and applies to a referent whose existence is not presupposed and accounts for about 10% of all cases of any, e.g. *But is there **any** truth in it?*. Krieger (2003, pp. 6-7) designed a DDL task informed by these findings, where he tried to represent these percentages of frequency in the concordance lines he had chosen. The figure in Appendix 3D reproduces the task designed by

Krieger (2003). He stated that the aim of the task is to get the students to discover all three usage patterns of *any* and their frequency. Krieger suggested that this task can also be used for other purposes such as "defining functions and common language chunks of any", or it can be a part of a lesson about quantifiers or a related area.

Tribble and Jones (1997) suggested that grammatical features of the language in general can by studied via the concordances of certain phrases. They provided an example of a worksheet intended for teaching the grammar of reported speech at intermediate level. The figure in Appendix 3E represents this activity. The steps suggested for employing this worksheet are provided in Appendix 3E, too.

Meunier (2002) suggested incorporating learner input into grammar teaching materials via parallel native and learner concordances (cf.Granger & Tribble, 1998; Joyce & Burns, 1999). However, it should be noted that, as Tribble and Jones (1997) argued, there is no guarantee that a certain grammar rule or some aspect of it would be apparent in concordances or even in the whole corpus itself. By the same token, a concordancer may bring both illuminating and unexpected results. Thus, the materials designer should be aware of the different types of available corpora and their distinguishing features drawn from their sources; for instance, designing corpus-based materials for teaching academic English requires an academic corpus built from sources such as academic articles.

3.4.1.3 Activities for teaching synonyms and homonyms

The DDL approach offers an efficient way of comparing and contrasting synonyms and homonyms through concordances. The figure in Appendix 3F represents an exercise aimed at training learners of lower intermediate level or above to identify parts of speech in context, based on a concordance of *like*.

In addition, the same approach can be applied to highlight the sometimes subtle differences between the meanings of the same word, as shown in the figure in Appendix 3B with its exercise designed around the word *hammer* by Gabrielatos (2005), or between the meanings of words that are almost synonyms. The figure in Appendix 3G reproduces an exercise suggested by Tribble and Jones (1997) to teach the semantic differences between *over* and *above*. The combined concordances provide in a condensed piece of text information about many aspects of vocabulary

like nuances of meaning, idioms, and chunks that learners need to be exposed to. While the exercise in Appendix 3G might appear more appropriate for learners at intermediate level or above, it can be toned down with "much less ambitious objectives" (Tribble & Jones, 1997, p. 47). The figure in Appendix 3H is therefore a simplified version of the previous exercise about *over* and *above.*

3.4.1.4 Activities for group work

DDL activities can be carried out individually, in pairs or in groups, depending on the activity aim and more importantly on the amount of data. Thus, when a teacher wants to exploit the inevitably large corpus output of a number of linguistic items especially when the data are from a large corpus, designing exercises for group work would make them more manageable. Tribble and Jones (1997) gave an example of such an exercise by designing an activity focusing on *see, look, watch* and their inflected forms. The concordances are split into sections of roughly equal sizes and printed out on worksheets including the same set of instructions. The suggested steps and figures are reproduced in Appendix 3I.

3.4.1.5 Gap-filling exercises

All the previous types of exercises require learners to provide information about the keywords of concordances after examining their contexts, however, with the gap-filling exercise the learners' task will be supplying the missing keyword themselves. Tribble and Jones (1997) introduced a twist on this type of exercise which includes incorporating two different sets of concordances for two or more keywords. Their example is shown in Appendix 3J. In this exercise learners know what words have been deleted: *poor* and *rich*, and only need to supply them where appropriate. The metaphorical meanings of these words are then explored in the second part of the activity.

3.4.1.6 Activities based on learner output

Since concordancers can be used for retrieving errors in learners' output, these erroneous instances could serve as a basis for remedial activities. Although DDL activities are often informed by native speaker corpus data, they do not need to be exclusively based on native speaker concordances and learner data can be incorporated in the activities as a remedial method (cf.Granger, 1996; Granger & Tribble, 1998; Meunier, 2002; Tribble & Jones, 1997). For instance, Joyce and Burns (1999, p.

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48) argue that "by noticing the gap between their own and target language forms, learners are also better able to accelerate their acquisition".

Granger and Tribble (1998) suggested a number of ways of incorporating native and learner data and the figure in Appendix 3K illustrates the use of parallel native and learner concordances for the study of erroneous items. In this exercise learners will be instructed to compare the complementation of the words *accept* and *possibility* in native and learner examples. They claim that this kind of exercise can help students overcome fossilized errors in their interlanguage, in this case the erroneous use of the infinitive after these two words. They contend that these exercises should be motivating for learners as they are not dealing with any type of grammar rule or a well-worn lexical problem, rather they are exposed to their own attested problematic linguistic items. Furthermore, the structures that are displayed for students include structures that they have succeeded in mastering, such as the *that*-clause after *accept* or the *of*-phrase after *possibility*. Tribble and Jones (1997) used whole-sentence concordances of *which* and *that* extracted from a corpus of student essays, as shown in Appendix 3L.

In his book *Grammar for English Language Teachers*, Parrott (2000) made extensive use of authentic native data and authentic learner data in some exercises. These examples, reproduced in in Appendix 3M, are used for error correction exercises. The exercise focus is on article usage.

All of the DDL exercise types described above are pre-prepared by teachers and the teacher is the only person to use the computer and the concordancer. While conducting the process of designing these types of exercises the teacher is exposed to a wealth of information about language use and patterns, yet teachers and materials designers need to realize that these raw data do not automatically constitute useful and informative language teaching materials directly. They need to put a lot of thought into choosing the appropriate design for the targeted language items and for their students' needs and wants.

3.4.2 The hard version

This section describes what is sometimes called interactive uses of concordancing (Tribble and Jones (1997, p. 63), that is, learners' use of a hands on concordancer (Boulton, 2010b, p. 131). The hard version, as pointed out by Aston (1996), requires learners to have access to a computer and corpus platforms and have the competence to use them. Variations in the hard version of DDL can be classified in different ways. Aston (1996) proposed categorizing them in terms of who decides

the language focus, who directs and guides the learning process and whether concordances are incorporated into a computer assisted language learning program, are web-based or readily available online. Based on these principles, there are three types: (a) teacher-guided independent concordancing; (b) learner independent concordancing; and (c) CALL-based independent concordancing. C. Yoon (2011, pp. 132-134) classified them in terms of the dominant use to which the corpus is put by learners. According to this criterion, there are two types of use: "corpora as research tools" and "corpora as reference tools". However, Yoon warned that these two categories are not mutually exclusive but for the sake of classification, the dominant type of corpus use is considered. In what follows, a number of studies from both types will be described briefly.

3.4.2.1 Corpora used as research tools

Using corpora as research tools for language learning was pioneered by Johns (1996; 1988) and was what he understood as DDL. Cresswell (2007) is one of the studies that set out to evaluate how effective corpora can be as a research tool for learners in studying connectors. The connectors in focus were: *instead, in fact, as a matter of fact, on the contrary, in contrast, anyway, indeed, yet, rather*, and *on the other hand*. The study was carried out as a part of an EFL academic writing course taught by the researcher himself at an Italian university and participants were relatively of advanced level, majoring in Translation. Cresswell's study comprises two groups: a DDL group, and a control group. The DDL group was divided into small groups. Their task was to figure out the meanings, functions and syntactic patterns of the target connectors. Participants worked on corpora of *The Independent* newspaper using *Concord* (M. Scott, 1999) to manipulate concordances. The control group had the same task but had only one source to consult, dictionaries. Cresswell stated that he was available only for advice on searching techniques and the students remained solely responsible for the accuracy of their descriptions of connectors. Students were required to present their metalinguistic information of connectors to their own group. The researcher also examined students' final papers for the module to track any differences in learners' use of connectors between the DDL group and the control group. 8 out of 15 groups in the DDL group succeeded in providing information that were principally accurate. Analysis of learners' 'genuine use' of connectors revealed only a slightly higher rate in the use of some connectors by the DDL group, but generally no clear effect was detected.

The focus was self-correction of vocabulary errors in Watson Todd (2001), 25 Thai postgraduate

students in an English language course were instructed to choose a lexical error from their writing, which had been previously marked and the error pointed out by the researcher, and search for examples of the lexical item on the internet. After they had selected 10 concordances, they were required to induce valid rule/s from the concordance patterns and correct the selected error using the rules. The results were quite positive, a mean of 7.78 out of 10 concordances tallied with the inferred patterns, and 18 out of 23 attempted lexical corrections were successful.

D. Lee and Swales (2006) also obtained encouraging results, however their study aim was improving learners' academic writing and raising their rhetorical awareness through direct use of a corpus by four non-native doctoral students. The study took place in an English for academic purposes course taught by one of the researchers at an American university. First, students were given access to written and spoken academic corpora, and they were trained on how to use the corpus tools. They carried out a number of corpus-based activities to familiarize themselves with the way a corpus can be used to examine language. Students were instructed to collect two corpora: one of their own academic writing, and one compiled from electronic versions of published papers of experts' academic writing in students' individual disciplines. At the end of the course, participants presented their findings to the class and discussed how the exploitation of the two corpora raised their rhetorical awareness and for what further purposes they envisaged using corpora in the future. Interviews with participants after the course revealed very positive views about corpora: they believed that corpora increased their autonomy and they claimed to prefer using corpora over other reference tools and grammar books.

Geluso and Yamaguchi (2014) integrated corpus consultation into a course design with the aim of improving spoken fluency. Lower intermediate Japanese EFL learners were introduced to the Corpus of Contemporary American English (COCA) over a period of three weeks, then they used it to discover and investigate formulaic sequences they wished to use in their speaking journals and later present them to their colleagues weekly. The project entails using COCA in preparing 'speaking journals' which consisted of four phases: preparation, corpus use, a practice conversation, and the real conversation with a native or a proficient speaker of English which students were required to record. The second component was teaching a selection of students; favourite formulaic sequences to their colleagues in students-led classes. Recordings of students' interactions suggested that they were generally successful in using the formulaic sequences

appropriately in context. Questionnaires and interviews showed positive attitudes towards the DDL approach, nevertheless a few reservations were noted: unfamiliar vocabulary, truncated concordance lines, doubt of corpus data and needing some authority confirmation of their findings, and tight time in classes.

3.4.2.2 Corpora used as reference tools

In this section, a number of studies where learners used corpora as reference tools to solve their linguistic problems will be reported. Kennedy and Miceli (2001) compiled their own *Contemporary Written Italian Corpus (CWIC),* to evaluate how learners go about corpus-based investigation. Participants were undergraduates enrolled in an Italian program at Griffith University in Australia. Kennedy and Miceli opted for what they termed an "apprenticeship" approach to training students, which is aimed "to promote learning by example and by experience" (p. 81). They compiled a corpus and students used it as a problem-solving tool. Students' problem-solving activities took the form of revising a text to correct their own or others' work and their utilization was the focus of the study. Eight students participated in the study whose language proficiency ranged between intermediate and upper-intermediate. Students were given "two texts to revise. In the first, ...[the researchers] set specific tasks by underlining certain words to indicate where there might be a problem. In the second, …[they] invited them to decide what issues to deal with for themselves" (p. 81). All the texts provided by the researchers were selected from work submitted by students during the course. The researchers concluded that participants were successful in carrying out many investigations, however, a number of factors were identified by the researchers as responsible for the attested inefficient cases of corpus investigation which are "lack of rigor in observation and reasoning …, [and] apparent ignorance of common pitfalls and techniques for avoiding them" (p. 81). They finally concluded that their training was not sufficient to transform their students to competent 'corpus researchers'.

An apprenticeship-based project to use corpus for learning Italian language was conducted by Kennedy and Miceli (2010). They developed an apprenticeship approach over a semester which was designed in light of the insights provided by their earlier study which emphasized the need to improve learners' training (Kennedy & Miceli, 2001). Therefore, the new approach was easier than the one in their previous study, rather corpus use is introduced as "an aid to the imagination in

writing, and then to achieving accuracy" (p. 28). The two key uses of a corpus introduced to students were:

> to enrich the content and language of their text, through what we call pattern-hunting; and to edit their text for lexico-grammatical accuracy, through pattern-defining. Both the pattern-hunting and pattern-defining functions entail exploring the corpus in search of models for word patterns to employ in one's own text (pp. 31-32).

The researchers built their own corpus for this study, which they named CWIC (Contemporary Written Italian Corpus), a 500,000 word corpus built from letters, emails, and magazines to provide models of personal as well as professional writing. It can be used via the web or on a CD-ROM. The user platform interface looked familiar to experienced internet users. The search engines allowed the user to expand the search to the whole text, not only the isolated concordance lines. It also allowed users to specify the text type and it provided frequency lists. To evaluate the efficacy of training, three students of different ages, with different learning styles and levels of computer literacy, were asked to enhance their autobiographical writing by using 'pattern-hunting' and 'pattern-defining' for 45 minutes using the corpus and other reference tools. Participants were immediately interviewed afterwards to provide a retrospective report on their corpus use, with recordings of their computer screen activity provided to prompt their memory when necessary; and to obtain their views and attitudes towards corpus consultation. Two students displayed positive attitudes, whereas the third student experienced some difficulties and failed to see the unique functions a corpus can provide, that is failed to appreciate the potential of 'pattern hunting'. The researchers concluded that students' web/computer literacy along with their individual attitudes and understanding of corpus consultation have the greatest impact on the amount they consult corpora, the way in which they do it, and their success or otherwise in doing so.

To evaluate the use of corpora in learning the French language, Chambers and O'Sullivan (2004) and O'Sullivan and Chambers (2006) carried out a research project in two stages. The researchers built their own corpus, a small semi-specialized corpus of texts exhibiting well-written contemporary standard French relevant to student writing assignments. Participants were native English speaking learners of French at different levels of proficiency in writing who were studying in Ireland. In the first phase of Chambers and O'Sullivan (2004), eight graduate students took part in the study. Students were trained in concordancer use for a period of three weeks. After each student had submitted a 600-word text relating to an aspect of the French language, they were

requested to consult a corpus to correct the errors that had been underlined in their texts. 64 changes out of 85 (i.e. 75%) were correct. In the second stage, in O'Sullivan and Chambers (2006) paper, 14 undergraduate French majors conducted the same scheme and carried out the same task. 122 out of 166 modifications (i.e. 73.49%) were made correctly. According to the researchers, corpus consultation was useful in both studies, in particular for lexico-grammatical patterns, prepositions, idiomatic expressions, and to minimize the interference of the native language. Participants' attitudes toward corpus consultation, in relation to its usefulness and whether they would continue to refer to a corpus, were overall positive and the postgraduates were marginally more positive than the undergraduates on both issues.

Unlike the majority of studies that used corpora for learners to consult in their writing, the aim of Gaskell and Cobb (2004) was providing L2 writers with feedback on their sentence-level errors using URL-link technology to embed concordances in L2 learners' texts. Participants were 20 lower-intermediate Chinese EFL learners in an English writing course at a Canadian university. For four weeks, students were trained by providing them feedback on their errors via URL links to Brown Corpus concordance examples. Error feedback was provided for five errors per learner every week during a four-week training period. Training was carried out in the first two weeks in extracting and interpreting concordances using a projector in class. After training, students carried out the same task of error correction by consulting the corpus on their own. The authors compared the rate of accurate error correction during the first four weeks and thereafter. During the first four weeks, most of the students completed the searches for all the errors, however, after pre-cast links were removed and students instructed to consult the corpus themselves, less than half of them succeeded in conducting the task. However, signs of improvement in the following weeks were also reported by the researchers and they attributed this to students gaining more confidence with the technology. The researchers reported that every participant in the study stated they learned a lot of things and that their overall English writing was enhanced.

In what is often described as a comprehensive treatment of students' corpus use behavior and their views of the strengths and weaknesses of corpora as a second language writing tool, H. Yoon and Hirvela (2004) carried out a study to investigate learners' evaluation of corpus use in L2 writing. Eight intermediate and 14 advanced undergraduate ESL students at a US university took part in the study. Students worked on the Collins COBUILD Corpus, a large corpus made of millions of entries retrieved from the Bank of English. In the first few weeks of the term learners worked in

pairs to make, and later present to the class, prototype sentences for key words they had been provided on a list. As the students became acquainted to the process, they were asked to explore the Collins COBUILD database on their own to tackle actual word-related problems in their writing, recognized by them or by their teacher, and to send their search findings to the teacher by e-mail. The teacher shared the findings every week in class via handouts.

Students' perceptions and attitudes were overall positive toward the use of a corpus as an L2 writing tool and they found it most useful for learning the common usage of words. A point of interest was the fact the participants from the intermediate level were generally more positive in their responses than their advanced counterparts. The authors attributed this difference to a number of possible factors, chief among them being the additional direct training and practice in corpus use that L2 learners in the intermediate course received and the possibility that intermediate L2 learners are more inclined to perceive themselves as language learners. Another possible reason, according to the researchers, was the teacher's greater advocating of corpus use in the intermediate class in comparison to the advanced class which they linked to their original (questionable) assumption that advanced-level language learners would by default have advanced computer skills and therefore that in the advanced class the teacher would need to emphasize this aspect less. Furthermore, students acknowledged the power of corpora and the part corpora can play as a source of consultation alongside dictionaries and other printed reference resources. The results were obtained via a questionnaire and semi-structured interviews.

The two studies conducted by Frankenberg-Garcia and reviewed here used paper-based corpus materials as reference resources, rather than hands-on corpus use, and they provide insigtful findinigs. Frankenberg-Garcia (2012) conducted a study comparing single and multiple concordance lines and dictionary definitions as a language reference tool. Participants were second year undergraduates studying Tourism at a Portuguese university. They were randomly assigned to one of four groups using the following reference materials: a single corpus example, multiple corpus examples, dictionary definitions, or no materials in the control group. Frankenberg-Garcia dealt with comprehension and production separately in both reference materials and tests. The ten target items in the comprehension task were unknown to students while the ten items in the productions task were familiar to the students but were prone to typical production errors, nevertheless. The corpus examples were taken from large corpora and were carefully selected to feature contextual clues to meaning (for decoding purposes) and the examples of the production

task were chosen to exhibit appropriate colligations/collocations (for encoding purposes). The dictionary definitions were from the electronic version of the Longman Dictionary of Contemporary English, and they only presented the relevant sense of the target word. The comprehension test was a multiple-choice task and the production test was an error correction task. Participants had to complete the tests using the reference sheets. In the comprehension test, the dictionary definitions performed best but not significantly better than multiple corpus examples. The dictionary definition significantly outperformed the single concordance and the control group. In the production test, both single and multiple corpus examples were better than definitions or no references at all. The difference between single and multiple corpus examples was significant. The results show that learners can use corpus examples to obtain useful information effectively on both word meaning and usage. Multiple corpus examples would help learners understand word meaning and usage more effectively than single corpus example, and different types of examples are needed for decoding and encoding purposes.

Frankenberg-Garcia wanted to further test the robustness of her findings and carried out another study. In Frankenberg-Garcia (2014), participants are secondary school students, admittedly a hugely under-researched population in the literature of DDL (Boulton & Pérez-Paredes, 2014). The research design incorporated several adjustments, mainly, the production test was a translation task from L1 for known but error prone items using lexical prompts. The comprehension test results were remarkably similar to the results in the previous study. One corpus example was significantly better than the control group, and both multiple corpus examples and dictionary definitions were helpful and not significantly different. The production test results for single corpus example and dictionary definitions did not reach significance level in comparison with the control group, and only the multiple corpus examples were significantly better than the control group and dictionary definitions experimental condition. A possible explanation, according to Frankenberg-Garcia, is the different format of the production tests in the two studies.

3.5 Overview of studies examining learning outcomes from concordancing and DDL

3.5.1 Introduction

Boulton (2010b) carried out a comprehensive survey of the literature and it brought to light at least 70 empirical DDL studies published in English. For the purposes of his survey, the following broad criterion was adopted: "any use of overt corpus data for foreign or second language (L2) learning or teaching, whether the researcher claims it as DDL or not" (p. 130). It was found that the research questions are varied in these studies, however, Boulton suggested categorizing them into three broad categories, although the objectives of some studies fall into more than one of these categories. First, studies that attempt to investigate whether learners are able to use corpora. Often, qualitative methods are employed to examine the data in these studies which usually include classroom observation, interviews, logbooks, diary grids, and other self-report instruments. Second, studies which aim to evaluate learners' affective attitude towards corpus use, whether they find it easy, useful, enjoyable; and whether they think it helped them learn something, though of course their subjective views might not be reflected in actual learning. The instruments used are similar to the ones used in Boulton's first category, that is mainly self-report protocols. The majority of studies in this category have reported favourable and positive attitudes, with a few exceptions (e.g.Whistle, 1999). Third, studies that examine outcomes of corpus use, which can be divided into two types: studies that examine outcomes of corpus use as a reference tool, as in writing or error correction. The other type focuses on learning outcomes, an issue that has not been investigated in the vast majority of these studies.

27 empirical studies of DDL investigating L2 learning outcomes were found in the literature. More than two thirds of them (19) appeared in the last six years. Additionally, as pointed out by Boulton, in 14 of the studies, students had direct access to the corpus and in eight studies some type of CALL software was used. Only eight out of the 27 studies were soft DDL, and three of these eight studies used a combination of both soft and hard DDL. Details of these soft DDL studies are reported in the next section 3.5.2.

3.5.2 Empirical research using paper-based DDL materials

Koosha and Jafarpour (2006) examined the effect, if any, of concordancing materials and DDL in the learning of preposition collocations. The participants were 200 senior English majors studying at three universities in Iran. They were chosen from 450 EFL majors. A Michigan Test of English Language Proficiency was used to classify the participants' level of proficiency. Then, participants from different levels (low, mid, high) were randomly assigned to experimental and control groups. The researchers were careful to keep the number of students in each level equal in both groups (high=30, mid=40, low=30). Two types of teaching materials and two preposition collocation completion tests were written by the researchers to evaluate the effect of the DDL approach. Prepositions and their collocational properties were chosen by the researchers to be the subject of focus because of their importance for learners of English, and because of the difficulties they present for Iranian EFL students. The study took place over a fifteen-week semester, one hour a week. Six patterns of preposition collocations were investigated by the students. These patterns were as follows:

1. Adjective + preposition collocation: *good at, bored with, superior to, tired of*
2. Preposition + noun collocation: *in astonishment, with embezzlement, on credit, with distress, by car*
3. Noun + preposition collocation*: motivation in, admiration for, argument about*
4. Verb + preposition collocation*: consist of, insist on, indulge in, resist in*
5. Preposition + preposition collocation: *out of, next to, in front of, in lieu of*
6. Idiomatic expressions: *to be at best, to be in the air* (p. 200)

The materials used for the control group were taken from traditional grammar books such as *A Comprehensive Grammar of the English Language* (Quirk, Greenbaum, Leech, & Svartvik, 1998), *Modern English* (Frank, 1993) and *English Idioms* (Seidl & McMordie, 1987). With the experimental group, on the other hand, a DDL approach was utilized. Concordancing lines extracted from the Brown Corpus using the Web Concordancer and presented in KWIC format were the basis of the experimental group materials. The researchers claimed that the teaching materials for both groups were at the same level of difficulty for the students (p.199), yet we are not provided with any details on how this conclusion was reached.

Participants were pretested using a completion test on collocation of prepositions. The test consisted of 60 items, and its reliability was reported to be .86. After the treatment session, both

groups were tested to examine the effect of the type of instruction. The posttest, too, consisted of 60 items with a reliability estimation of .82. A significant difference was found between the performance of the DDL group and the traditionally taught group, $p > .001$, with participants in the DDL outperforming their colleagues taught by the conventional approach.

Koosha and Jafarpour's study provides evidence that the DDL approach can be effective and improve learners' knowledge, at least for some language patterns. However, it can be critiqued in a number of aspects. We are not given any examples or samples of the DDL or conventional teaching materials, e.g. the number of concordance lines or what sort of prompts preceded them. The pretest and posttest are only described as a completion test on preposition collocations. The study lacks details about whether the completion test was contextualized or not, and whether the two tests were identical or not. The study target items covered preposition collocations of adjectives, nouns, verbs and prepositions; yet it also included what they called idiomatic expressions: *to be at best, to be in the air*. It is widely acknowledged in the literature of formulaic language that formulaic sequences can occupy differing positions on the spectrum of transparency, and that the degree of transparency of the language items affects their difficulty for learners. The nature of the formulaic sequence itself, whether it is a collocation or a lexical phrase or an idiom, plays a big role in the ease or difficulty of learning. However, in this study the researchers do not seem to have taken these factors into account.

Boulton (2010a) wanted to test the efficiency of paper-based DDL materials in comparison with other traditional teaching methods (e.g. grammar books, dictionaries) in helping lower level learners to deal with a number of problematic areas. The data of his study were collected through pretests and posttests, and questionnaires on students' views of the teaching materials. The participants in Boulton's study were 62 sophomore students at an architecture school in France. Those learners were at a lower intermediate level of English proficiency, equivalent to A2 or B1 on the Common European Framework of Reference for Languages (COUNCIL, 2001), as reflected by the mean score of their results on a Test of English for International Communication (TOEIC). The majority of them were native speakers of French, however, there were also three L1 Arabic and three L1 Chinese speakers. All participants had no prior knowledge or experience of DDL.

Boulton chose 15 problematic language items from the students' own written texts. The participants were given 30-40 minutes to write an argumentative essay on a topic related to

architecture. Problematic language items were identified and a list of them was chosen for the study based on frequency and generalizability. Boulton argues that this method will also help learners see the relevance of the selected language items, rather than imposing a list of difficult language items from other available resources. The focus was on grammar/usage items since, according to Boulton, they are more amenable to a DDL approach. The final list of 15 problem areas which were considered typical problematic language items for French learners was rated by English teachers at another university. A third of the 15 problematic items served as control items and received no treatment. As for the other ten items, five of them were taught to half of the students using traditional methods while the other five items were taught using the DDL approach. The situation was conversed for the other half of the study's population. The aim was that each group and language item can serve as a control for the others.

The teaching materials used were two booklets containing the same ten language items, however traditional and DDL treatment materials were transposed in each booklet. The target fifteen language items were as follows:

1. *dozen, hundred, thousand, million, billion*
2. *want*
3. *person, people*
4. *in the first part*
5. *right, good*
6. *depend*
7. *home*
8. *play, practice, do, go (+ sport/activity)*
9. *say/tell*
10. *steal/rob*
11. *agree*
12. *allow*
13. *lose, loser, loss, loose*
14. *near, far, close*
15. *only, alone, lone, lonely*

The corpus-based materials were retrieved from the BYU-BNC (Davies, 2004) interface to the British National Corpus. For the traditional materials, dictionaries were used as the source of comparison. The information was collected from *Collins English French Electronic Dictionary*, (2005) and *Collins COBUILD English Dictionary for Advanced Learners* (2003). Four teachers

took part in the study, and because only one of them had some experience of DLL, a one hour training session was arranged to train teachers on DDL and the experimental materials.

The pretest was conducted in week one and the treatment session in week two. The posttest was conducted after three weeks to examine medium-term recall. The experimental session lasted for one hour. The session started with introductory information and concordance examples for about five minutes. The time spent on each target item was five to ten minutes on average. The pretest and the posttest were in an identical multiple-choice format consisting of 30 questions, two on each of the 15 problematic language items mentioned above. The statistical analysis of the test results showed that both types of treatment, but especially the DDL treatment, had a significant effect. There was an improvement of 22.2% for the traditional items, 31.6% for the DDL items, and 5.32% in the untreated control items. As for the question of which treatment was more effective, a minimal significant difference was found ($p = .15$). In other words, there is a 15% possibility that the DDL approach was more effective than the traditional approach due to chance only. However, the DDL treatment was significantly superior to the control experimental condition, while the dictionary treatment was not.

The questionnaire consisted of 10 items, and the first eight items asked students to evaluate the two approaches on a 5-point Likert scale. When only counting the favourable opinions (*agree* or *strongly agree*), 30 participants thought the dictionary task was easy, and 54 thought the DDL task easy; 31 found the dictionary useful, while 59 considered DDL approach useful. 37 believed that dictionary materials would help them avoid errors, while 58 felt this was the case for the DDL materials. 28 students stated that they would like to work with dictionary activities, while 51 said they would like to work with DDL in future. A comparison was carried out between the results of the proponents of the traditional approach and the proponents of the DDL approach and the statistical test showed that DDL was considered significantly better by students (p= .049). The two open questions in the questionnaire gave the students the opportunity to explain their views on the advantages of dictionaries and corpora. Corpora were seen as efficient in presenting "concrete examples", "practical English", "frequent usage", and the "language of today" (p.554). The numerous examples corpora provide were considered helpful to "visualize" and "get a feel" for the targeted items (p.553).

Boulton (2010) is an insightful study in a number of areas. It showed that paper-based materials

can, when designed properly, eliminate many of the alleged barriers to carrying out DDL activities in ELT classrooms, e.g. time, effort, computer literacy. The study also illustrated that DDL has its place even in classes with low levels of language proficiency (A2 to B1 CEFR), and it can be used in normal classrooms with teachers and learners having little or no previous knowledge of DDL. It showed that the DDL approach can be effective in treating a number of typical problem areas, although there was some variation in the improvement of the various target items. While this might be an inevitable outcome in language learning studies, these uneven results can be minimized by narrowing the scope of the items under study to show where DDL can help and be more fruitful.

The focus of Boulton (2009b) was on linking adverbials in English. The study compares the efficiency of two traditional and two corpus-based sources of data as reference tools and later to test recall. Boulton wanted to investigate whether lower level learners can derive some benefit from a DDL approach without prior training. Participants' performance was tested three times: prior to the experiment without any access to reference tools, during the experimental session where they had access to the reference tools and ten days later with no access to reference tools.

The participants were 132 first-year students at an engineering college in France. The majority 94% were native speakers of French and 86% of them were male. Their level was lower intermediate, according to their average score on a full-length Test of English for International Communication (TOEIC). Their level of motivation for studying English was reported to be generally quite low as English classes were regarded as something to be endured rather than useful preparation classes for their program. The ten most common linking adverbials of contrast and concession in the newspaper register, as revealed by the British National Corpus, were chosen for the experiment. These linking adverbials are: *but, however, actually, in fact, anyway, whereas, on the other hand, besides, nonetheless,* and *on the contrary.* Linking adverbials were selected because, as contended by Boulton, their usage system is complex. They also seem to be difficult to teach and they continue to represent a problem even at advanced levels.

For the corpus-based materials in his study, information was gathered from WebCorp (2007), which is an internet corpus. Again, the search was limited to the newspaper register, as it is a familiar register for learners, to obtain up-to-date samples and to ensure a certain degree of quality of exemplars. The students were randomly divided into four groups. Each group was handed a different source of information data as a reference tool. The four reference tools were:

1. The short context (SC) which consists of five short contexts for each test item.
2. The keyword in context (KW) featuring eight concordance lines for each test item.
3. The bilingual dictionary (BD) where entries for each test item where taken from *Collins-Robert Senior*.
4. The grammar/usage (GU) which includes notes for each test item from Swan's *Practical English Usage* (2005).

All participants, regardless of the reference tools they had consulted, received the same tests throughout. Each test included two types of exercises. Each exercise consisted of ten items to cover each of the ten target language items. The first exercise comprised ten sets of four concordances. The second exercise presented ten short contexts, of one to three sentences. The results of test two and three were significantly higher than test one. However, there was no significant difference between results for test two and three. Furthermore, when the reference sources were compared, the analysis showed that the two groups which worked with corpus-driven reference materials (SC) and (KW) had used them more effectively in test two than the other two groups which had the conventional reference sources. Whereas in test three, the recall test, there was not any significant differences anymore between any of the four groups. A more useful way of analyzing the results, as argued by Boulton, is to compare the results of test one against test three. We can then identify a significant improvement for all these three groups (SC), (KW) and (BD), with the exception of the GU group as the difference was not significant. Nonetheless, Boulton pointed out that when the two corpus groups' performance in test two were compared, the KW group showed a significant improvement. Boulton concluded that DDL can be effective in the learning process even at lower levels of proficiency.

Boulton did not explain, however, whether there was any teaching per se. We have no details of how students went about the second test, or what the teacher's role was. He pointed out that all the materials were used as reference tools in test two and to test recall in test three, thus, this might have affected their efficiency as learning tools. No information was provided on how the students worked on test two, in pairs or in groups, how their conclusions were verified, or if the appropriate conclusions derived from the reference materials were reinforced, and if it took place, how it was carried out.

Another study by Allan (2006) set out to investigate whether concordance tasks have any effect on increasing learners' understanding and subsequent acquisition of vocabulary. Participants were

tested by means of pre- and posttests. Her study included a control group and 20 of the 40 test items served as control items too. Participants were also asked to respond to a questionnaire to discover their reactions and attitudes to using concordances.

The participants in the study were 18 multilingual adult learners studying at a language centre in Ireland. 13 formed the experimental group and 5 performed as a control group. They are described as advanced in the study and they were taking preparation courses for the Cambridge Advanced English (CAE) examination. The CAE test, as reported by Allan, requires learners to demonstrate depth of lexical knowledge. Consequently, she felt that concordancing would be useful. Learners' motivation was considered important for the success of the experiment and the participants were thought to be suitably motivated and ready to explore new ways of advancing their English. The tasks for the experimental group consisted of concordance lines and awareness-raising questions to encourage learners to examine the meaning and contexts of the target vocabulary items. The tasks were paper-based. The corpus that was used to derive these lines was not explicitly identified and was only referred to as 100,000 words of broadsheet newspaper articles on varied topics. The control group was taught vocabulary using typical textbook approaches. The experiment was conducted over 12 weeks, and each session lasted around 30 minutes for the experimental group and 15 minutes for the control group. The vocabulary tests used in the study were based on the Vocabulary Knowledge Scale (VKS;Paribakht & Wesche, 1997). VKS is a self-assessment scale upon which students rate their knowledge of a word according to certain categories. Participants in both groups completed the test before and after the experimental sessions. The target items were selected from multiple-choice cloze tests in previous CAE papers. Forty target items were chosen for the pre- and posttests so that a selection of these could be represented in the experimental tasks.

The data analysis showed evidence of a significant difference between the average pretest and average posttest scores for the concordance group. Whereas the control group results did not show a statistically significant pre-/posttest difference. Analysis that was limited to the target words revealed that for the control group, only seven of the twenty words, which had been taught through traditional exercises, showed increases, while the reminder showed losses. In contrast there were gains for each word taught using the concordance tasks and the gains were significant for eight of the twenty words.

The questionnaire included a question about whether the course had changed participants' ideas

about learning vocabulary, but none of the control group responded affirmatively. As for the experimental group, seven out of 13 said the concordances had changed their ideas, two were uncertain, and four answered negatively. The majority of learners in the experimental group indicated that they found the tasks interesting. When asked about how useful they found the tasks, their answers were even more favourable. On a scale of one to five, only one student rated them below three, and five students rated them as extremely useful. The question of whether participants would be interested in using concordances in the future also resulted in positive comments as 10 replied they would, one was uncertain, and two responded they would not. Hence these results suggest concordance tasks may have been taken up with some enthusiasm.

There are a number of limitations in Allan's study, some of which were pinpointed by the researcher herself. These limitations are principally related to the control group. Allan reported that the teachers of the concordance group were instructed not to explicitly teach all of the vocabulary items which were to appear in the pre- and the posttest. There was no such restriction for the teacher of the control group. The amount of time spent on the target items varied in the experimental groups, which in return had its effect on the level of focus. The researcher herself noted that "the control group should be considered to represent a baseline of 'normal' vocabulary teaching, rather than a true control measure" (p. 26). The other limitation is, as pointed out by Allan, the level of involvement and interest. The concordance group was described as more interested in the project and in completing the tasks. On the other hand, the control group had less involvement and consequently less motivation. Having identical conditions in both groups for any experiment makes the results more reliable. Additionally, the control group consisted of only five participants, a fact that makes the mean results and other statistical tests less reliable. The VKS test (Paribakht & Wesche, 1997) that was utilized in the study has also been subject to serious criticism in the literature. For instance, Waring (2000) questioned the accuracy of students reporting on their own learning. Moreover, the keywords used as prompts in the scale, such as *know, means, have seen, can use* have been criticized. Waring (2002) explained that "a subject could *know* a word but have never *seen* it in writing, but *know* the pronunciation of it". Along the same lines, Read (2000, p. 136) doubted that L2 learners' vocabulary knowledge "can be meaningfully represented by a single linear scale".

Finally, Allan attributed the carry-over of positive effects to untreated items as a sign that the DDL effect exceeds that of the target item; but an alternative explanation lies in the fact that the control

group had a ceiling effect with learners scoring significantly higher than the experimental group, thus, having less room for improvement.

In another series of studies, Belz and Vyatkina (2005a, 2005b, 2008) used paper-based and hands-on treatment sessions to raise L2 German learners' knowledge of modal particles (MP) (*ja, denn, doch,* and *mal)* which are very important for accurate interpretation in German and to signal the speaker's attitude towards utterances and interlocutors. The study was a part of a telecollaborative course, whereby 16 NSs of English and L2 learners of German at the undergraduate level were partnered through the internet with 23 NSs of German and learners of English. The learners in both groups shared the same tasks which included reading and discussion. Learners chatted with and emailed their keypals during class time and in their own time. All correspondence was saved in a web-based teleconferencing program. Each group had its own folder and all participants had access to all folders. Learners answered enquiries about metalinguistic descriptions and metapragmatic awareness based on the Developmental Learner Corpus excerpts. The corpus stored the complete transcripts of participants conversations during the two-months of telecollaborative cooperation.

The part we are concerned with was carried out over eight weeks and lasted for four hours in total. All electronic conferencing took place via the teleconferencing program FirstClass. The study involved transferring all the produced telecollaborative correspondence into Telekorp, a bilingual learner corpus with a built-in control corpus. The researchers asserted that learners were underusing MP in comparison with NSs as illustrated by their documented interactions. The intervention involved retrieving examples of learners' emerging use of MP and examples of the use of MP by their German keypals, with the aim of drawing their attention to their own and their NS interlocutors' patterns of MP use and consequently improving their learning. Positive feedback was an essential part in the intervention and learners were encouraged to use MPs after each interventional phase. If learners did use MPs, their uses were referred to and they were praised.

The intervention consisted of four stages. The first stage involved pointing out the target features in the teaching materials without giving an account about their usage. Learners were asked to observe their keypals' use of the bolded words. Learners' development was traced microgenetically using the data in Telekorp. Microgenetic analysis can be defined as "a local, contextualized learning process . . . [that] can sometimes be traced visibly in the course of talk between expert and novice." (Mitchell and Myles, 2004, p.198). Analysis after stage one showed that only one learner, the most

proficient of the group, used one MP *ja* once. At the start of the second week, the second intervention stage was carried out. This stage involved directing learners' focus to the meaning, form and usage of the MPs. Learners were asked to specify the linguistic category that MPs belong to, list all the words they knew that belong to this category, identify their functions from a given list, and write down any words they had used to fulfill the same role. The learners' answers indicated that their awareness of the pragmatic function of MPs did not bring metalinguistic knowledge and production. Stage three consisted of more focused instruction on the syntax and meaning of MPs. The fourth and final intervention stage focus was on MP use. Appropriate and inappropriate uses of MPs were discussed and learners were encouraged to use them in their writing. During that week the number of MPs used by learners increased and they even exceeded the number of MPs used by NSs, 55 to 44. Further analysis of results showed that learners started using the target items more frequently and accurately than before, although no statistical results were reported.

Subsequent examination of two learners' post-course portfolios, which included reflective diary notes by the learners about the course, stressed the significance of learners' noticing. One of the learners, Jeremy, comments that:

> his German keypals used many *da*-compounds, but that he initially had 'no idea' what they meant or how important they were… Lastly, Jeremy explains that he has re-read his keypals' email and now recognizes many uses of *dafür, damit, dazu*, and *davon* in them. He no longer finds the emails confusing because he better understands what the *da*-compounds mean and how they stitch pieces of text together (p.44).

Christie, another learner, stated that she did not notice the MPs in her German keypal's emails before the instruction, however, she asserted that she started noticing them immediately after the instruction. Belz and Vyatkina's study illustrated the potential for paper-based corpus materials, however, it has also indicated that asking learners to observe and form hypotheses and conclusions on their own might not be an effective approach with all linguistic features. It confirmed that teachers' guidance and appropriately designed materials that include a certain degree of rule hiding are essential to facilitate learning.

Tian (2005a, 2005b) wanted to examine the effect of the DDL approach on L2 learners' learning in three linguistic areas: grammar, comparison of word usage, and distinctive features of a text type,

and whether DDL has different effects on learners of different proficiency levels. 98 Taiwanese university students from two news media English classes taught by Tian herself participated in the study and 48 of them performed as a control group. All of the participants were non-English majors from different departments in the university. The General English Proficiency Test, a locally developed test in Taiwan, was used to determine learners' proficiency level. 50% in the test was assigned as the cut-off score, meaning that learners who achieved over 50% were regarded as high proficiency students, and those who scored less as low proficiency.

The grammar points under study were subjunctive verbs and reduction of adverb clauses to modifying adverbial phrases and they were taught in two weeks. The second instructional focus was the comparison between two verbs' usage: contract vs. infect and one week was assigned for this. The final instructional focus was again given one week and it involved the special features of English news headlines, like tense and condensation of certain word categories, as the course was on news media English. The study lasted for five weeks and each class met for two hours a week. These three instructional focuses were chosen because they represent problematic linguistic features for the learners as illustrated by their performance during the term and from the researcher's previous experience. Concordances in the materials designed for the experimental group were taken from English news concordancers and related websites, while materials for the control group were based on grammar books and news media English textbooks. In the study, the experimental groups were given printouts of search results from news concordancers and websites, then asked to observe them then form rules and support or modify them by further examples. For the control group, the instructor first introduced the instructional focus, then provided the rule or the appropriate pattern and finally she would supply more examples from grammar books or news media English textbooks for illustration.

Students' improvement was tested for each one of the instructional focuses using pretests and posttests. The results indicated that students in both groups and in all instructional focuses improved significantly. However, students in the DDL group performed significantly better than the control group on grammar and text features but not on comparison of word usage. Tian argued that these results show that the DDL approach is effective for teaching grammar and special features of genres. The study involved the evaluation of the effectiveness of DDL with respect to three different linguistic focuses/features, as it would be naïve to claim DDL will be equally effective for all linguistic features (Boulton, 2009a; Gabrielatos, 2005). However, the study is not

without limitations and a number of them are acknowledged in the paper itself. One of the limitations is the very narrow scope of the linguistic items chosen: only one pair of words represented word usage, and consequently they can barely represent this entire area. Another limitation is that the three instructional focuses were taught during different times in the semester for varying amounts of time and this might have affected learners' learning outcomes and testing scores. Furthermore, the results are compromised by the different question format for each type of language item in the pre-/posttests, rendering direct comparison problematic.

Johns et al. (2008) carried out a study to evaluate the efficiency of four CALL (computer assisted language learning) programs. The aim was improving learners' reading comprehension and reducing the difficulties they face when reading longer texts through explicit grammar and vocabulary teaching based on target text. Three of these CALL programs, MATCHUP, CLOZE, and BILINGUAL SENTENCE SHUFFLER, are text-based and one, CONTEXTS, is based on concordances. The study was conducted on 22 Senior Grade 3 students aged 17-18 from Taipei Yong-chun Senior High School, Taiwan, using an experimental group and a control group, each consisting of 11 learners. The CALL programs were developed at Birmingham University. The texts in all the programs were taken exclusively from Arthur Ransome's novel *Swallows and Amazons* (1930). All the CALL programs were based on courses that were studied by the students in the weeks before the CALL program sessions. The teaching materials included both monolingual concordancing and concordance-based activities and parallel concordancing and concordance-based activities. Two corpora formed the basis of the teaching materials: a cumulative corpus for the text of *Swallows and Amazons*, and a cumulative corpus of a Chinese translation of *Swallows and Amazons* by Lee and Wang (2004).

MATCHUP is a CALL program that employs multiple-choice fill in the blank exercises. For each file chosen by the user, ten sentences with gapped words appear on the left of the screen, with ten answers randomly ordered on the right. The CLOZE program used in Johns et al.'s study used texts categorized according to the chapters of *Swallows and Amazons* they appear in. The user can select the interval for deletion, e.g. every tenth word deleted, and the type of deletion, e.g., whole word after the second letter. There is also a help facility offered that uncovers some of the letters in an answer to assist the user. The program also includes a logging program that shows what guesses the learner made, what type of help s/he used, and how long s/he worked on every step. BILINGUAL SENTENCE SHUFFLER displays shuffled sentences of a short text summarizing

the steps of performing different processes, e.g. putting up a tent. Using the help feature in this program makes the equivalent Chinese sentences appear under their English counterparts on the screen. A log file is available to analyze students' performance, too.

Monolingual concordance-based materials as their name suggests included concordances from the corpus of the novel. Students were offered printouts and asked to investigate points like the word meaning and its collocations. CONTEXTS is a CALL program which is based on concordances. In the study the program featured three word categories, namely 'expressions of movement', 'other verbs in *Swallows* and *Amazons'* and 'prepositions in *Swallows* and *Amazons'*. The program works with a group of related words each time. For instance, a group of verbs of movement is listed at the bottom of the screen, a number of concordances will appear for each verb once on the whole screen. When the user has finished investigating this list of concordances, s/he can choose to move to another verb from the verbs at the bottom of the screen. After the investigation, the learner can test themselves by completing a quiz. Another program in the study that is based on concordances is the E-C CONCORD program. This program relies on the parallel concordancing concept (concordances in English and Chinese). The learner can enter the search word and choose 'equal to', 'starts with', 'contains', or 'ends with' according to their needs. Each experimental session was arranged as follows:

1. Reading the specified chapter and carrying out group discussion (50 minutes)
2. Non-concordancing exercises using: MATCHUP, CLOZE, BILINGUAL SENTENCE SHUFFLER. (50 minutes)
3. Doing concordance-based exercises:
   a. Monolingual concordancing materials (20 minutes)
   b. The CONTEXT program (20 minutes)
   c. Parallel concordancing materials (20 minutes)

To evaluate the effect of the experimental sessions on learners' general English proficiency, the researchers compared their term exam results before and after the sessions. The overall mean score of students' term exams in both groups were almost identical (76.3 and 76). The results of the test carried out after the experiment showed that the experimental group scores were higher than the control group and the difference was statistically significant ($p < 0.005$). The study also aimed to investigate the effect of the experiment on students' reading comprehension and reading speed. Again, the experimental group performed much better and the difference was significant ($p < 0.005$). A significant difference was also found between the experimental group reading speed and

that of the control group (208 words per minute to 103 words per minute).

The authors carried out interviews with both groups after the experiment. For my purposes, the experimental group answers to the following two questions will be reported:

1. Did you enjoy the elective course? Why/Why not?
2. What do you think of the concordancing materials? Do they help you to understand the language points in the book more clearly? Why/Why not?

Of the 11 students interviewed, 10 stated that they enjoyed the experimental sessions very much. The person who did not said they found it challenging. 8 students out of the 11 interviewed evaluated concordancing materials positively. The ones who were not as enthusiastic about concordancing materials thought that reading cut-off lines was difficult and that a large amount of corpus data is overwhelming. Nevertheless, they stated their anxiety decreased with them becoming more familiar with the approach.

Johns, et al.'s study does show the potential of concordance-based materials and students' attitudes toward them. However, the small sample size is one of its limitations, along with the impossibility of controlling all the variables in the experiment which consequently makes claiming that the attested improvement is a result of the experiment a tenuous claim. The authors incorporated a number of CALL programs and implemented different approaches in the experiment which makes it difficult to pinpoint the impact of a certain approach, in particular, on the students.

To conclude, the available small body of empirical DDL studies using paper-based materials provide some beneficial insights, however, they have their limitations. The experimental methods and design diminish the validity of some of the findings. In particular, the target language features are often limited, (e.g. Tian, 2005a, 2005b) or includes a varied selection of target items with an umbrella term covering them, e.g. grammatical collocations in Koosha and Jafarpour (2006) and grammar/usage items in Boulton (2010a). Problems in the execution of the experimental treatment were found, (e.g. Allan, 2006; Koosha & Jafarpour, 2006). Limited information was provided about testing instruments and/or the teaching materials (e.g. Allan, 2006; Koosha & Jafarpour, 2006). Sometimes, problems occur in the test instruments themselves (e.g. Allan, 2006; Tian, 2005a, 2005b). The results are often encouraging, though the effects are sometimes small or not statistically significant. It is important for future empirical studies on DDL learning outcomes to strive to be systematic and focused in terms of methods and design.

The two next studies I report in this thesis are on using paper-based DDL materials to teach two types of formulaic language, namely collocations and lexical phrases. These two studies will build on the findings of the empirical DDL studies I review above. The two studies will try to evaluate the effectiveness of DDL for formulaic language pedagogy, given its potential strength (see sections 1.5, 3.2, 3.3). In these studies I will attempt to design materials that do not require expensive resources or extensive training and if they show that they can be effective and practical, they can provide empirical evidence of DDL efficacy for teaching collocations and lexical phrases. There are two studies in the DDL literature which have utilized the DDL approach and are relevant to the focus of the coming studies, (T. Chan & Liou, 2005; Sun & Wang, 2003) , and they will be reviewed in section 4.4.

3.6 Summary and conclusion

The chapter discussed concordancing and the DDL approach, their concepts, literature and pedagogical applications. Studies evaluating DDL in the paradigm of L2 learning were reviewed. The scarcity of empirical studies on the efficacy of the DDL approach is repeatedly acknowledged in the literature and conducting empirical research is called for. Similarly, a very small body of research exists on deliberate learning of formulaic language. The next two chapters will report the two empirical studies carried out to evaluate the effectiveness or otherwise of paper-based DDL materials. Quantitative and qualitative measures and instruments were used to collect the data which included focusing on students' and teachers' views about the teaching materials.

Chapter 4 The collocation study

4.1 Introduction

Research on EFL learners' collocational knowledge suggests that their knowledge lags far behind that of native speakers (Farghal & Obiedat, 1995; Laufer & Waldman, 2011; Nesselhauf, 2003). In the eighties Pawley and Syder (1983, pp. 194-195) described this well attested problem in L2 learners' production: "In the early stages of putting one's 'book knowledge' into practice…, it is a common experience to find that most of one's productions are, to the native ear, unidiomatic". However, very few research studies (although see T. Chan & Liou, 2005; Laufer & Girsai, 2008; Sun & Wang, 2003; Webb & Kagimoto, 2009, 2011) have been conducted to evaluate the effectiveness of various direct instruction methods on formulaic language learning.

The classroom-based studies described in this chapter aim at evaluating the effectiveness of two types of instructional materials in the form of concordance-based and dictionary-based worksheets for teaching collocations. The first section, 4.2, will review models of formulaic language learning in L1 and L2. Section 4.3 will review the available research on EFL learners' knowledge of collocations; the next section, 4.4, reviews the research on teaching collocations in EFL contexts. Section 4.5 will present the research questions. After that an overview of researching vocabulary teaching techniques and a focus on the Involvement Load Hypothesis in particular is presented in section 4.6. This will be followed by a description of the methods used in the collocations study in sections 4.7-4.11. The pilot study is presented in section 4.12, and it is followed by a description of the procedure followed in the main study in 4.13. Test results are reported in section 4.15 and discussed in section 4.16. Students' questionnaire results are presented and discussed in 4.17, while students' and teachers' interview findings are reported in 4.18 and 4.19, respectively.

4.2 How is formulaic language learned?

If we are to teach formulaic language to L2 language learners in a principled way, we would need to understand how formulaic language is acquired and the types of difficulties formulaic language learning might present to L2 learners. The two sections below will discuss these issues. The first describes N.C. Ellis and Wray's models of L1 formulaic language learning and the second presents Wray's model of L2 formulaic language learning. A discussion of why applied linguists have considered formulaic language particularly problematic for L2 learners will be introduced at the end.

4.2.1 A model of L1 formulaic language learning

N. C. Ellis (2001) claimed that for L1 learners, the acquisition of formulaic language involves the implicit process of 'chunking', fueled by a principle of learning by association, 'Law of Contiguity', which entails that: "Objects once experienced together tend to become associated in the imagination, so that when any one of them is thought of, the others are likely to be thought of also, in the same order of sequence or coexistence as before" (James, 1890, quoted in N. C. Ellis, 2001, p. 42). N.C. Ellis explains how learning in L1 and L2 occurs as follows:

> The more any novel word, be it L1 or L2, is repeated in phonological WM [working memory], the more its regularities and chunks are abstracted, and the more accurately and readily these can be called to WM, either for accurate pronunciation as articulatory output or as labels for associations with other representations. It is from these potential associations with other representations that interesting properties of language occur. Links with conceptual representations underlie reference and grounded semantics. Links with frequent local collocations underlie syntax and idiomatic meaning. Links with local and more distant lexical neighbours underlie lexical semantics. *Links between L2 and simultaneously active L1 representations underlie translation and language transfer effects*. These simple associations amass over the learner's language input history into a web of multimodal connections which represents the complexities of language (2001, p. 44, emphasis added).

Building on an idea from A. M. Peters (1983), Wray (2002) proposed that in L1 acquisition (which continues throughout one's life), a major principle of learning from input, and it indeed function by default is Needs Only Analysis (NOA): "The process of analysis which the [native speaker] child engages in would not be that of breaking down as much linguistic materials as possible into its smallest components. Rather, nothing would be broken down unless there was a specific reason"

(p. 130)

Wray (2008, p. 17) gives the example of 'how do you do'. When an L1 learner learns this expression, it gets mapped as a whole onto the meaning/function 'what adults say when shaking hands and meeting someone for first time'. The holistic storage for L1 learners is possible because there is a strong mapping of form to meaning/function. Models of variation will be noted over time, according to Wray, in line with (A. M. Peters, 1983), and she claims the NOA model postulates that input is checked against stored lexical units, and when variation occurs, some analysis may follow. As an example, Wray asks the reader to consider the expressions: 'have you seen daddy's coat?', 'have you seen daddy's phone?', 'have you seen daddy's other sock?'. The L1 child learner observes where the variation exists, and segmentation occurs here, "but not elsewhere (yet)" (Wray, 2008, p. 17). The child will have the following set of lexical units: (1) 'have you seen daddy's _____?', (2) 'coat', (3) 'phone', (4) 'other sock'. Any one of the last lexical units can be inserted in the slot of the first frame. The native speaker's knowledge of the language will involve lexical units of varied length, and also a huge sensitivity to which items can be combined. This sensitivity may be built by frequency principles, semantic ones, or both. Wray (2008, p. 19) observes that "Needs are dynamic and NOA will trigger different analysis as the needs of an individual change".

4.2.2 A model of L2 formulaic language learning

Building on the same NOA model, Wray (2002) argues that adult L2 learners have different needs and often significantly different input. Furthermore, being adults enables them to use alternative means to accomplish their communication tasks. Adult L2 learners learning in classrooms with textbooks are oriented towards the external measurements of their learning. Also, adult L2 learners' minds seem to be better at segmenting and rationalizing language than L1 child learners. This might be attributed to the way language is taught in classrooms and textbooks and to biological maturity, along with social experience, education and literacy. Thus, Wray proposed that L2 learners tend to analyse input more than L1 child learners and to store shorter lexical units. Wray ascribes L2 learners' difficulties with formulaic language to this proposal. She also notes that L2 learners' often restricted repertoire of idiomatic expressions and their tendency to express their

messages in a non nativelike way are results of this hypothesized model.

N. C. Ellis (2012, p. 34) observes that L1 and L2 acquisition of formulaic language are different and the difference rests on several factors. He asserts that L1 acquisition would indeed be more formulaic than L2 acquisition. When an L1 child learns about language from formulaic units and analysis of language sequences, s/he is learning from scratch about classification of language components: verbs, nouns, pronouns, prepositions and so on. N.C. Ellis points out that even the issue of whether L1 learners first learned units are words at all is debatable (A. M. Peters, 1983). On the other hand, adult L2 learners are aware of the existence of language categories and structures. They anticipate that lexical units and constructions in the L2 correspond to ones in their L1. Consequently, "they are more likely therefore to attempt *creative construction*, swopping these elements into corresponding slots in frames" (p. 34, emphasis added). Another factor, according to N.C. Ellis, is the fact that recognition of formulaic language, as is the case in all other areas of language processing, is easier than production. N. C. Ellis and Ferreira-Junior (2009a, 2009b) showed that naturalistic adult L2 learners used the same verbs in verb-argument constructions as are found in their input. The types in the input correlated with the ones in uptake in excess of r=0.90, a finding that stresses the important role of input and its characteristics in uptake and the need to take this fundamental aspect into account when researching formulaic language learning (see also Durrant, 2008; Durrant & Schmitt, 2010). Nonetheless, Ellis and Ferreira-Junior noted that complex constructions were usually produced in a simplified version. Indeed some researchers have shown that naturalistic adult learner language shares some features with adult taught learner language, as well as with L1 child learner language (see Wray, 2002, chapter 10).

Transfer from L1 is also a prominent factor (Gilquin, 2007; Laufer & Waldman, 2011; Paquot, 2008), and one that has been highlighted by researchers as has been discussed above. Types of exposure and input also play a big role in formulaic language acquisition. While an L1 child learner learns from thousands of hours of exposure and input, and a naturalistic adult L2 learner also learns from wide exposure and interaction, a taught adult L2 learner learns from dictionaries and grammar books and "neither provide naturalistic input nor encourage fluent idiomatic expression of formulaic speech" (N. C. Ellis, 2012, p. 34). However, the viability of taught L2 learners reconstructing their language after learning formulaic language units has been demonstrated by Myles in an extensive longitudinal study (2004; Myles, Hooper, & Mitchell, 1998).

In her discussion on how to make formulaic language learning work, Wray (2008, pp. 227-228) asserts:

> ..the need for learners to encounter a range of different discourse types in order to discover which formulaic sequences are appropriate and where. It is obviously difficult to encounter a broad range of formulaic sequences in genuine functional contexts in a classroom, and direct teaching is necessarily an alternative that must be considered…. It is generally accepted these days that learning isolated items of lexis is of limited value, and teachers and textbooks often now present new vocabulary within a collocational or phraseological context…

For my own purposes in this thesis, I would like to refer again to the factors of lack of extensive input and L1 effect that have been aforementioned because these two elements are to a large extent the ones we can manipulate to lessen their negative impact in L2 learning contexts. Formulaic language learning should be enhanced by providing taught L2 learners with different types of rich input and explicit teaching where possible, along with raising their awareness of the L1-L2 relationship through contrastive analysis tasks while presenting formulaic language in its holistic form to discourage unnecessary analysis and replacement. The empirical studies reported in chapters four and five are attempts to build on these principles for teaching two types of formulaic language: collocations and lexical phrases.

4.3 Research on EFL Learners' Knowledge of Collocations

Research on EFL learners' collocational knowledge can be classified into three main categories. The first category is corpus-based research that examines the appropriateness of the collocations used in EFL learners' written output through analyzing a corpus of their written texts. As an example of this category, Hasselgren (1994) analyzed errors in word combinations made by a group of first year Norwegian university EFL learners. It was found that the source of most errors (42%) was the use of a wrong synonym. In Hasselgren's study natives' intuitions were used as an external measure for classifying errors in learners' output. Granger (1998b) examined amplifier-adjective collocations (e.g. *extremely rare*) in the French sub-corpus of the ICLE (International Corpus of Learner English) and a small native corpus to investigate the collocations produced by advanced French-speaking EFL learners in comparison to natives. Her results showed that French learners used fewer amplifiers with adjectives than natives. French learners also overused two amplifiers (*completely* and *totally*). Granger attributed French learners' overreliance on these amplifiers to them being "safe-bets" (p.148), i.e. they were only confident using a narrow range of amplifiers, and thus overused them. Granger's study was one of the first in collocational corpus-

based research. Pursuing a similar goal, Nesselhauf (2003) examined 213 verb-noun collocations from the German ICLE sub-corpus. The 32 essays investigated were written by German-speaking university students of English in their third and fourth year. Nesselhauf used a combination of idiom dictionaries and natives' intuitions in analyzing these collocations. It was found that 24% of the collocations were not correct according to these norms. Nesselhauf concluded that non-natives indeed have difficulties in producing native-like collocations. However, it should be noted that no native corpus was used as a baseline for comparison in Nesselhauf's study.

In a more recent study Siyanova and Schmitt (2008) normalized the Russian ICLE (Granger, Dagneaux, & Meunier, 2002) sub-corpus and the Louvain Corpus of Native English Essays (LOCNESS), (Granger, Sanders, & Connor, (n.d.)) which was compiled to be the native equivalent of the ICLE corpus, against the BNC. The Russian ICLE sub-corpus consists of essays written by Russian university students who were studying English as a foreign language at an advanced level. The students had been studying English for six to twelve years. The criterion employed for judging typicality of collocations was having at least 6 occurrences with a mutual information (MI) score of at least 3 in the BNC, MI being "a measure of *the strength of association between two words*" (Clear, 1993, pp. 279-282). It was found that 44% of the 810 adjective-noun collocations in the learner corpus were typical according to the aforementioned criterion. This percentage was close to the percentage of typical collocations in the native corpus which was 48% out of the 806 extracted collocations. Thus, Siyanova and Schmitt (2008) commented that "these learners were as likely as a comparable group of native speakers to produce frequent and strongly associated collocations in their essays" (p.439). Similarly, Laufer and Waldman (2011) conducted a study where they compared a corpus of almost 300,000 words of Hebrew EFL learners' texts to a corpus of texts written by adult natives. The Hebrew corpus consisted of the written essays of a range of learners: 9th and 10th grade ('basic'); 11th and 12 grade ('intermediate'), and college and university students ('advanced'). Advanced learners had 400 aberrant and 852 correct collocations, intermediate learners made 82 aberrant and 162 correct collocations, and basic learners wrote 34 aberrant and 68 correct collocations. Collocational knowledge was judged by consulting two collocation dictionaries. The analysis targeted the most frequent 220 nouns in the native corpus which were likely to be known by Hebrew EFL learners. Results revealed that native speakers produced almost twice as many typical collocations as the learners produced (checked by two collocation dictionaries): 10% in comparison with 5.9%. About a half of all collocations produced by L2

learners were incorrect regardless of their level. Laufer and Waldman's findings seem to contradict Siyanova and Schmitt's results as they showed a significant difference in performance between native and nonnatives, while Siyanova and Schmitt's results do not reveal a significant difference between native and nonnatives. One possible explanation might be the fact that the criterion followed for verification of collocations was different in the two studies. In Laufer and Waldman's study they employed dictionaries whereas corpus evidence was used in Siyanova and Schmitt's study. Dictionaries might include a limited number of collocations whereas a corpus as big as the BNC is likely to include a large number of significant collocations (Sonbul, 2012). Moreover, both of the collocations dictionaries used in Laufer and Waldman's study, the BBI and the LTP are not corpus-based. This might be the reason behind the difference in scores in the two groups in both studies (10% and 6% respectively in Laufer and Waldman's study in comparison with 48% and 44% in Siyanova and Schmitt's study).

The second category of EFL research on collocations represents the studies that have explicitly tested EFL knowledge of collocation via the use of paper-and-pencil tests. In the aforementioned study, Hasselgren (1994) used a recall test and found that Norwegian EFL learners failed to show the same sensitivity as a group of native speakers in using collocations. Hasselgren stated that Norwegian EFL learners tended to use 'teddies' or what Granger (1998b) termed 'safe-bets' in the test, i.e., the same narrow range of collocations they were comfortable with. A similar conclusion was reported by Granger (1998b) who used a 'word-combining' test in her study of two groups of French EFL learners and native speakers. Participants were required to indicate which adjective/s of all the 15 could form acceptable collocations for each one of the 11 amplifiers, and they were required to mark the one that was more salient (salient in the subjects' minds). It was found that French learners marked more collocations as being salient than natives did. Granger concluded that French EFL learners' sense of salience is weak and inaccurate. In another study, Bahns and Eldaw (1993) used two tests that targeted 15 verb-noun collocations. The first test was an L1-L2 translation test and the second one was a cloze test that required recalling the verb that goes with each noun. Results showed that 53% of the collocations produced in the translation task were typical, and 48% of those written in the cloze task were typical. Thus, the collocational knowledge demonstrated by German learners can indeed be described as weak.

Similarly, Arab learners seemed to perform rather weakly on collocational tests. Hussein (1990) administered a recognition task in the form of contextualized multiple choice test to Jordanian

English-majors. The results showed that only 48% of their responses where correct, which is a low percentage, especially when considering it was a contextualized recognition rather than a production task. A similar conclusion was reached by Farghal and Obiedat (1995) who measured Jordanian English-majors' knowledge of 22 frequent collocations by dividing learners into two groups and assessing the first group's knowledge with a recall (cloze) test, while an L1-L2 translation test was used with the second group. Results showed that only 18% of the first group's responses where correct, and the second group only scored 5%. However, these two studies were criticized for not including a proper native baseline for comparison, and for failing to control for the sufficiency of clues in context and for the frequency of collocations (Durrant, 2008; Gyllstad, 2007).

In order to compare the effect of the ESL learning environment versus the EFL one, and the impact of L2 learners L1 Arabic on learning collocations, Shehata (2008) measured 35 ESL and 62 EFL learners' productive and receptive knowledge of 16 verb-noun and 16 adjective-noun collocations. In each set half of the collocations were L1 congruent and half L1 incongruent. Testing instruments included two gap-filling productive tests, an appropriateness judgment test, and a vocabulary recognition test. The results indicated that there were significant differences between the two groups on their productive and receptive knowledge of collocations and that the ESL participants perform significantly better than the EFL participants. At the productive knowledge aspect, the ESL participants outperformed (M=20.7) the EFL participants (M= 16.5), and also at the receptive knowledge aspect, the ESL group (M= 38) performed better than the EFL group (M= 36). When examining the potential influence of learners' L1, the results showed that both ESL and EFL groups were significantly more successful with congruent than with incongruent collocations. Along similar lines, Alsakran (2011) investigated the language learning environment (ESL or EFL) impact on learners' productive and receptive knowledge of three types of collocations: verb-noun, adjective-noun, and verb-preposition. Participants' productive knowledge was measured by three gap-filling tests for each type of collocations, while receptive knowledge was measured by an appropriateness judgment test. The ESL learners performed significantly better than the EFL learners. The ESL group productive knowledge (M=18.10) surpassed that of the EFL group (M=14.47), and a similar pattern emerged on the receptive tests, ESL group results (M=39.10) were significantly higher than the EFL group ones(M=31.81).

Furthermore, participants performed significantly better on verb-noun collocation than on the

adjective-noun and verb-preposition collocations. Both studies confirmed the findings of earlier ones and demonstrated Arabic-speaking EFL learners' poor collocational knowledge.

The final type of collocational research is the most recent, which includes incorporating psycholinguistic measures to assess learners' collocational knowledge. Yamashita and Jiang (2010) used an online Yes-No phrase acceptability judgment task to assess Japanese ESL and EFL learners' processing of English collocations. The target collocations included congruent and incongruent collocations. The former refers to collocations that share the same lexical items between the learner's L1 and L2; the latter refers to collocations whose lexical components are different from the learner's L1. The same task was also administered to a group of advanced Japanese ESL learners and to a group of natives. They found that for the native group there was no significant difference between congruent and incongruent collocations in error rate and reaction time. The difference was, however, significant in the nonnative groups with higher error rates in both groups and a longer reaction time for the EFL learners' group when considering incongruent collocations. Yamashita and Jiang concluded that:

> L2 learners are initially dependent on the L1 mediation process…but with the increase of exposure to and use of the L2, direct links between L2 collocations with concepts are formulated and L2 collocations come to be processed independently of the L1 lexicon (p. 661).

In another recent study, Wolter and Gyllstad (2011) employed a priming method to assess implicit knowledge of congruent collocations, incongruent collocations and control (non-collocate) items. A group of L1 Swedish EFL learners and two groups of native English speakers were tested. Natives' results showed a clear processing advantage for both types of collocations: congruent and incongruent over control items. There was no processing difference between congruent and incongruent collocations. Nonnatives were also administered the COLLMATCH collocational test which is a yes/no test for assessing explicit collocational knowledge. In nonnatives' results, there was a processing advantage for congruent collocations over control items (by item and participant analysis), however the difference between incongruent items and both congruent items and control items was only significant by participant analysis. The COLLMATCH test results revealed that more 'yes' responses were given to congruent than incongruent collocations. Thus, Wolter and Gyllstad concluded that learners' L1 seems to have an effect on their processing of L2 collocations, and the effect seems to be clearer on explicit tests than implicit ones.

We can conclude from this section that EFL learners even at the very advanced level make errors

in collocation use and produce fewer collocations that natives. EFL learners' knowledge of L2 collocations is obviously affected by the L1, and Arab EFL learners' recall of collocations seem to be weaker than their European counterparts.

4.4 Research on Teaching Collocations in EFL Contexts

Most collocational research in the EFL context has investigated processing and usage, rather than learning. Research on whether formulaic language can be successfully taught and learnt and how that teaching should be carried out is rare. Very few studies have aimed to explore the various possible conditions for teaching and improving collocational knowledge among EFL learners.

In this section, I will briefly review five empirical classroom-based studies (T. Chan & Liou, 2005; Laufer & Girsai, 2008; Sun & Wang, 2003; Webb & Kagimoto, 2009, 2011). These intervention studies explored the effectiveness of various instructional methods on learning collocations. The review here is focused on these studies since they took place in classroom settings, and they were all intervention studies that explicitly treated the target items, much like the studies carried out in this thesis. Sun and Wang (2003) was the first study that set out to assess the usefulness of concordance lines for teaching collocations in the EFL classroom context in Taiwan. Sun and Wang compared the effectiveness of inductive and deductive approaches on learning collocations by using a concordancer. In the study, two versions of error correction tasks were used before and immediately after the treatment conditions. The level of collocation difficulty was also examined as the four target collocations were divided into two easy and two difficult collocations. Eighty-one students in the second year of a senior high school in Taiwan participated in the study. The results showed that the students who learned under the inductive instructional condition scored significantly higher for the easy collocations than the group who learned collocations deductively. Sun and Wang, however, did not employ any delayed posttest in their study. Their study examined only immediate gains.

In contrast, T. Chan and Liou (2005) featured such a posttest. T. Chan & Liou also conducted their study in a Taiwanese EFL context. Thirty-two non-English major college freshman students in Taiwan participated in the study. In their study, they compared two treatment conditions: teaching by a bilingual English-Chinese concordancer through online units and traditional teaching with no concordancers in online units, with a no treatment control condition. T. Chan & Liou used a pretest and two posttests (one immediate, the other delayed). The test used was a form recall test. The

results showed that all three conditions led to significant improvement both in immediate and delayed tests. Interestingly, although there was no significant difference in results between the two instructional conditions in the immediate test, it was found that learners who learnt via the traditional method regressed more than the group who learnt via the concordancing condition. Based on this finding, T. Chan & Liou concluded "an induction-based approach may take longer time for the learning effects to surface" (2005, p. 246).

In a more recent study, Laufer and Girsai (2008) compared the effect of three instructional conditions on learning single words and collocations. They had three groups of the same L1 and comparable English proficiency and zero previous knowledge of the target items. 75 tenth graders EFL learners participated in the study. Each group of students learnt under a certain instructional condition: meaning focused instruction, form-focused instruction, and contrastive analysis and translation. The meaning focused group carried out a task, which required understanding the text through completing two communicative tasks with no focus on the target items. The form-focused group's task required understanding the text and attention to the target items as learners needed to complete two form-focused tasks: a multiple choice meaning recognition activity and a text fill-in activity. Contrastive analysis and translation treatment involved two translation activities (L2 into L1 followed by L1 into L2) and a brief explicit contrastive explanation. Immediately after the treatment and after a week, participants were given two tests: form recall and meaning recall. The results showed that the contrastive analysis and translation group improved significantly more than all the other groups on all the tests. Laufer and Girsai concluded that these results can be attributed to the 'noticing' hypothesis, 'task-induced involvement load', and the influence of learners' L1 on L2 vocabulary learning.

Pursuing similar goals, Webb and Kagimoto (2009) investigated the effects of receptive and productive tasks on learning collocations. 145 Japanese EFL learners were divided into three groups: two experimental groups and one control group. The group who received the receptive treatment encountered collocations in three glossed sentences, while the group which underwent the productive instructional condition completed a cloze task as they wrote the collocations in the provided blanks of the same three glossed sentences. Four tests were used to measure receptive and productive knowledge of collocations: multiple choice test, cloze test, L1-L2 and L2-L1 translation tests. Results showed that both treatment conditions led to significant gains in knowledge in comparison with the control group, however, the difference between the two instructional

conditions' effects was not significant. After learners were grouped into higher level and lower level based on their VLT (Vocabulary Levels Test) and their pretest results, it was found that the productive learning treatment was better for higher level students, and receptive treatment was more effective for lower level learners. Later, Webb and Kagimoto (2011) carried out another study on learning collocations with Japanese EFL learners to evaluate the effects of manipulating three factors: number of collocates, position of node word (i.e., adjective with nouns in the +1 position as their collocates, e.g., *good laugh, good reason*, or in the -1 position, e.g., *difficult time, full time*), and synonyms. The study employed receptive treatment as each collocation was encountered only once. Learners' productive knowledge was measured by form recall pre- and posttests. The treatment led to high scores in the posttests ranging between 60% and 90% in comparison with zero knowledge in the pretest. It was found that as the number of collocates increased for a node word (1, 3, 6), knowledge gains increased. In contrast, including synonymous adjectives had an inimical effect on learning collocations. The position of the node, however, did not have any effect on collocational learning.

Learning collocations has been shown to be inherently difficult for adult L2 learners by many studies including the current CEA of the SLC, and the studies reviewed above. The study by Laufer and Waldman (2011), for instance, did not find any difference in productive knowledge of verb-noun collocation between three different English language proficiency levels of EFL learners, proving that theses errors are highly persistent. Boers, Demecheleer, Coxhead, and Webb (2014, pp. 55-56) quite rightly argue that it is often the verb in these collocations that L2 learners replace with an erroneous choice (*do a mistake), and such replacements are often caused by L1 interference where an equivalent collocation exists with a different verb collocate (Nesselhauf, 2005; Yamashita & Jiang, 2010). They point out that several other factors play a role in L2 learners' struggle: for instance, when a collocation consists of words known to the learner, s/he is less likely to attend to the components of the collocation because the words are known to the learner and might not attract his/her attention. Furthermore, it is often the noun that convey most of the semantic load of the collocation (compare *make* and *mistake*), decreasing the salience and the prominence of the verb (or any other) collocate to the learner. A further possible cause is the "lack of distinctiveness" of the collocates, meaning some of the verb collocates may be treated as synonyms by learners, e.g. *make* and *do* in *make a mess* and *do damage*.

For all these reasons and many others (see section 1.3 and section 1.5), research is desperately

needed on how to teach formulaic language. Researchers agree that multiple encounters with a collocation (and perhaps similar formulaic language patterns) are needed for the L2 learner to establish the connection between the meaning and form of the formulaic sequence (Webb, Newton, & Chang, 2013). Particularly in EFL contexts the chances of learners meeting the same formulaic sequence are quite slim. Substantial reading and listening can, to a certain extent, aid, but the reality is that the chances of encountering the same formulaic sequence in an authentic text during a short span of time more than once are very small. According to Boers et al. (2014):

> this holds true for most formulaic sequences, even those that one would imagine to be very common. For example, Byrd and Coxhead (2010, pp. 46-47) find that *on the basis of* occurs only twice within a corpus of written academic texts of 15,625 words (p. 56)

Deliberate learning of a selected set of formulaic sequences produces higher learning gains (Laufer & Girsai, 2008), in comparison with learning as a by-product of a communicative activity. While we can assume that deliberate learning of formulaic sequences must be beneficial in the sense that it promotes learners' and teachers' awareness of the occurrence and nature of formulaic language in general:

> [I]t needs to be acknowledged that, to date, little empirical evidence is available to support an assumption that each of the various exercise types presented in learning and teaching materials is optimally beneficial for learners' retention of the collocations [or any other type of formulaic sequences] they target. (Boers et al., 2014, p. 56)

The aim of the two classroom studies reported in this thesis, the collocation study and the lexical phrases study, is to help advance our knowledge of the effective types of tasks for teaching collocations and lexical phrases and L2 learners' and teachers' perception and attitudes toward them. The two studies will compare two types of tasks: DDL paper-based tasks and dictionary-based tasks. In the following section the research questions of the collocation study are presented.

4.5 Research questions

1. What type of instructed input, concordance-based or dictionary-based, if either, promotes learners' initial learning of productive knowledge of the meaning and the form of collocation? And which one is more effective?

2. What type of instructed input, concordance-based or dictionary-based, if either, promotes learners' retention of productive knowledge of the meaning and the form of collocation? And which one is more effective?

3. What type of instructed input, concordance-based or dictionary-based, if either, promotes learners' residual learning of productive knowledge of the meaning and the form of collocation? And which one is more effective?

4. What type of instructed input, concordance-based or dictionary-based, if either, promotes learners' initial learning of receptive knowledge of the meaning and the form of collocation? And which one is more effective?

5. What type of instructed input, concordance-based or dictionary-based, if either, promotes learners' retention of receptive knowledge of the meaning and the form of collocation? And which one is more effective?

6. What type of instructed input, concordance-based or dictionary-based, if either, promotes learners' residual learning of receptive knowledge of the meaning and the form of collocation? And which one is more effective?

7. To what extent are concordance worksheets and a data-driven learning approach appropriate for learning collocations, in contrast with a dictionary based approach, in the Saudi university context?

    This is broken down into the following research questions:

1. How helpful do learners find concordance worksheets for learning collocations?
2. How helpful do learners find dictionary worksheets for learning collocations?
3. How difficult do students find working with concordance examples in collocation worksheets?
4. How difficult do students find working with dictionary information in collocation worksheets?
5. Would they like to use concordance worksheets in the future to learn collocations?
6. Would they like to use dictionary worksheets in the future to learn collocations?

7. Do they think concordance worksheets are more helpful for learning collocations than the dictionary worksheets or vice versa?
8. Do they think concordance worksheets are more difficult for learning collocations than the dictionary worksheets or vice versa?
9. Do learners like concordance worksheets for learning collocations more than dictionary worksheets or vice versa?
10. How do learners think we can improve the concordance worksheets for teaching collocations?
11. How do learners think we can improve the dictionary worksheets for teaching collocations?
12. What do learners believe to be the principal advantages and disadvantages of the translation activity?
13. What do learners believe to be the main strengths and weaknesses of the concordance worksheets, the DDL approach and the dictionary worksheets for teaching collocations?

4.6 Researching vocabulary teaching techniques

According to Nation (2010) and Nation and Webb (2011, pp. 2-3):

> [T]here are three major ways of analyzing vocabulary teaching techniques: (1) By doing technique analysis such as looking at involvement load (Laufer & Hulstijn, 2001) or by analyzing the goals, learning conditions, signs, and design features of techniques (Nation, 2001b); (2) by observing the learners thinking aloud during or after a vocabulary learning activity (Hosenfeld, 1976) or (3) by doing experimental comparisons of vocabulary learning activities (Hulstijn & Laufer, 2001).

Furthermore, Nation and Webb (2011) assert that analyzing teaching techniques is an area of high significance in language teaching and learning research. Because there is a noticeably large number of vocabulary learning techniques and activities, analyzing them would help us figure out which ones best help learning. Analyzing vocabulary learning techniques would answer questions like: which vocabulary learning techniques should one choose? "Which ones are likely to work well? Why are they likely to work well? Can the features that make them work well be used in other techniques to improve them?". Thus, technique analysis is a very useful practice. "[E]ffective systems of technique analysis can help improve teaching and learning [practice and results]" (Nation & Webb, 2011, p. 3).

4.6.1 Involvement Load Hypothesis

Nation and Webb (2011, p. 3) argue that "the best known and the best-researched" way of analyzing vocabulary teaching techniques is Laufer and Hulstijn's (2001) Involvement Load Hypothesis. Laufer and Hulstijn (2001) proposed a motivational-cognitive construct of involvement to weigh the degree of cognitive processing exerted by an L2 learner in a given vocabulary learning task. The construct of involvement consists of three components: need, search, and evaluation. Each one of these components can be either absent (-) or present with moderate strength (+), or present with full strength (+ +) in a given vocabulary activity. They argued that the degree to which an L2 learner is engaged in cognitive processing depends on the combination of motivational and cognitive elements of a vocabulary learning task.

The need component is operationalized as the motivational feature of the task which exists when the word is required for completion of a given task and is based on a drive to comply with the task requirements. Need can occur in two degrees of strength: moderate (+) or strong (+ +). Need is considered as moderate when it is necessitated by an extrinsic motivation (e.g. the teacher), and it is hypothesized as strong when it is self-imposed. An example of the moderate need is the need to use a word in a sentence that the teacher has asked the learner to produce. A case in point of strong need is when the learner tries to express a concept without knowing the appropriate word for it.

Search and evaluation are the cognitive (information processing) components of the involvement construct. They both involve attention to word form and word meaning. Search is the attempt to find the meaning of an unknown L2 word or the L2 word form, e.g. trying to translate a word from the L1 into the L2 by consulting a dictionary or another authority. In their original proposal in 2001, Laufer and Hulstijn contended that search can be either absent (−), or present (+). Search was not conceptualized as the relative degree of processing. Recently, Laufer (2012, p. 344) stated that no distinction between a moderate and strong search was originally hypothesized. "However, in later discussions of the construct, such a distinction was suggested". The recent distinction claims that search is moderate when a learner searches for the meaning of a given word, and strong when a learner searches for word form to express familiar meaning. This distinction was not published in a paper with a detailed treatment. To the best of my knowledge, it was only mentioned briefly first in (Nation & Webb, 2011) through personal communication between the first author and Laufer. The second was in the concise description of the Involvement Load Hypothesis in *Routledge*

Encyclopedia of second Language Acquisition (Laufer, 2012). There are no empirical studies conducted with this recent distinction in search component involved. In an email exchange with Laufer, I asked her to examine and comment on the DDL and dictionary tasks, and she stated the following on the search dimension on vocabulary learning tasks:

> In our papers on Involvement Load we do not distinguish between moderate and strong types of search (actually we had a lot of discussions about this…). You could suggest that there are indeed different categories of search since some types of search require more cognitive efforts than others (Laufer, personal communication)

Evaluation requires comparing a given word with other words, or a specific sense of a word with its other senses in order to determine whether a word fits a certain context or not. Evaluation involves making choices between options or providing a suitable context for a word. For instance, when an L2 learner looks up a word in a dictionary to understand its meaning by comparing all its meanings against the provided context and realizing/identifying the one that best fits the context. The type of evaluation that requires understanding difference between words or differences between several meanings of a word is identified as moderate. Evaluation that entails generating a sentence using the new word and additional words to form the required sentence or text is recognized as strong evaluation.

A vocabulary learning task can induce any one, two or all three components of involvement: need, search and evaluation. If we want to evaluate a task in relation to its involvement load, we need to make a total of nine judgments (3×3) which would result in an involvement index score range from 0 to 6 (each component may be absent −, present in a moderate form +, or present in a strong form ++) . The quality of any analytic measure of a given vocabulary learning task depends on the reliability of the analysis. Nation and Webb (2011) quite rightly contend that:

> With this relatively small number of judgments to be made, it would be wise when applying the involvement load hypothesis to have at least two judges determining the involvement load of each activity. This would help reach a good level of reliability in the analysis of the activities (p. 5)

The Involvement Load Hypothesis postulates that words which are processed with a higher involvement load will be retained better than words that are processed with a lower involvement load. The design of the vocabulary learning task determines the quality of the learning outcomes. The major theoretical construct behind the Involvement Load Hypothesis is Craik and Lockhart

(1972) levels of processing theory. Their depth of processing theory hypothesis, and other researchers' and scholars' notions and hypotheses that sprang from it are considered as dealing with explicit learning in the paradigm of constructionism. Craik and Lockhart argued that the quality of retaining a new piece of information in long-term memory is not determined by the length of time that it is kept in the short-term memory but rather by the degree of depth with which it is initially processed. Laufer and Hulstijn (2001) quite rightly pointed out that in the literature a major obstacle facing this proposal and similar psychological and cognitive proposals is providing unambiguous, operationalisable definitions of the notions surrounding depth of processing, be it 'encoding specificity', 'distinctiveness of encoding', 'degree of elaboration', 'cognitive effort', or 'degree of richness' (Baddeley, 1997; Zechmeister & Nyberg, 1982). Laufer and Hulstijn (2001) Involvement Load Hypothesis is an attempt to operationalize the recurring effective concepts of attention and elaboration in the literature of psychology and cognitive psychology:

> We propose to identify the components of incidental tasks which we believe are conductive to the kind of elaborate processing crucial for learning. This proposal should be conceived as a first attempt to stimulate researchers as well as practitioners to operationalize the general labels of 'attention' and 'elaboration' into concrete task specific constructs. For now, three such components will be proposed which, taken together, constitute the construct of involvement
> (p. 14)

All three components of the involvement load can be manipulated separately and in any combination by researchers and practitioners to design tasks with varying involvement loads. There have been several studies that investigated the Involvement Load Hypothesis and strongly supported its predictive learning outcomes (Hulstijn & Laufer, 2001; Keating, 2008; Kim, 2008; Nassaji & Hu, 2012; Webb, 2005).

4.7 Participants

117 Saudi female English majors in their sophomore year learning English as a foreign language at a Saudi University participated in the study. They ranged in age from 20 to 26 (*M*=21.52, *SD*=1.27). They were first exposed to English at school at an average age of 10.79 years (*SD*=3.21, *Min*=4, *Max*=14). They were Arabic native speakers and had never lived in an English speaking country. Initially, 156 Saudi female students participated in the study for course credit. However, a large number of participants were discounted for the purposes of this research for a number of reasons, as follows: (1) students who had lived abroad for a period of time (N=1), (2) students who

scored below 20 at the 2000 word level of the Vocabulary Levels Test (VLT) (N=22), to ensure the participants included in the study would be able to understand most of the running words in the treatments, and due to the longitudinal nature of the study design, students whose pretest, posttest, or treatment data were missing (N=16) were excluded from the experiment. Participants' average raw score was 24.48/30 on Schmitt et al.'s (2001) VLT, demonstrating that they had knowledge of the meanings of almost 82% of the most frequent 2000 word families; while their average raw score was 17.22 at the 3000 word level, indicating that they had receptive knowledge of the meanings of about 57% of the 1000 word families at that level. Within the framework of the University, these students had all passed the same intensive course before they were admitted to the English Language and Translation department. During their years of study, they followed the same curriculum and courses prescribed by the Ministry of Education and the Ministry of Higher Education. Teachers in the department conduct lessons in English and do not practice translation except for translation courses.

4.8 Target items

The target collocations to be taught and tested included ten verb-noun collocations. A list of theses collocations and their error samples in the SLC is presented in Appendix 4A. I decided to primarily focus on verb-noun collocations. This type of formulaic sequences was selected mainly:

> because of its frequent occurrence in language… Moreover, these combinations are reported to be notoriously difficult for learners…. Furthermore, Altenberg (1993, p. 227) claims that they 'tend to form the communicative core of utterances where the most important information is placed'. (Barfield & Gyllstad, 2009, p. 157)

Collocations can be defined by two approaches: the frequency-based approach and the phraseological approach. The concept is operationalized here in terms of a complementary approach. It combines both the frequency-based approach and the phraseological approach, and is based on the idea that these two approaches need not be in opposition. As Nation (2001a, p. 317) put it, from the perspective of language pedagogy, collocations should be considered as "items which frequently occur together and have some degree of semantic unpredictability". Evert (2008) also stressed the interdependent relationship between the two approaches. Collocations identified through frequency-based analysis (corpus-based analysis) also have phraseological significance. By the same token, collocations that have phraseological significance will inevitably stand out in corpus analysis. Collocations in the present study are defined from the statistical and

phraseological standpoints, and the definition of collocations in the current study is adapted from (Barfield & Gyllstad, 2009, p. 155):

> two syntagmatically related and frequently co-occurring orthographic words, either adjacent or separated by a specified distance, where one of the words is used in a figurative, delexical, or technical sense, and where the meaning evoked by the combination as a whole, sometimes requiring additional lexical elements for grammatical well-formedness and usage convention, is either compositional or non-compositional and varies in degree of opaqueness.

From the statistical side, two-word pairs are defined as collocations if they co-occur with a greater frequency than chance (i.e. with a minimum frequency of 5 occurrences, minimum MI score of 3, and a minimum T-score of 2, (Hunston, 2002, pp. 71-72). Table 4:1 shows the statistical information of the target and the training collocations as retrieved from Collins WordBanks corpus http://www.collins.co.uk/page/Wordbanks+Online. Using the frequency-based approach as the sole criterion for defining collocations has the limitation of the possibility of including idioms and will therefore not distinguish between collocations on the basis of semantic factors. Semantic characteristics affect the degree of collocations' easiness for learning. Semantic factors include elements such as L1 and L2 congruence (Nesselhauf, 2003), concreteness of meaning (Walker & Hulme, 1999), and transparency of meaning (Fernando, 1996; Moon, 1998; Nesselhauf, 2003). The target collocations were confirmed after pretesting all the actual participants. The list of the target collocations was also pretested with a group of EFL learners, all female Saudi whose L1 is Arabic, and they were in the same semester from the same institution as the target population and similar to the target group in English language proficiency almost three months prior to the actual study. All the study items in the study have been selected as having low degree of congruence (i.e. word for word correspondence between L1 Arabic and L2 English form and meaning). The degree of congruence was judged first by me (the researcher, a native speaker of Arabic and proficient speaker of English). After that, three other native speakers of Arabic who have studied for their postgraduate degrees in English speaking countries (one MA holder and two PhD holders) were asked to judge the congruence of the collocations. Collocations were deemed incongruent if they were rated as such by at least three judges. The phraseological approach uses either native speakers' intuitions (Hasselgren, 1994), collocation dictionaries (Laufer & Waldman, 2011), or a combination of both (Nesselhauf, 2003). From the phraseological standpoint, all the target collocations appeared in four collocation dictionaries: *Oxford Collocations Dictionary for students of English*, *Macmillan Collocations Dictionary*, *Longman Collocations Dictionary and Thesaurus*,

and *The BBI Combinatory Dictionary of English: Your guide to collocations and grammar*. Thus, these items' collocational status was confirmed from the phraseological perspective.

Collocation (+/-5 span, lemma)	Frequency	T-score	MI
Pose a threat	4305	65.582	11.071
Break a habit	429	20.472	6.431
Set a goal	2779	51.665	5.648
Grant wish	381	19.281	6.355
Draw conclusion	1781	42.120	9.018
Run risk	1747	40.703	5.255
Pay attention	9224	95.825	8.792
Raise questions	6466	80.007	7.634
Get the impression	1391	36.488	5.528
Meet expectations	871	29.286	7.026
Place order	2041	43.220	4.528
Make room	3093	50.747	3.514
Tell the truth	5897	76.377	7.533
Settle an argument	147	11.935	6.001

Table 4:1 Statistical details of the target collocations and the training collocation items from the WordBanks corpus

All of the target collocations are among the most frequent 2,000 word families in the BNC lists, apart from one word, *habit*, which is in the 3,000 word families in the BNC. In addition, according to the BNC-COCA interface, also from Cobb's LexTutor, all the target collocations are in the 2,000 word families, except for two items, *conclusion* and *impression*, which are both in the 3,000 word families.

4.8.1 Selection and presentation of target items

Four weeks prior to the beginning of the treatment phase, a pretest was administered to the two classes during regular class time. The pretest consisted of 30 verb-noun collocations: 10 target items and 20 distractors. Collocations that were incongruent collocations (i.e. collocations whose lexical components are different between learners' L1 Arabic and L2 English) were the ones aimed at in the selection process. Incongruent collocations are known to be problematic for EFL and ESL

learners because of the influence of the L1 (E. Peters, 2015; Wolter & Gyllstad, 2011, 2013; Yamashita & Jiang, 2010). Furthermore, errors affected by learners' L1 are claimed to be persistent. In their study of L2 learners collocations, Laufer and Waldman (2011, p. 665) state that "L1 influence appears in about half of the erroneous collocations at all levels of proficiency and does not decrease with time. More over, most of the recurrent errors seem to be interlingual".

4.9 Teaching materials

The training session materials (Appendix 4B) and the experimental teaching materials (Appendix 4C) followed the exact same design. The teaching materials covered the same collocations for all students, but the dictionary and the concordance treatments were reversed for each group since the experiment followed a counter-balanced design. Teaching materials were not in the form of a booklet because of the design of the study; it was essential that learners get the worksheets in order and separately. Every attempt was made to produce equivalent teaching materials for both corpus-based and dictionary-based treatments. Both types of treatments, concordance-based and dictionary based, started with an introductory task, an L1 Arabic/ L2 English translation exercise. It consisted of three Arabic sentences all containing the same node noun (i.e. *habit* for the target collocation *break a habit*), but it was introduced in each sentence with a different verb collocate. One of these sentences contained the target collocation (e.g. *break a habit*), which has, like all the target collocations in the present study, a low degree of congruence (word for word overlap between L1 Arabic and L2 English) for the target group of participants. The other two sentences contained two transparent collocations (e.g. *develop* and *change*), which again, like all the two other transparent collocations accompanying each target collocation in the worksheets, have a high degree of congruence between the L1 Arabic and the L2 English in the form and meaning of the collocation components. The transparent collocations were included to raise learners' consciousness of the nature of congruent and incongruent collocations. Another intended aim was to avoid demotivating participants, which may have been more likely had only incongruent collocations been introduced at the beginning. Furthermore, it has been found out by Webb and Kagimoto (2011) that introducing multiple collocates for a small number of node words is an effective technique for learning collocations. All the sentences in all the worksheets were checked using the Vocabprofile, one of the tools available from Tom Cobb's Compleat Lexical Tutor site (http://www.lextutor.ca), Lextutor being web-based software that generates an analysis and statistical data on the type of

vocabulary in a submitted text. All of the running words that made up the sentences in exercise no.1 are high-frequency words from the first two thousand-word level in the BNC. Only five words were not among the most frequent 2000 word families in the BNC: *habit, pose, academic, online,* and *reveal.* Nevertheless, they are all among the words in the new general service list (Browne, Culligan, & Phillips, 2013). The second part of the worksheets consisted of a single page with either concordance lines or dictionary information preceded by a question to guide students in the search and discovery process, and the third and last exercise asked learners to look again at their translation in exercise one after the input they had received in he second part.

The corpus data were complied from the Collins WordBanks Online corpus (formerly known as the Bank of English). This corpus was chosen because its language is current and real, and it is the corpus used in the creation of all Collins dictionaries, so it should be balanced and representative. The WordBanks online corpus is about 455 million words. The majority of the texts used in building the WordBanks corpus date from between 2001 and 2005; thus, the corpus is one of the most current corpora available online. The WordBanks corpus contains a wide range of texts from various sources, such as newspapers, magazines, websites, journals, books, television and radio and consists of no less than eight varieties of English: British, American, Canadian, Australian, New Zealand, Indian, South American, and Irish English. In the interface of the WordBanks online corpus texts have been classified according to five categories: text form, domain, country, year, corpus and subcorpus. User search can be modified by specifying values for these attributes in the Sketch Engine (Kilgarriff, Rychly, Smrz, & Tugwell, 2004). The interface also allows register-specific searches, and part-of-speech queries, and shows comparison of search results for linguistic items when requested. It also provides information on frequency and collocates, and data from statistical measures such as mutual information (MI), and t-score. The interface, however, has a number of limitations in particular with regard to the number of concordance lines in the window, and sorting the concordances or copying them. The main strengths of this interface are that it is simple to use, has guidance notes, and is available for a free trial. The data presented in the concordance-based worksheets consisted of concordance lines. The concordances were in the key word in context (KWIC) format because I wanted to keep the original layout of the concordances as it is in the corpus with all their distinctive features, and evaluate their effectiveness and learners attitudes towards them. In the concordance-based worksheets for teaching collocations the keywords were the nouns (e.g. *habit* for the target collocation *break a habit*), and they were centred

in bold with an average of 9 words left and right. The concordance lines were pasted onto the page, and they were not edited or modified in any way. I selected the concordances from the long lists provided by the WordBanks corpus of the target collocations. The concordances were presented in groups in the worksheets with four concordances for each verb collocate included in the worksheet. I tried to select concordance lines that demonstrated the meaning of the collocation, and seemed accessible to the target group of participants. Culturally loaded concordance examples and specific contexts concordances were avoided. Selecting concordance examples for decoding purposes was not a straightforward task. It is probably even more difficult than selecting examples for encoding purposes, as pointed out by Frankenberg-Garcia in her own study which included selecting concordance examples for decoding and encoding purposes (2012, p. 281): "It was much easier to find concordances with appropriate collocations and syntactic features suitable for encoding purposes than ones with enough contextual clues for decoding purposes".

It is indeed one of the main features of paper-based corpus materials that specific procedures in selecting concordances and preparing them can be implemented. In this way, paper-based corpus materials allow for designing worksheets that specifically focus learners' attention on certain desired elements. Paper-based corpus materials overcome the usual criticisms faced by approaches that require learners themselves to be working directly on the corpus: they avoid overwhelming learners with large quantities of data, and reduce the amount of background noise. Also learners will spend less time in searching as the concordances have been selected to guide their discoveries and limit the potential for other possible answers (Boulton, 2010a; Thompson, 2006).

For comparison purposes, another set of teaching materials was needed, which would, to some extent, represent traditional resources. I decided to use dictionaries and they indeed provide an obvious recourse for comparison (Boulton, 2010a; Frankenberg-Garcia, 2005; H. Yoon & Hirvela, 2004). For one thing they provide examples, along with the explanation of the meaning. In this way, they represent a resource that has less of a search and discover element. Dictionary-based materials start by explaining the meaning of the collocation or the lexical phrase, then listing one or more examples. As opposed, of course, to the concordance-based materials which do not provide any explanation, learners instead being provided with a list of concordance examples which they search and discover collocation patterns and meanings for themselves through guessing and forming hypotheses and finally arriving at the right conclusion. The decision was made to use a collocation dictionary rather than a general dictionary because of the fact that although general

dictionaries include many collocations, they ignore a large number (Benson, 1990). Bogaards and Van der Kloot (2003) draw a very important distinction between finding information in a dictionary, and the usefulness of this information. In this study, care was taken to test only the aspect of usability, excluding the aspect of findability by making sure participants have no problems in finding the information they needed, because the aim of the study was gauging the effectiveness of two different types of input. At the beginning, a number of the collocation dictionaries available in the market were considered as potential sources of data for the dictionary-based worksheets. These dictionaries were the *LTP Dictionary of selected Collocations (1997); The BBI Combinatory Dictionary of English (2009) 3rd edition; Oxford Collocations Dictionary for Students of English (2009) 2nd edition; Macmillan Collocations Dictionary (2010);* and *Longman Collocations Dictionary and Thesaurus (2013)*.

The *LTP Dictionary of Selected Collocations* does not provide example sentences, and it is not corpus-based because it seems to have been compiled entirely on the basis of the authors' intuitions; consequently it raises concerns with respect to its reliability and comprehensiveness. Thus, it was excluded from the list. In *The BBI Combinatory Dictionary of English* (henceforth*, the BBI Dictionary),* syntactic class sets of collocates are not grouped together. The entry of the noun *habit* for instance (see Figure 4:1), has in one set of collocates the verb and the adjective collocates and the phrases and they are not signaled by a subheading. Furthermore, a new syntactic class when it comes after another does not necessarily occur at the beginning of a new line. Although *The BBI Dictionary* does include examples, they are attributed to their authors, as the dictionary is not a corpus-based dictionary. In addition*,* examples tended to be fragments rather than sentences. Thus and for reasons related to the organization of the entries, the availability and the quality of the examples provided, *The BBI Dictionary* was also excluded from the list.

> habit *n.* ["custom"] ["usual manner"] 1. to acquire, develop, form, pick up; have a ~ 2. to make a ~ of smt. (she makes a ~ of getting up early) 3. to fall into, get into a ~ (she got into the ~ of getting up late) 4. to break, shake a ~; to get out of a ~; (slang) to kick the ~ (she broke the ~ of a lifetime when she started getting up early) 5. to break smb. of a ~ 6. an annoying; bad; deplorable; strange ~ 7. an entrenched, fixed, ingrained; incurable ~ 8. a filthy; nasty; repulsive ~ 9. a good ~ 10. irregular; regular ~s 11. a ~ of (he has a bad ~ of interrupting people) 12. by force of ~ 13. in the ~ of (she is in the ~ of getting up early) 14. out of ~ (I did it out of ~) (see also *a creature of habit* at **creature** 2; **habits**) ["costume"] 15. a monk's; nun's; riding ~

Figure 4:1 *Habit* entry in the BBI dictionary

As for the Oxford Collocations Dictionary for Students of English (henceforth, Oxford Collocations Dictionary), the collocates in the entries are organized according to their syntactic categories under subheadings. Unlike LTP Dictionary of Selected Collocations which lists the collocates of the head entry word in alphabetical order with no semantic classification, the Oxford Collocations Dictionary groups collocates semantically, although this organization is not explicitly labelled by means of a subheading. There are clearly some advantages to grouping collocates semantically, however, the Oxford Collocations Dictionary was criticized for this on the grounds that this grouping of collocates under one semantic class might not be necessarily interchangeable (Klotz, 2003), e.g. the following verbs were listed together in one semantic class: *acquire, adopt, cultivate, develop, establish, fall into, form, get in, get into, make*. Furthermore, as can be seen in Figure 4.2 in the entry of the noun *habit* in Oxford Collocations Dictionary, the examples provided after the list of the roughly synonymous collocates do not necessarily cover all the listed collocates. The fact that collocate group examples are provided only for one collocate or occasionally more is acknowledged in the introduction of the dictionary. Thus, in some cases learners might not find an illustrative example for the target collocation. Having examples from particular frequent usage contexts, which also need to be meaningful for learners, is essential. For instance, for the target collocation *break a habit*, in the entry the relevant part is as follows: '**break (yourself of), get out of, give up, kick** ◆ a difficult ~ to break ◆ You must break yourself of the ~ ◆ I got out of the ~ of

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getting up early'. In the first example of *break a habit*, the verb collocate comes after the noun in an infinitive form. While it is of course perfectly natural and possible in English, it does not seem to be one of the clearest ways of presenting the collocation, particularly for EFL learners. Another issue would be the fact that both examples of *break a habit* are fragments, rather than complete sentences in meaningful contexts. Examples in dictionaries need to be easy to understand to guide learners and confirm the appropriate meaning that has to be reached (Nation, 2001a, p. 293). Consequently, Oxford Collocations Dictionary was removed from the list, too.

habit *noun*

ADJ. **annoying, antisocial** (*BrE*), **bad, dangerous, destructive, dirty, disconcerting** (*BrE*), **disgusting, filthy, horrible, irritating, nasty, poor, terrible, unfortunate** ◊ *Life has a nasty ~ of repeating itself.* ◊ *poor eating ~s* | **charming** (*often ironic*), **endearing, good** ◊ *one of his more endearing ~s* ◊ *her charming ~ of setting fire to cats* | **curious, eccentric, odd, peculiar, strange, unusual, weird** | **unhealthy** ◊ *The children are developing unhealthy eating ~s.* | **healthful** (*AmE*), **healthy** | **lifelong, old** | **daily, normal, regular, usual** | **ingrained** ◊ *deeply ingrained ~s of thought* | **nervous** ◊ *It was a nervous ~ she'd had for years.* | **expensive** | **personal, sexual, social** ◊ *I found some of his personal ~s rather disconcerting.* | **lifestyle** ◊ *Healthy lifestyle ~s begin when you're young.* | **mental** ◊ *Mental ~s are not easily changed.* | **buying, shopping, spending** ◊ *an effort to change the buying ~s of the British public* | **dietary, drinking, eating, feeding, food** | **exercise, sleeping, work** ◊ *The pills affected your sleeping ~s.* ◊ *Ellington's work ~s were a marvel to all.* | **reading, viewing** ◊ *women's television viewing ~s* | **cocaine, crack, drug, gambling, heroin, smoking** ◊ *I'm trying to kick the smoking ~.*
VERB + HABIT **be in, have** ◊ *She had been in the ~ of drinking five or six cups of coffee a day.* ◊ *She has some very annoying ~s.* ◊ *He had an irritating ~ of singing tunelessly around the house.* | **acquire, adopt, cultivate, develop, establish, fall**

Figure 4:2 *Habit* entry in Oxford collocations dictionary

The last two dictionaries are Macmillan Collocations Dictionary and Longman Collocations Dictionary and Thesaurus (henceforth, Longman Collocations Dictionary). Macmillan Collocations Dictionary has the distinctive feature of providing a definition for every sense of the word in its entry, which is very useful for decoding purposes, especially when the word is polysemous. Giving a definition for every sense of the word ensures that when the learner consults the dictionary to

check collocates, s/he can accurately find the collocates of each particular sense of the word. Similar to Oxford Collocations Dictionary, Macmillan Collocations Dictionary classifies collocates into semantic groups. However, unlike Oxford Collocations Dictionary, groups are explicitly signaled by subheadings. For example, under the entry of the noun *habit* (see Figure no. 4.3), there is the first subheading of the sets of adjective collocates 'unpleasant' followed by the adjective collocates: *annoying, bad, dirty, disgusting, filthy, irritating, nasty, unfortunate, unhealthy*. This would enable the learner to recognize, at a glimpse, the semantic coverage of the collocate sets (McGee, 2012). Macmillan Collocations Dictionary also presents example sentences, and unlike Oxford Collocations Dictionary, the majority are complete sentences. However, the downside is that in most of the collocate sets only one example is provided even when there are as many as nine collocates in the set as in the set of collocates under the subheading 'unpleasant' in Figure 4:3. Because of the lack of example sentences for most of the target collocations Macmillan Collocations Dictionary was also excluded as a potential source of data for the dictionary-based worksheets.

habit N

something you do often or regularly; a physical need to do something regularly

- adj+N **unpleasant annoying, bad, dirty, disgusting, filthy, irritating, nasty, unfortunate, unhealthy** *Auden's slovenliness and disgusting habits somehow emerge as charming eccentricities.*
▶ strange **curious, peculiar, strange** *The creatures have the peculiar habit of making sudden long leaps as they trot along.*

- n+N **drinking, driving, eating, feeding, reading, shopping, sleeping, spending, surfing** *Some Internet users may have unwittingly downloaded spyware which reports on their surfing habits.*

- v+N have a habit **have** *The chimpanzees have a nasty habit of throwing things at you.*

  If you do something regularly, you can say that you are *in the habit* of doing it or that you *make a habit* of doing it: *I'm not in the habit of gossiping about my friends.* If you have been doing something regularly for a long time, you can say that you do it *out of habit* or do it *from habit*: *Heading back to the park gates, we made an obligatory stop at the drinking fountain, out of habit rather than necessity.*

▶ start having a habit **acquire, adopt, cultivate, develop, fall into, get into** *As you discipline your life and begin to cultivate good habits, you get your life under control.* ● *Get into the habit of using the stairs rather than the lift.*
▶ stop having a habit **break, kick, overcome, quit** *Drug abusers are being helped to overcome the habit rather than being jailed.*
▶ change your habits **alter, change** *To lose weight, you must aim to change your eating habits.*

Figure 4:3 *Habit* entry in Macmillan collocations dictionary

Longman Collocations Dictionary and Thesaurus (henceforth, *Longman Collocations Dictionary)* seemed to be the best available option from all the dictionaries available on the market, requiring no major modifications of its content. Thus, the dictionary data for the collocation worksheets were taken from the *Longman Collocations Dictionary.* The first edition of this dictionary was published in 2013. *Longman Collocations Dictionary* is a corpus-based dictionary. It is based on the *Longman Corpus Network:* a database of over 450 million words of spoken and written English. The dictionary contains 75,000 collocations and 80,000 corpus-based examples showing collocations in 'a typical context', as described in the dictionary's blurb. The dictionary also integrates a thesaurus with more than 7,000 synonyms and antonyms. This dictionary includes a unique component, which is the Academic Collocations List (ACL). The ACL list consists of 2,469 collocations and the list was compiled using the written section of the Pearson International Corpus of Academic English (PICAE). The first edition of *Longman Collocations Dictionary*, which is the one used in the current study, comes with a one year online subscription which gives access to the dictionary, and interactive exercises that test users' knowledge of collocations. The online version has a built-in dictionary so that any word can be clicked on to find out the meaning. In the hard copy of the *Longman Collocations Dictionary*, it is claimed that the online version includes the full contents of the print dictionary plus more collocations and more examples; however, to a large extent this was not found to be accurate. Like *Macmillan Collocations Dictionary, Longman Collocations Dictionary* provides a definition for every word entry, and for every sense of the word itself (see Figure no.4:4 of the word entry *habit*). The entries include subheadings for the syntactic classes: nouns, verbs, adjectives, adjectives, adverbs, prepositions and finally phrases. Collocates of a similar semantic range, or what in some senses could be labeled synonyms, are listed together in one line. For example, in the *habit* entry, the second semantic set of adjectives collocates includes: *annoying, unpleasant* and *nasty*. The fifth set of adjective collocates contains: *strange, peculiar,* and *odd*. Although *Longman Collocations Dictionary* employs the technique of grouping semantically close collocates together technique like some of the other dictionaries, it is still relatively better in that than *Oxford Collocations Dictionary* and *Macmillan Collocations Dictionary*, in the sense that it arranges synonymous collocates in smaller groups of collocates sharing a closer semantic range. For instance, if we look at the *Oxford Collocations Dictionary habit* entry (see Figure 4:2), we can see the first set of adjective collocates consists of: *annoying, antisocial, bad, dangerous, destructive, disconcerting, disgusting, filthy, horrible, irritating, nasty,*

poor, terrible and unfortunate. As has been mentioned earlier this organization of semantically close collocates is not explicitly labeled as is the case in *Macmillan Collocations Dictionary*. Moreover, the number of the adjective collocates in the example above is considerable, and these collocates are not necessarily interchangeable; they seem to cover a wide semantic range. The meaning of a *dangerous habit* is not close to a *filthy habit*, which is in turn different from an *unfortunate habit*. Similarly, looking at the *habit* entry in *Macmillan Collocations Dictionary* (see Figure 4:3), the first set of adjective collocates contains: *annoying, bad, dirty, disgusting, filthy, irritating, nasty, unfortunate, and unhealthy*. Though they are labeled by the umbrella descriptive adjective 'unpleasant', the collocates themselves are not synonyms, e.g. *annoying* is not a synonym for an *unfortunate* or *unhealthy habit*. In *Longman Collocations Dictionary* (see Figure 4.4), *bad* is presented alone with an example. Then, *annoying*, *unpleasant*, and *nasty* are grouped in one line with an example of the first. *Dirty* and *filthy* are presented together as the third group of adjective collocates with an example of the second collocate, which of course is applicable for both collocates. A *good habit* is on its own as the fourth group, followed by *strange, peculiar*, and *odd* as the fifth set. The sixth category includes the collocation *a disconcerting habit*. This collocation meaning is described in parentheses immediately after the collocation and is followed by an example, as is the case with all the collocations. *Longman Collocations Dictionary* provides the meaning of some collocations, but there is no clear explanation clarifying for what type of collocations the meanings are provided. In the introduction of the dictionary, it is stated: "meanings of difficult collocations are explained in brackets" (Longman Collocations Dictionary, 2013, p. iv), and no further commentary is provided.

Figure 4:4 *Habit* entry in Longman collocations dictionary

Here the word entry in *Longman Collocations Dictionary* includes all the possible collocates from different syntactic classes including phrases as the last set in the entry. The examples for all the collocations are full sentences, and not fragments. Since the effects of providing learners with full sentences and fragments could vary, this variable needed to be kept constant so that it would not influence the results. Utilizing the collocation entries from *Longman Collocations Dictionary* met

this requirement. In the current study, only the verb collocates sections of the noun entries were included in the worksheets: (1) to avoid distracting learners with other types of collocates; (2) to save time during classes; and (3) to match the content of the concordance-based worksheets.

The content of all the dictionary worksheets needed to be exactly the same. Thus, all the elements already existing in some entries -e.g. glosses- needed to be present in all the entries in the worksheets. Not all the target collocations entries in *Longman Collocations Dictionary* had glosses. Thus, glosses were added to the following collocations: *place order, get the impression, pay attention, tell the truth* and *make room*. To find appropriate glosses for these collocations, I needed to search in different dictionaries. Collocation dictionaries were not considered for this purpose since *Longman Collocations Dictionary* was the only one that includes glosses. Consequently, a number of general dictionaries were consulted: Oxford Advanced Learner's Dictionary (2010) 8th edition (https://oald8.oxfordlearnersdictionaries.com), Longman Dictionary of Contemporary English (2009) 5th edition (http://www.ldoceonline.com), Cambridge Advanced Learner's Dictionary and Thesaurus (2008) 3rd edition (http://dictionary.cambridge.org/dictionary/british/), Collins Concise English Dictionary (2013) 8th edition (http://www.wordreference.com/definition/), Macmillan English Dictionary for Advanced Learners (2007) 2nd edition (http://www.macmillandictionary.com), and Merriam Webster Advanced Learner's English Dictionary (2008) (http://www.learnersdictionary.com). Although all the seemingly appropriate glosses found in the general dictionaries were collected, only one gloss was selected to be added to the dictionary-based worksheets. The number of glosses found for these collocations varied. For the collocation *pay attention*, five possible glosses were found, while only one gloss was found for the collocation *make room*. The final stage of the selection process included discussion and consultation with vocabulary specialist Mr. Phil Scholfield (Dept. of Language and Linguistics, University of Essex). As a result, two very minor amendments were implemented: the verb *giving* was changed to *give* in the gloss of the collocation *pay attention* and the phrase *at the time* was added at the end, and the gloss of *get the impression* was preceded by the verb *receive*. Glosses that were finally added to the target collocations entries are presented in Table 4:2.

Collocation	Added gloss	Source
place an order	make an order	*Cambridge Advanced Learner's Dictionary*
get the impression	receive an idea, a feeling or an opinion that somebody/something gives you	*Oxford Advanced Learner's Dictionary*
make room	create space by moving other things	*Macmillan English Dictionary for Advanced Learners*
pay attention	give your attention to what is being done or said at the time	*Merriam Webster Advanced Learner's English Dictionary*
tell the truth	to let (sb) know the truth	*Collins Concise English Dictionary*

Table 4:2 Glosses added to the dictionary entries in the dictionary-based worksheets

In order to avoid overwhelming learners with other verb collocates which are listed in the same line with the collocations that learners were supposed to find for the three sentences in exercise no.1 in the worksheets, I needed to exclude any verb collocates of this type from the entire entries. For example, in Figure 4: 4 of the word entry *habit* in *Longman Collocations Dictionary,* the transparent/congruent verb *develop* is listed together with the verb collocate *form.* Similarly, the target incongruent verb collocate *break* is accompanied by the verb collocate *kick.* In the worksheets both verbs, *kick* and *form*, were excluded. Frequency counts (within a window of +/- 5, lemma) from Collins WordBanks corpus was the criterion employed to decide which verb collocate/s should be removed from the entries in the worksheets (see Table 4:3). To further validate the frequency counts obtained via WordBanks corpus, the same frequency data (see Table 4:4) were collected from the British National Corpus (BNC) interface accessed from the BYU-BNC (Davies, 2004) and The Corpus of Contemporary American English (COCA) (see Table 4:5), also accessed from the BYU-COCA interface (Davies, (2008-)). From the BNC data, out of the 29 parallel verb collocate groups, only the results of 4 groups did not match WordBanks data. However, since data from two corpora (WordBanks and COCA) on collocation frequency count aligned, the BNC divergent results on these 4 groups, highlighted in grey (see Table 4:4), did not affect the data that were ultimately utilized (i.e. WordBanks' frequency counts). Similarly, the varying results of three parallel collocation groups out of all the 29 in COCA data were not

considered because of the agreement between the other two corpora (WordBanks and BNC).

Amendments to the dictionary entries also included deleting collocations that could possibly be close to the meaning of the target collocations. For instance, the entry of the noun *habit* includes the target verb collocate (*break*) and a similar verb collocate (*get out*). Since the aim of the teaching materials was teaching and later testing only a specific set of collocations, rather than any other possible substitute verb collocate, it was essential to modify the dictionary entries so that only the target collocations were presented to learners. Keeping similar collocations could have confused learners by what might sometimes be subtle differences between the verb collocates; besides the issue is beyond the focus of the present study. Consequently, the decision was made to eliminate these verb collocates. Among the target collocations, six verb collocates had what could possibly be synonymous verb collocates in the *Longman Collocations Dictionary* entries. The set of the target collocations and their synonymous counterparts are presented in Table 4:6. The verb collocates' order in the entries was randomized using the online randomizing tool http://www.randomizer.org, and the same process was carried out with the concordance lines.

The lexical frequency profiles of the concordances and dictionary entries were checked via the vocab profiler tool on Cobb's Lextutor website. The worksheets were checked against the BNC 1K-20K, and the new integrated platform of BNC-COCA K25, i.e. the first 25,000 word level in both BNC and COCA corpora. I decided to include the coverage of the BNC-COCA K25 list, since it is the most recent one and it ensures combining both British and American English. Data are presented in Tables 4:7-4:10. The numbers show that while the two types of worksheets are of course not identical, they are quite comparable in terms of their vocabulary load. Since the inherent features of both types were largely kept as they were originally, it adds to their ecological validity. It is not an unusual practice in vocabulary research to compare vocabulary learning tasks even when the two types are not exactly equal in every aspect; it is valid to compare and experiment with them since they are "common and useful and thus it is worth seeing which is the best" (Nation, personal communication).

Parallel verb collocates	Most frequent verb collocate
1. Pose/present threat	Pose
2. Break/kick habit	Break
3. Develop/form habit	Develop
4. Achieve/reach goal	Achieve
5. Get/have wish	Have
6. Come to/arrive at/reach conclusion	Come to
7. Lead to/point to conclusion	Lead to
8. Carry/involve risk	Involve
9. Pose/present risk	Pose
10. Keep/hold attention	Keep
11. Attract/catch attention	Attract
12. Bring up/raise/pose question/s	Raise
13. Get/gain the impression	Get
14. Have/leave the impression	Leave
15. Give/leave impression	Give
16. Meet/satisfy expectations	Meet
17. Come up/live up expectations	Live up
18. Place/put an order	Place
19. Get/receive an order	Get
20. Fill/meet an order	Meet
21. Lose/forget an order	Lose
22. Find out/discover/uncover the truth	Find out
23. Get at/get to the truth	Get to
24. Search/seek the truth	Search
25. Accept/admit the truth	Accept
26. Bend/stretch the truth	Stretch
27. Stop/end argument	End
28. Jump to/lead to conclusion	Jump

Table 4:3 A summarized table of frequency counts from Collins WordBanks corpus

Parallel verb collocates	Most frequent verb collocate
1. Pose/present threat	pose
2. Break/kick habit	Break
3. Develop/form habit	Develop
4. Achieve/reach goal	Achieve
5. Get/have wish	Have
6. Come to/arrive at/reach conclusion	Come to
7. Lead to/point to conclusion	Lead to
8. Carry/involve risk	Involve
9. Pose/present risk	Present
10. Keep/hold attention	Hold
11. Attract/catch attention	Attract
12. Bring up/raise/pose question/s	Raise
13. Get/gain the impression	Get
14. Have/leave the impression	Have
15. Give/leave impression	Give
16. Meet/satisfy expectations	Meet
17. Come up/live up expectations	Live up
18. Place/put an order	Place
19. Get/receive an order	Get
20. Fill/meet an order	Meet
21. Lose/forget an order	Lose
22. Find out/discover/uncover the truth	Find out
23. Get at/get to the truth	Get at
24. Search/seek the truth	Search
25. Accept/admit the truth	Accept
26. Bend/stretch the truth	Stretch
27. Stop/end argument	End
28. Jump to/leap to conclusion	Jump to

Table 4:4 A summarized table of frequency counts from the BNC

Parallel verb collocates	Most frequent verb collocate
1. Pose/present threat	Pose
2. Break/kick habit	Kick
3. Develop/form habit	Develop
4. Achieve/reach goal	Achieve
5. Get/have wish	Have
6. Come to/arrive at/reach conclusion	Come to
7. Lead to/point to conclusion	Lead to
8. Carry/involve risk	Carry
9. Pose/present risk	Pose
10. Keep/hold attention	Keep
11. Attract/catch attention	Attract
12. Bring up/raise/pose question/s	Raise
13. Get/gain the impression	Get
14. Have/leave the impression	Leave
15. Give/leave impression	Give
16. Meet/satisfy expectations	Meet
17. Come up/live up expectations	Live up
18. Place/put an order	Place
19. Get/receive an order	Get
20. Fill/meet an order	Meet
21. Lose/forget an order	Lose
22. Find out/discover/uncover the truth	Find out
23. Get at get to the truth	Get to
24. Search/seek the truth	Search
25. Accept/admit the truth	Admit
26. Bend/stretch the truth	Stretch
27. Stop/end argument	End
28. Jump to/lead to conclusion	Jump to

Table 4:5 A summarized table of frequency counts from the COCA

Target collocation	Eliminated synonymous collocation
Pose a threat	*Represent a threat*
Pay attention	*Devote attention*
Meet expectations	*Live up expectations*
Break a habit	*Get out of a habit*
Get the impression	*Form impression*
Run risk	*Take risk*

Table 4:6 Target collocations and eliminated parallel collocations

	BNC-2 original	BNC-3 Original	BNC-off list-original	BNC-2 After adding proper names	BNC-3 After adding proper names	BNC-off list After adding proper names
argument	96.01	96.68	3.33	98.51	99.18	0.83
conclusion	97.26	98.01	2	98.76	99.51	0.50
expectations	96.82	98.41	1.60	97.88	99.47	0.54
goal	98.15	98.52	1.48	98.15	98.52	1.48
habit	90.76	97.74	2.27	92.20	99.18	0.83
impression	96.92	97.74	2.27	98.37	99.19	0.82
order	93.41	95.23	4.77	97.27	99.09	0.91
question	93.60	94.51	5.48	96.57	97.48	2.53
room	92.74	94.82	5.20	95.51	97.59	2.41
wish	93.52	95.03	4.97	97.64	99.15	0.85
threat (training)	93.98	96.56	3.44	95.99	98.57	1.44
attention (training)	97.22	98.33	1.67	98.52	99.63	0.37

Off list here means everything above 3K+

Table 4:7 The lexical frequency profile of the concordances in the collocations worksheets (BNC)

	BNC-COCA-2 original	BNC-COCA-3 original	BNC-COCA-off list original	BNC-COCA-2 After adding proper names	BNC-COCA-3 After adding proper names	BNC-COCA-off list After adding proper names
argument	94.51	96.01	4	98.18	99.68	0.33
conclusion	89.81	98.02	1.99	91.3	99.51	0.50
expectations	93.90	98.41	1.60	95.23	99.74	0.27
goal	95.56	99.26	0.74	95.56	99.26	0.74
habit	96.71	97.53	2.47	98.56	99.38	0.62
impression	89.71	97.94	2.06	91.36	99.59	0.42
order	89.09	92.50	7.51	97.27	99.09	0.91
question	91.78	95.66	4.34	95.66	99.54	0.46
room	91.70	94.47	5.53	92.40	95.17	4.83
wish	90.93	93.31	6.69	96.76	99.14	0.86
threat (training)	90.55	94.85	5.15	95.13	99.43	0.57
attention (training)	95.74	97.41	2.59	97.96	99.63	0.37

Off list here means everything above 3K+

Table 4:8 The lexical frequency profile of the concordances in the collocations worksheets (BNC-COCA)

	BNC-2 original	BNC-3 Original	BNC-off list-original	BNC-2 After adding proper names	BNC-3 After adding proper names	BNC-off list After adding proper names
argument	95.00	97.14	2.85	95.71	97.85	2.14
conclusion	98.30	-	1.70	99.15	100	-
expectations	93.80	96.13	3.88	96.90	99.23	0.78
goal	97.01	-	2.99	98.50	-	1.50
habit	86.96	97.10	2.89	98.13	99.27	0.72
impression	95.03	95.74	4.26	98.58	99.29	0.71
order	93.85	95.60	4.39	97.36	99.11	0.88
question	99.16	-	0.84	99.16	-	0.84
room	92.73	-	7.28	94.55	-	5.46
wish	93.16	95.64	4.35	96.89	99.37	0.62
risk (training)	94.11	96.32	3.69	96.32	98.53	1.47
truth (training)	94.42	96.65	3.35	96.65	98.88	1.12

Off list here means everything above 3K+

Table 4:9 The lexical frequency profile of the dictionary entries in the collocations worksheets (BNC)

	BNC-COCA-2 original	BNC-COCA-3 original	BNC-COCA-off list original	BNC-COCA-2 After adding proper names	BNC-COCA-3 After adding proper names	BNC-COCA-off list After adding proper names
argument	95.00	98.57	1.42	95.00	98.57	1.42
conclusion	87.18	98.29	1.70	88.03	99.14	0.85
expectations	93.80	96.13	3.88	96.90	99.23	0.78
goal	91.05	97.02	2.98	92.54	98.51	1.49
habit	96.38	97.10	2.89	98.55	99.27	0.72
impression	80.85	95.74	4.26	84.40	99.29	0.71
order	90.35	93.86	6.14	93.86	97.37	2.63
question	94.96	98.32	1.68	94.96	98.32	1.68
room	92.73	-	7.27	94.55	-	5.45
wish	91.92	95.03	4.97	95.65	98.76	1.24
risk (training)	92.65	97.06	2.95	94.86	99.27	0.74
truth (training)	95.53	96.65	3.35	97.76	98.88	1.12

Off list here means everything above 3K+

Table 4:10 The lexical frequency profile of the dictionary entries in the collocations worksheets (BNC-COCA)

4.10 Dependent measures

A pretest, two short-term delayed posttests and two long-term delayed posttests were designed to assess learning of collocations. The pretest gauged productive knowledge of form and meaning and the posttests quantify two aspects of collocational knowledge: receptive and productive knowledge of form and meaning. Measuring knowledge of form first is advisable in studies on learning collocations, (e.g. Laufer & Girsai, 2008; Webb & Kagimoto, 2009, 2011; Webb et al., 2013). As Webb et al. (2013, p. 96) have pointed out:

> Ideally then, studies investigating knowledge of collocation would first measure knowledge of form to determine whether learners can recognize and produce the forms of collocations and then measure receptive and productive knowledge of form and meaning to determine whether they can link the forms of collocations to their meanings.

In addition, measuring collocational knowledge at two levels of sensitivity (receptive and productive knowledge) can provide a more accurate assessment of participants' collocational knowledge. Nevertheless, "measuring knowledge of the form and meaning of collocations is not as straightforward as it is for single-word items and presents design problems for researchers" (Webb et al., 2013, p. 95).

Although form and meaning are essential aspects of knowledge of collocations, there are also other aspects. Nation and Webb (2011) pinpointed nine aspects of knowledge of multiword units in Table 4:11. Even though it may be useful to measure some of the other aspects shown in Table 4:11., the fact that the target collocations are real collocations and their components are real words, hindered this possibility. Tests of form and meaning were developed and used in the present study because these aspects of knowledge may be the most valuable ones in L2 learning contexts. Nation and Webb (2011) have stressed that because research on multiword units is still in its infancy, researchers are likely to face many methodological problems. And they advised after reviewing and analyzing some aspects of tests in studies of multiword units that it is essential to be clear about what aspect of knowledge the test is actually testing.

The first stage of constructing a test entails defining the 'construct' we intend to measure. The psychological term 'construct' is used to refer to the mental ability that a test is intended to measure (see, Alderson & Clapham, 1995; Bachman & Palmer, 1996; Chapelle, 1998). The

development of the test needs to follow a logical sequence of three procedures to link the construct to the observed performance. These procedures are as follows: (1) the construct needs to be defined theoretically; (2) the construct needs to be defined operationally; and (3) procedures should be established for the quantification of observations (Bachman, 1990).

The theoretical definition of the target linguistic aspect (here 'collocation') was mentioned earlier (see section 4.8). The second procedure is to define collocation knowledge operationally. I worked from the following definition of receptive collocation knowledge of form and meaning as a construct:

The knowledge necessary for appropriately recognizing the written form of the collocation and recalling the meaning of this collocation.

The construct of productive collocation knowledge of form and meaning was operationalized as follows:

The knowledge necessary for appropriately recognizing the meaning of the collocation and recalling the written form of this collocation.

The test of productive knowledge of form and meaning (Appendix 4D) followed the exact same content and format in the pretest and the posttests. The only different element was the order of the test items, which was varied between the three tests. The productive knowledge test used a translation format where the L1 meanings cued the answers as in item (1):

(1) يقطع عادة   _____

The aim of the pretest was to measure the participants' knowledge of the ten target collocations, and record participants' knowledge of the 20 distracters, which would also serve as control items. In vocabulary learning studies, the recommended practice, which is based on psychology studies, is to have about one third target items, and to have two thirds nontarget distracters, to minimize the chances of learners becoming aware of the target items (Schmitt, 2010). Nearly all the 20 distracters were among the 2,000 most frequent word families in the BNC, and were thus likely to be known by the participants. The four words that were not among the 2,000 most frequent word families are: *ruin/spoil, implement and internet,* and the first three are among the most frequent 3,000 and 4,000 word families in the BNC, respectively. *Ruin/spoil* are among the most frequent

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2,000 in BNC-COCA, and *implement* is in the 3,000 word families. These words are also among the items of the new general service list (Browne et al., 2013). The fourth word *Internet* is off-list in the BNC but it is the same in Arabic and thus likely to be known by the participants.

Form	spoken	R	What does the MWU sound like?
		P	How is the MWU pronounced?
	written	R	What does the MWU look like?
		P	How is the MWU written and spelled?
	word parts	R	What words are recognizable in this MWU?
		P	What words are needed to express the meaning?
Meaning	form and meaning	R	What meaning does this MWU signal?
		P	What MWU can be used to express this meaning?
	concept and referents	R	What is included in the concept?
		P	What items can the concept refer to?
	associations	R	What other words or MWUs does this make us think of?
		P	What other words or MWUs could we use instead of this one?
Use	grammatical functions	R	In what patterns does the MWU occur?
		P	In what patterns must we use this MWU?
	collocations	R	What words, MWUs, or types of MWUs occur with this one?
		P	What words, MWUs, or types of MWUs must we use with this one?
	constraints on use (register, frequency…)	R	Where, when, and how often would we expect to meet this MWU?
		P	Where, when, and how often can we use this MWU?

Table 4:11 What is involved in knowing a multiword unit (MWU), adapted from Nation & Webb, (2011, p.190)

Note. R= receptive knowledge   P= productive knowledge

According to the new BNC-COCA interface, all the components of the distracters are among the 2,000 word families, apart from the two words *implement* and *sin*, which are both among the most frequent 3,000 word families. The two short-term delayed posttests were administered two weeks after the treatments. The two long-term delayed posttests were given to the participants after a six week interval had elapsed from the short-term delayed posttest. The aim of the short-term delayed posttests was to find out whether the learners' knowledge of the form and meaning of the collocations has improved, whereas the aim of the long-term delayed posttests was to determine whether the participants retained any learning gains over time. Since the level of congruence between the L1 and L2 form and meaning of the collocations was very low, the productive test asked participants to recall the L2 written forms that they had been taught rather than simply translate the L1 Arabic collocations into the L2 corresponding items. For example, to achieve the full score in (1), the participants had to write the collocation *break a habit* next to its L1 translation, which transliterated into English as *cut a habit**.

The second posttest measures the receptive knowledge of form and meaning (Appendix 4E). The test employed a receptive translation design. In this test the L2 collocations were the cues and the participants had to write the L1 meanings to be marked correct in this test. For example, in (2), the participants needed to write the meaning of *break a habit* in the provided blank besides it. To achieve the full score, participants needed to show their knowledge of the meanings of the collocations rather than the meanings of the individual components of the collocations.

(2) *break a habit*   _____

The productive knowledge of form and meaning test task assessed productive collocational knowledge of the participants because the participants move from the given collocation meaning in Arabic to the L2 written form. This test is a recall task because the participant being tested should provide the L2 form. Thus, the movement is from meaning to form. The test tests recognition knowledge of the meaning of the collocation, the form-meaning connection, and recall knowledge of the written form of the collocation. By contrast, the test of receptive knowledge of form and meaning assessed participants' receptive collocational knowledge of the target collocations since the participants move from the given collocation to the meaning. Similarly, this test is a recall test, as the L1 translation must be provided by the testee; and the movement here is from form to

meaning. The test tests recognition knowledge of the written form of the collocation, the form meaning connection, and recall knowledge of the meaning of the collocation.

The distinction between recall and recognition processes in test tasks is essential when developing vocabulary tests. Recall and recognition are two different cognitive processes performed by the language user. The recall process involves the language user's retrieving and supplying the form or the meaning of a vocabulary item after being triggered by some sort of prompt stimulus. While in the recognition process the form or the meaning of a vocabulary item is recognized by the language user from a list of options (Laufer & Goldstein, 2004; Schmitt, 2010).

When a comparison is planned between productive and receptive learning via test tasks, the two tests (the productive and the receptive tests) should be both recognition tests or both recall tests. This distinction should be taken into account before developing tests for comparing receptive and productive knowledge. Some studies use a recognition test for assessing receptive knowledge (e.g. multiple choice); and a recall test for measuring productive knowledge (e.g. translation from L1 into L2), and "[i]t is then impossible to tell how much the difference in scores is a result of the productive/receptive distinction or the recognition/recall distinction" (Nation, 2001b, p. 30). Receptive and productive test items need to vary solely in terms of the variable of receptive/productive knowledge, and thus, should use similar test formats (Nation & Webb, 2011). Nation (2001b) has also warned against other confounding differences in test items. For example, presence and absence of sentence context, incorporating or excluding a communicative task, and oral and written presentation. In this study, care was taken to develop both tests (productive collocational knowledge test and receptive collocational knowledge test) as recall tests following similar formats. Furthermore, every attempt was made to rule out confounding variables. Test items in both tests were presented in written form, and collocations were tested in isolation not in context.

Since in the posttests, the first test (the productive test) used the L1 meanings as the cues for the participants, there might have been a learning effect resulting from it on the receptive test. However, learners were not aware of the possibility of learning from these L1 cues, they were not aware of the format of any other upcoming tests or whether there will be a second test, in the first place. Furthermore, they were required to demonstrate their ability to link the written form of the collocations with their appropriate L1 meanings rather than merely that they had a vague

knowledge of their meanings. Thus, it is expected that any learning effect may have been minimal. To diminish any possible learning effect, participants were administered a grammar test between the two tests; and the order of the test items was varied between the two tests.

Using translation formats for assessing participants' collocational knowledge of form and meaning has been utilized in a number of studies on learning collocations (e.g. Laufer & Girsai, 2008; Webb & Kagimoto, 2009, 2011; Webb et al., 2013). Since the tests were intended to be used solely with Arabic-speaking learners of English, this would therefore be a credible test task. Nation (2001b, p. 351) addressed the generally misleading feeling that translation should not be used in testing of vocabulary, and described it as "quite wrong," arguing that utilizing first language translation for the meanings "is very efficient" and "makes the test much more sensitive to partial knowledge" (pp. 350-351).

In order to check the validity of the tests, they were piloted after they were developed with two groups of native speakers of Arabic (10 in each) who were proficient speakers of English as well. All of the participants were studying in British universities or working in the UK. Initially, the criterion used to select the participants for the pilot of the tests was achieving at least 6.5 as an overall score on IELTS or TOEFL iBT equivalents (79-93).

Each group of participants was administered one type of test, either the productive or the receptive test. Participants who were administered the receptive test were able to provide appropriate meanings of the collocations. At least 9 (out of 10) were able to provide the meanings of each one of the collocations (M= 29.499 out of 30, SD= .516, 98.33%). As for the productive test, the same criterion for choosing the participants was followed, however, the results were not the same. Not all the collocations were translated into English correctly. Interestingly, some participants made the same errors in their attempts to provide the appropriate collocations. Almost all errors were made in participants' choices of the verb collocates, specifically (M= 26.87 out of 30, SD= 1.65, 89.57%). This supports many researchers' views and findings on advanced L2 learners' struggle with collocations. Consequently, I raised the English language proficiency threshold for selecting participants to at least 7.5 as an overall score on IELTS or TOEFL iBT equivalents (102-109). Also I only recruited participants who had spent at least 36 months (three years) in undergraduate or postgraduate studies in the UK. This time all the collocations were correctly translated into English by at least 9 (out of 10) participants (M= 29.25 out of 30, SD= .699, 97.50%).

In addition, the results of the short-term delayed tests in the pilot study showed a significant improvement from the pretest scores. This is a further validation of the construct validity of the tests. The intervention strategy for building arguments for construct validity is "well suited to criterion-referenced testing where the purpose is to assess learning" (Brown, 2005, p. 232).

4.11 Qualitative data collection instruments

4.11.1   Questionnaire

The questionnaire survey (Appendix 4F) was carried out to investigate the participants' opinions and arrive at a clear understanding about their attitudes toward the concordance-based worksheets, the DDL approach and the dictionary-based worksheets for learning collocations. Some of the questionnaire items were adapted from a number of questionnaire statements that have been used in previous studies (Boulton, 2010a; D. J. Lee, 2007; H. Yoon & Hirvela, 2004). The remaining items were specifically designed by me for this study. Several versions of the questionnaire were written and revised. The questionnaire was piloted and revised as a result.

The questionnaire consisted of two parts: closed-ended and open-ended sections. The closed-ended part consisted of 27 statements to which the respondents were asked to indicate their degree of agreement on a 5-point Likert scale. There were items that were negatively worded in the questionnaire to avoid having participants marking heavily on one side of the questionnaire, and the scores of those items were reversed before analysis (Dörnyei & Taguchi, 2010). The open-ended part included 6 open-ended questions. All the questionnaire items were presented in English and Arabic. The translation processes started by handing the original English version of the questionnaire to two academics who are native speakers of Arabic to be translated in a parallel manner. After that, I (the researcher) and the two translators in a "reconciliation meeting" discussed the translated questionnaires to arrive at a final agreed on version (Dorer, 2012, p. 9). I arranged the questionnaire items into multi-item scales based on the literature and the study's theoretical considerations. The questionnaire items fall into the following categories: (1) effectiveness/usefulness of the concordance-based materials; (2) difficulty in using the concordance-based materials; (3) attitudes towards/ liking vs. disliking of the concordance-based materials; (4) effectiveness/usefulness of the dictionary-based materials; (5) difficulty in using the

dictionary-based materials; and (6) liking vs. disliking of the dictionary-based materials. The open-ended section covered the following issues: (1) perceived strengths and weaknesses of the concordance-based martials and the dictionary-based materials; (2) comparing the concordance-based materials and the dictionary-based materials on effectiveness/usefulness and liking vs. disliking; (3) advantages and disadvantages of the activities in the worksheets; and (4) suggested improvements.

The questionnaire was piloted before its final administration with a group of respondents who were students in the same institution and similar to the target population in every way (a detailed account of the pilot study of the teaching materials can be found in 4.12). They were students from the semester immediately below the target group. Thus, they were supposedly of a lower English proficiency level, overall. The internal reliability of respondents' responses to the items of the questionnaire was calculated from the data of the 56 respondents who responded to all the 27 items in the collocations pilot study, and the 63 respondents in the lexical phrases pilot study. Reliability was measured via Cronbach's Alpha and it was α= .82 for the collocation questionnaire, and α= .83 for the lexical phrases questionnaire. The piloting before the final administration resulted in a few changes. One of the changes was the changing of the wording of open questions 4 and 5. Question 4 in the pilot instrument was as follows: 'How can the concordance worksheets for teaching collocations be improved in future?' and question no. 5 was a parallel item asking the same question about the dictionary materials. However, during the piloting two students said this formulation was not clear to them. One asked who they were addressing when answering this question. After clarifying that they could suggest improvement on any part and at any stage of implementing the materials and they could address the materials designer or the teacher during using these materials in the class, both students declared their clear understanding of the intended request, and they all made suggestions in their responses. After the session I showed them the modified version of the questions in order to check they were now clear what the question meant and they all agreed that it was clearer and plain as to whom they were suggesting the improvements. The new version of the question became 'How can the concordance worksheets for teaching collocations be improved in the future? (You can write your suggestions to anyone involved and at any stage: design, use in class…etc.)'. Four statements from the close-ended section of the questionnaire were deleted from the final version of the questionnaire. The first set is item 6 and item 22 in the pilot study questionnaire, which are parallel items: 6. With the

concordance worksheets, I have to think by myself/ 22. With the dictionary worksheets, I have to think by myself. During the pilot study, and after follow up interviews with a few respondents after they had completed their questionnaires, I noticed that a few had understood the statement differently, e.g. some understood it as 'I had to think about the information I was given to find out the answer'. Therefore, the decision was made to delete both items entirely, in order to ensure the questionnaire only included clear statements, resulting in thorough understanding and consistent responding. The second set is item 9 and its parallel counterpart item 25: 9. Using concordance worksheets to learn collocations where you have to find the information yourself is more useful than being told the right answer by your teacher/ 25. Using dictionary worksheets to learn collocations where you have to find the information yourself is more useful than being told the right answer by your teacher. I was not quite sure that this item would be useful in the questionnaire; my supervisor also advised that it would be better to eliminate this item. The comparison seemed to be between concordance worksheets or dictionary worksheets and the teacher supplying the answer right away. Though it might be of interest, it was still not directly relevant to the evaluation of the two types of worksheets. Consequently, both items were deleted after the pilot study.

4.11.2 Interviews

4.11.2.1 Student interviews

The interviews were semi-structured with lead questions derived from the respondents' questionnaire results. The interviews aimed at providing an in-depth understanding of the students' perception and evaluation of the two types of materials. After all the experimental sessions and after administering the questionnaire, students were invited to write their names on a piece of paper if they were willing to be interviewed about their feelings towards the teaching activities. Six students were finally selected for the interviews based on their questionnaire responses taking into consideration their general attitudes towards the concordance-based materials and the DDL approach in order to obtain a wider and balanced range of views. Consequently students with a positive attitude towards the concordance-based materials are referred to as P1, P2 and P3, and the remaining students with a negative attitude are labeled in this study N1, N2, and N3.

As can be seen in Appendix 4G, the students' interview schedule consisted of seven sections: (1)

how difficult it was to use these worksheets –concordance and dictionary worksheets; (2) general preference (for either type of worksheets); (3) usefulness; (4) strengths and weaknesses – of both types of worksheets; (5) suggested improvements; (6) attitudes towards the translation task on the collocation worksheets and the sentence making task on the lexical phrases worksheets; and finally (7) final comments on any aspect they'd like to talk about it. Each one of the interviewees was interviewed individually for an average of 35 minutes. Interviews on each study, collocations and lexical phrases, were conducted separately on different weeks. The process of selecting the interviewees for the collocations study was done separately from the selection process conducted for the lexical phrases study interviews because a student might like the DDL worksheets for teaching collocations but not for teaching lexical phrases, or vice versa. Interviews were conducted in Arabic, the native language I shared with all the participants. Interviews were audio recorded via a digital voice recorder and later transcribed for the purposes of coding and analysis.

4.11.2.2   Teacher interviews

In order to gain a deeper understanding of teachers' perceptions and attitudes towards both types of materials and the DDL approach, two Arabic native speaker teachers who had observed the implementation of the materials in the classrooms were interviewed. The first teacher (T1) has a doctoral degree in applied linguistics and about 7 years' teaching experience; the second teacher (T2) holds a doctoral degree in English language and translation and nearly 5 years' teaching experience. They were interviewed after the teaching sessions which they had attended and observed in order to get their insight on how the students dealt with both types of worksheets and to solicit their views on the two approaches, DDL and dictionary, and how feasible they felt it would be for teachers in this context to use similar materials with the learners. The interviews were carried out with reference to the teachers' responses on the retrospective questionnaire on the collocation teaching sessions (see Appendix 4H). The teachers' retrospective questionnaire consisted of three main sections: (1) the translation activity and the instructions; (2) the concordance worksheets; and (3) the dictionary worksheets. Teachers were invited to comment on the retrospective questionnaire about their opinions of the difficulties (if any) that learners had experienced while working on the concordance examples and the dictionary entries. Teachers were asked to comment on the design of the worksheets including the activities and the input. They were also asked to give their views on the strengths and weaknesses of the concordance worksheets and

the dictionary worksheets, in addition to being asked for any suggestions they might have for improving the worksheets.

The teachers' interviews (see Appendix 4I) mainly contained questions about: (1) how difficult they thought the worksheets were for students; (2) which type of worksheets (concordance or dictionary worksheets) they preferred for teaching collocations; (3) how appealing and interesting the two types of worksheets seemed for students; (4) how useful the worksheets were for teaching collocations; (5) strengths and weaknesses of both types of materials; (6) suggested improvements; (7) feelings on the translation task; and (8) the DDL approach. Interviews lasted on average 45 minutes and were audio recorded using a digital voice recorder. They were later transcribed for data analysis

4.12 The Pilot study: Trialling teaching materials

This section describes a pilot study of the teaching materials conducted with EFL Saudi students over 8 weeks, with additional time for follow-up discussions and interviews. The main aim of the pilot study was to try out the teaching materials for both the collocations and the lexical phrases studies, the tests, the questionnaire and the interview schedules to be used in the main study, so as to identify and eliminate any unexpected problems. In the following sections the procedures and results are reported, and this account ends with a discussion of the problems encountered during piloting and the subsequent modifications made to the main study's data collection instruments. (However, the discussion about the piloting of the tests, questionnaires and interviews was dealt with previously in this chapter.)

4.12.1   Focus of the pilot study

The main purposes of piloting the teaching materials were to determine how difficult participants would find the teaching materials and what problems they might encounter. The focus was generally on the following questions: (1) How difficult do participants find working with concordance examples?; (2) How difficult do participants find working with dictionary entries?; (3) How difficult do participants find carrying out the activities in both types of worksheets?; and (4) what do participants believe to be drawbacks in both types of worksheets, and how can they be lessened or eliminated?

4.12.2 Participants and setting

The target group in the pilot study was chosen based on my ability to obtain access to a similar EFL learner group to the target group in the main study. Every possible attempt was made to get access to the closest group of participants as possible to the target group, and preferably in a similar setting to that of the main study. The pilot study was carried out with a group of EFL learners who were very similar to the target group, albeit not from the exact academic semester in the institution. The two groups in the pilot study were students taking the course Reading and Vocabulary I in semester 3, a pre-requisite for the target group in the main study who were taking the course Reading and Vocabulary II in semester 4. They were all Saudi female sophomore English majors. Their age range was between 20-27 (*M*=21.477, *SD*= 1.46). Their first exposure to English at school was at an average age of 10.82 years (*SD*= 3.33, *Min*= 4, *Max*= 14). They were all Arabic native speakers and none of the participants have ever lived in an English speaking country. Participants in the pilot study were classified as similar to the final target group based on their Vocabulary Levels Test scores. Participants' VLT scores were never disclosed to the participants but I kept a record of these for comparison with their subsequent evaluation of the teaching materials and study instruments. Participants' average raw score was 22.53 /30 on Schmitt, Schmitt, and Clapham (2001) Vocabulary Levels Test (2K level) demonstrating that they had receptive knowledge of the meanings of 75% of the most frequent 2000 word families; while their average raw score was 15.97 at the 3000 word level indicating that they had receptive knowledge of the meanings of about 53.23% of the word families at that level. Their educational background was described earlier in section 1.4.1.

The pilot study was carried out with the pilot study population in a real life classroom situation during their weekly classes of the module Reading and Vocabulary I, and I was the teacher during the sessions. Participants knew they were part of a research experiment, however they were not informed of the study procedure or its upcoming tests. They participated in the pilot study for course credit. All the pilot study sessions for the training and teaching materials were carried out without adhering to a time restriction because I wanted to calculate how much time would be required for working on the worksheets. I was present in the classroom all the time and was helping participants and answering questions when required. I was observing the participants while they

worked on the worksheets throughout in order to gain insights into any problems in the materials themselves or the delivery and the instructions, and to discover how the materials and procedures could be modified and improved. Moreover, participants were asked to complete two short retrospective questionnaires on both types of worksheets in the two studies (See Appendix 4J/5K). The questions in the questionnaire focused mainly on: (1) the difficulty of working on the concordance and the dictionary worksheets; (2) the usefulness of the worksheets; (3) the difficulties and problems (if any) that they encountered while working on the worksheets; and (4) what they liked and disliked in the worksheets. Discussions and individual interviews were also carried out with some of the participants with reference to the retrospective questionnaires.

4.12.3   Materials and procedure

The same worksheets that were intended for the main study were the ones trialled in the pilot study. The training sessions were conducted before the teaching sessions in the two parts of the pilot study. The first part of the piloting was allocated for the collocation study's instruments, and the second part for the lexical phrases study's instruments. I gave a brief introduction about what collocations or lexical phrases and corpora are with some examples of collocations and lexical phrases written on the board. Some concordance example printouts were also handed to participants. After that the training sessions started by handing out the concordance worksheets first, then the dictionary worksheets. The counterbalancing process was carried out in the pilot study as well as in the main study in order to counter the drawback of order effects (also known as carryover effects) in the within-subjects (or the repeated measures) design. A carryover effect is when a previous treatment affects the participant's performance in a subsequent treatment. This includes practice effects and fatigue effects. Thus, counterbalancing where participants complete the different levels of the independent variable in different orders provides a way out of this potential limitation (Myers, Well, & Lorch, 2010; Podesva & Sharma, 2014). After the teaching session, the questionnaire was administered to the class and the interviews were conducted with two students in the first part of the pilot study, and two students in the second part. Only the short-term posttests were administered in the pilot study.

4.12.4　　　Findings and discussion

The trialling of the teaching materials resulted in some useful insights for the main study, and the findings were used to modify the materials' instructions and the procedures followed when piloting.

All of the participants reported that they had never seen this type of concordance examples, and never dealt with something similar. Participants praised the use of training materials before the actual teaching materials and said they were very helpful as a warm up stage. However, I noticed that although participants said they did not have any questions about how to use the worksheets to find information about collocation and lexical phrases before using the teaching materials, a few seemed puzzled and not clear about how they should read or deal with the concordance examples. It was obvious that they needed to be given the instructions again and that they required one-to-one advice. The nature of the cut off concordance lines was clearly a major issue. One of the students stated that she didn't know what the context was before the beginning of these concordance lines, and since the sentences were not complete, therefore, she would not be able to retrieve any information. Participants were instructed at the beginning of the session that they were not meant to understand the whole context of each concordance example or where it started and finished. Nevertheless, a few seemed reluctant and confused when exposed to this new type of activity. Yet, all of those participants seemed able to work on the concordance examples after further and repeated instructions. I noticed that some participants were writing the instructions on their papers and after asking whether they would prefer to have the instructions on how they should read the concordance examples on the board in front of them some agreed they needed it while others declared it was clear to them after the oral instructions. The way some learners reacted to concordance examples might be related to the participants' different learning styles. Thus, I later decided to provide specific instructions and tips for participants on how to read and use concordance examples on printouts in the main study. Furthermore, the initial introduction to corpora would be aided by the use of Microsoft PowerPoint to maximize illustration and cater for as many learning styles as possible in the main study.

Another issue that seemed to confuse some participants, and I noticed while observing the participants work on the teaching materials, was the transcription symbols, e.g. <M03/> <tc text="laughs"/>, <p/>. Thus, a clarification point needed to be made about such symbols to the

participants during the pilot study and before commencing work on the worksheets for the main study. Participants were reminded of the nature of the corpora and similar available corpora of authentic English, and that such symbols were normal in the concordance examples, and these symbols are simply transcription symbols used by the transcribers and the compliers of the corpus when working on spoken materials.

And despite the efforts made to make the concordance examples accessible and comprehensible, a few participants were seen to be distracted by some examples and not sure of their understanding. In the majority of cases, it seemed that this was due to the 'cut off' nature of concordance examples, and in a few cases to the way sentences are structured. Participants were advised to try to guess the general meaning of the concordance example, without necessarily being completely sure of the exact meaning. Especially because learners were to be given the chance after finding the information in the concordance examples or dictionary entry section to specify the concordance examples that displayed the collocation or lexical phrase meaning to them by saying the line number and to follow this with an explanation of the concordance sentence meaning. Consequently, I made sure that numbers were included on all the concordance worksheets in the main study for ease of reference and to avoid leaving learners feeling lost and overwhelmed amid the concordances.

4.13 The main study: Procedure

In the main study, the experiment was conducted in conditions as close to normal as possible. Four weeks prior to the treatment (five weeks in the case of the lexical phrases study), all of the participants were administered the pretests and given as much time as they needed to complete it. The treatment started with a training session that was conducted in the first week. For the training sessions four collocation worksheets were used (Appendix 4B): two corpus-based worksheets and two dictionary-based worksheets. Four lexical phrases worksheets were also used (Appendix 5B): two of the corpus-based type and two of the dictionary-based type. The same worksheets were used in the same order with the two experimental groups. The training sessions started with an introduction about the concept of collocations and lexical phrases. After that, students were handed introductory sheets about corpora and tips for working with concordances (Appendix 4K). The tips were adapted from Sripicharn (2010, p. 380). The actual training started with the corpus-based

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worksheets, then the dictionary based worksheets. At the end of the training session the personal information questionnaire (Appendix 2A) was administered. For the collocations study the actual experimental treatment implemented a counter balanced design. The two counterbalanced versions of the target items that the experimental groups received were divided based on their BNC-COCA off-list score (after adding proper names) to produce two sets which are as close as possible, in terms of their total off-list score, see Appendix (4L). The experimental session started with the first group studying 5 target collocations using concordance-based worksheets, then the other 5 target collocations using dictionary-based worksheets. The same process was carried out with the second experimental group, however the treatment was reversed, using dictionary-based worksheets first. In this way, no group or target item received special treatment, and thus they all served as control for each other. This technique was employed in other studies of corpora in language learning (e.g. Boulton, 2010a; Bowker, 1999; Stevens, 1991; Vannestål & Lindquist, 2007). There were 63 participants in the first experimental group and 54 in the second one in the collocations study. In the lexical phrases study, there were 58 in the first group and 51 in the second group. Teaching in these classes predominantly follows the 'knowledge transmission' paradigm and most lectures last approximately two hours. The experimental sessions in my studies took place during a two-hour lecture. The questionnaire was distributed for respondents to know their views and attitudes towards the different teaching materials and approaches after the teaching session, and students' interviews were conducted during the same week. The short-term delayed test was administered two weeks after the treatment to evaluate learning gains, and the long-term delayed test was conducted after an interval of 6 weeks to evaluate long-term retention. Participants were not provided any feedback about their performance or marks during the experiment. Figure 4:5 represents the design of the study graphically.

The training and the teaching worksheets were not handed to students all at once like a booklet; rather they were administered as single sheets one after another. This was due to the nature of the study. In addition, neither the concordance nor the dictionary worksheet, which included three activities, were administered as a single sheet. Participants were always handed the first exercise on a single separate sheet, then they would be given the remaining activities on other sheets. This was done to enable the participants to work properly on the first exercise, and not get distracted by the concordance or the dictionary sections, or search for the answers in them.

A detailed description of the worksheets content and tasks is provided in section 4.9 in the collocations study, and section 5.6 in the lexical phrases study. During the treatment sessions, participants were working on the worksheets individually. Once each item had been completed, a whole group discussion was carried out and feedback provided. This allowed me the opportunity to clarify and correct students' answers.

> Although even such limited teacher input may seem to go against the spirit of hands-on DDL, it is nonetheless a frequently reported practice..[(Boulton, 2010a; Vannestål & Lindquist, 2007)] and is expected in the case of traditional paper-based materials; it would also have been ethically questionable to have deliberately let students go away with erroneous ideas in the name of research (Boulton, 2010a, p. 547)

I covered each target item in its entirety, and the findings were checked with the whole class before moving to the next item. The aim was that all students should end up with basically the same information. The difference was only in the approach and the materials used to learn it.

The study design

Pretests + Vocabulary Levels Test (Four weeks prior to the treatment in the collocations study and five weeks prior to the treatment in the lexical phrases study))

Then

Training on both types of collocations and lexical phrases worksheets (the week before the experimental sessions)

Week 1 Class 1 (experimental group 1)	Week 1 Class 2 (experimental group 2)
5 collocations concordance 5 collocations dictionary + Questionnaire on collocations worksheets (concordance and dictionary worksheets) Interviews carried out during the same week	5 collocations dictionary 5 collocations concordance + Questionnaire on collocations worksheets (concordance and dictionary worksheets) Interviews carried out during the same week

Week 2 Class 1 (experimental group 1)	Week 2 Class 2 (experimental group 2)
5 lexical phrases dictionary 5 lexical phrases concordance + Questionnaire on lexical phrases worksheets (concordance and dictionary worksheets) Interviews carried out during the same week	5 lexical phrases concordance 5 lexical phrases dictionary + Questionnaire on lexical phrases worksheets (concordance and dictionary worksheets) Interviews carried out during the same week

Week 3 short term delayed tests on collocations
Week 4 short term delayed tests on lexical phrases
Week 9 long term delayed tests on collocations
Week 10 long term delayed tests on lexical phrases

Figure 4:5 The collocations and lexical phrases studies design

4.14 Data Analysis

While marking the tests, information about the experimental group to which the participant belonged were not visible to me when I was marking. Furthermore, tests were marked item by item, rather than by participant, to ensure consistency. Minor spelling errors did not lead to a deduction of points as long as the word was correctly recognized by me and the second marker. Participants needed to produce all the components of the collocation or the lexical phrase correctly to receive a score. Statistical test results for both the collocation and the lexical phrases studies were analyzed using the Generalized linear model (GZLM)-Generalized Estimating Equations (GEE) statistical procedure because the assumptions of ANOVA were not met by the data set in the collocation and the lexical phrase studies. The assumption of normality of distribution of test scores for both experimental groups was violated as assessed by the Shapiro-Wilk test and Kolmogorov–Smirnov test ($p < .05$), and by visual inspection of their histograms. The Generalized Linear Model and the Generalized Estimating Equations procedures together perform exactly comparable analyses to those performed by the General Linear Model procedure (i.e. ANOVA) but provide an ordinal option which does not have the General linear model prerequisites. All the statistical tests were carried out using IBM SPSS statistical package version 19.

4.15 Overall test results

The descriptive statistics (mean, median, minimum, maximum, standard deviation) of the scores for all the tests measuring productive and receptive knowledge of collocation on a 0 to 5 scale are reported in Table 4:12. Initially I conducted two overall GEE analyses to ascertain if there were any significant differences between mean scores in my data. First, an overall GEE analysis was conducted with the two independent variables: type of learning input or the lack of it (three treatments) and time (three test occasions). The dependent variable was productive knowledge scores. I found a statistically significant two-way interaction effect between treatment and time on the test scores measuring productive knowledge of collocations, Wald Chi-Square =171.255, $p <$ .001. This shows that score changes over time were not the same with each treatment, i.e. the three types of input led to different changes in productive collocation knowledge over the period of the study, as anticipated. What precisely the changes were will be considered in sections 4.15.1, 4.15.2

and 4.15.3.

A second overall GEE analysis was performed in order to ascertain the effects of type of knowledge tested (receptive versus productive). Here I included in the analysis: treatments (3), knowledge types (2) and test occasions (2: short term delayed vs. long term delayed). Two significant interaction effects were found. The first was for treatment and time (on scores regardless of type of knowledge tested), Wald Chi-Square =20.740, $p < .001$. This shows that the retention of collocation knowledge (productive and receptive) is not the same after different treatments. The second was for treatment and type of knowledge (receptive and productive), regardless of test time, Wald Chi-Square =184.014, $p < .001$. This shows that effects of my treatments on collocation knowledge after the direct treatment phase do in fact differ depending on what type of collocation knowledge is tested.

There are mainly two possible ways to compare the data. The first, by comparing changes between the test occasions, and the second by comparing differences among the three treatments. Since the GEE analyses above revealed many significant combined effects of treatment, test occasion and type of knowledge, there is a wide range of more specific follow up analyses that could be done. I chose to pursue only those that answer my research questions, to which I turn in the next section.

First, however, I will briefly consider a potential objection to the kind of study I conducted, which is that improvement in scores might be mainly due to the 'testing effect' and not to any effect of the experimental treatments. The same point has been raised in many studies (e.g. Boulton, 2010a; Laufer & Girsai, 2008; Webb & Kagimoto, 2009, 2011; Webb et al., 2013). It is possible in my study that during the second and third times of testing students became used to the test design and its components. By "testing effect" here I mean the claim that any testing, whether done for research or pedagogical purposes, is not actually only measuring participants' knowledge level but also has a side effect of promoting some learning, as if it is to a certain extent another experimental treatment. All the GEE analyses above, however, yielded significant two-way interaction effects of treatment and time on the test scores (whether receptive or productive), showing that changes in knowledge were not the same under the three treatments. Therefore even if there was any test effect, which would be the same in all treatments, there was clearly a treatment effect as well. Furthermore, GEE analyses with Bonferroni adjustment were performed to compare successive times for each treatment and each knowledge type (production or reception). When we look into

these in more detail we see from Table 4:12 that there was only a small improvement between the productive pretest and the productive short-term delayed test in the control items, which is not significant (*p* > .05). This shows that the significant interaction effect must derived from improvement on the treated items through dictionary-based input (*p* < .001), and through DDL (concordance-based input) (*p* < .001).

	Control condition					Concordance condition					Dictionary condition				
	M	Mdn	Min	Max	SD	M	Mdn	Min	Max	SD	M	Mdn	Min	Max	SD
Productive pretest	.91	1.00	.00	1.50	.27	.85	1.00	.00	3.00	.73	.87	1.00	.00	3.00	.69
Productive short term posttest	.94	1.00	.00	1.75	.32	1.91	2.00	.00	5.00	1.24	1.71	2.00	.00	5.00	1.11
Productive long term posttest	.92	1.00	.00	1.75	.26	1.76	2.00	.00	5.00	.87	1.30	1.00	.00	4.00	.79
Receptive short term posttest	.96	1.00	.25	1.75	.30	3.64	4.00	.00	5.00	1.09	3.51	4.00	.00	5.00	1.04
Receptive long term posttest	.96	1.00	.25	1.75	.25	3.50	4.00	1.00	5.00	.93	3.12	3.00	1.00	5.00	1.02

Table 4:12 Descriptive statistics for the three instructional conditions at each test time (collocation scores/5)

Looking at the results of the long-term delayed productive test, we see a similar pattern, with a non-significant improvement (*p* > .05) between the productive pretest and long-term delayed test in the untreated control items, while both improvements of the experimental treatments were significant (p < .001). A key finding here is that the testing effect is minimal as suggested by the non-significant results for the control items. The statistically significant results for both the DDL and the dictionary treatments in the productive short-term delayed test and the long-term delayed test indicate that both learning materials were effective methods of promoting learning of collocation.

When looking at the changes between the productive short-term delayed test and the long-term delayed test, it was found that there is no significant difference under the control experimental condition ($p > .05$). A similar result is found under the DDL instructional condition ($p > .05$). However, the difference between the two test scores in the dictionary experimental condition was significant, with the productive short-term delayed test scores being significantly higher than the productive long-term delayed test scores ($p < .001$).

Furthermore, carrying out the same statistical tests between the receptive short-term delayed test and long-term delayed test scores revealed a similar outcome. There was no significant difference between the two test scores in the control condition ($p > .05$) or the DDL experimental condition ($p > .05$). The difference was, on the other hand, significant between the two test scores under the dictionary instructional condition ($p < .001$). Again the receptive short-term delayed test scores were significantly higher than the receptive long-term delayed test scores in the dictionary treatment. This shows that loss of acquired knowledge in the long-term delayed tests seems to be more marked in the dictionary treatment, as evidenced by the statistically significant result. Yet, it is nearly non-existent in the control and the DDL treatments as indicated by the statistically non-significant results.

The lack of any considerable change under the control experimental condition clearly indicates that the results in all the comparisons above cannot be attributed to the 'testing effect'. Consequently, it seems there is no evidence of the effect of testing on the findings of the study.

4.15.1 Initial learning of productive knowledge of collocations

In order to answer the first research question (What type of instructed input, concordance-based or dictionary-based, if either, promotes learners' initial learning of productive knowledge of form and meaning of collocations? And which one is more effective?), I first performed a GEE analysis specifically focusing on the three treatments in relation to the productive pretest and productive short-term delayed test scores (differences between which I take to represent 'initial learning'). A statistically significant two-way interaction was found between treatment and time on productive pretest and productive short-term delayed test scores (Wald Chi-Square =97.101, p < .001).

In order now to test whether the experimental treatments genuinely differ in their effects, I next needed to perform GEE analyses (with Bonferroni adjustment for multiple comparisons) comparing each pair of treatments over the productive pretest and short-term posttest scores to see which treatment yielded significantly greater initial learning than which other one(s). There was a significantly greater improvement with the DDL treatment than with the control experimental condition between the productive pretest and the productive short-term delayed test (Wald Chi-Square =84.167, p < .001). There was also a significant difference in improvement between the control experimental condition and the dictionary treatment on the productive pretest and the productive short-term delayed test scores, with the dictionary treatment initial learning being significantly greater than that with the control experimental condition (Wald Chi-Square =62.766, p. < .001). Finally, answering the key question of whether DDL was significantly more effective than the dictionary treatment, the GEE analysis yielded a non-significant difference in improvement between the DDL instructional condition and the dictionary instructional condition (Wald Chi-Square =2.923, p =.261). This result means that there is a 26% probability that the DDL treatment was more effective in initially developing productive knowledge of collocation than the dictionary treatment because of chance alone. In sum, the tests show that both treatments, DDL and dictionary, promoted initial learning, both were significantly better than the control experimental condition but neither is significantly more effective than the other.

4.15.2   Retention of productive knowledge of collocations

As for the second research question (What type of instructed input concordance-based or dictionary-based, if either, promotes learners' retention of productive knowledge of form and meaning of collocations? And which one is more effective?), an overall two-way GEE was run including all the three treatments on the productive short-term delayed test and the productive long-term delayed test scores. Any differences between these experimental treatments over this period were considered representative of differential retention. I found a statistically significant two-way interaction between treatment and time on productive short-term delayed test and productive long-term delayed test scores (Wald Chi-Square = 9.093, p = .011).

Next, to test whether the experimental treatments genuinely differ in their effects, separate GEE analyses with Bonferroni adjustments for multiple comparisons were run on each pair of treatments over the productive short-term delayed test scores and productive long-term delayed test scores to find out which treatment was followed by larger losses of gained knowledge. There was a non-significant difference in retention between the control experimental condition and the DDL treatment on the productive short-term delayed test and the productive long-term delayed test scores (Wald Chi-Square =. 752, p = 1.000), indicating that the loss of gained knowledge is similarly small under both treatments. Interestingly, by running the test between the control experimental condition and the dictionary treatment, I found a significant difference with the dictionary treatment having a higher loss (Wald Chi-Square =11.568, p = .003). This is due to the very slight loss of knowledge between the two test scores with the control experimental condition, as compared to the larger loss in gained knowledge between the two test scores under the dictionary treatment. Conducting the same test between the DDL and dictionary instructional conditions revealed a non-significant difference (Wald Chi-Square =2.596, p = .321). Here the DDL treatment is not significantly different from the control experimental condition where there is nothing much to be forgotten while the difference between the dictionary treatment and the control condition was significant. However, neither experimental treatment is significantly more effective for retention than the other when compared.

4.15.3   Residual learning of productive knowledge of collocation

To answer the third research question (What type of instructed input, concordance-based or dictionary-based, if either, promotes learners' residual learning of productive knowledge of form and meaning of collocation? And which one is more effective?), an overall GEE analysis was conducted on the productive pretest and the productive long-term delayed test scores focusing on all three treatments. Difference between these two scores I take to represent 'residual learning', once initial gains and later lack of retention are all taken into account. A statistically significant two-way interaction was found between treatment and time on the productive pretest and the productive long-term delayed test scores (Wald Chi-Square $= 123.395$, $p < .001$).

Further GEE analyses with Bonferroni adjustment for multiple comparisons were performed to test whether the experimental treatments do in fact differ in their effects. Comparisons were carried out for each pair of treatments over the productive pretest and the productive long-term delayed test to find out which treatment resulted in significantly higher residual learning. There was a significantly higher improvement with the DDL treatment than with the control experimental condition between the productive pretest and the productive long-term delayed test scores (Wald Chi-Square =127.546, $p. < .001$). The second comparison for this research question was carried out between the control experimental condition and the dictionary treatment on the productive pretest and the productive long-term delayed test scores. The result was also significant with the dictionary treatment residual learning being significantly better than that with the control experimental condition (Wald Chi-Square =20.401, $p. < .001$). Most importantly, the difference in residual learning was also found to be significant between the two experimental treatments: DDL and dictionary. The DDL instructional treatment statistically significantly outperformed the dictionary instructional treatment (Wald Chi-Square =14.137, $p. < .001$).

These findings show that both experimental treatments were significantly superior to the control experimental condition, but the crucial finding is that under the DDL experimental treatment participants performed significantly better in retaining knowledge over an extended period of time than they did under the dictionary experimental treatment.

Both experimental treatments promoted residual learning. This is evidenced by their significantly more effective results than the control experimental condition. In addition, the DDL treatment is significantly more efficient in promoting residual learning of productive knowledge of collocation than the dictionary treatment as shown by the results above.

4.15.4 Initial learning of receptive knowledge of collocations

In order to answer the fourth research question (What type of instructed input, concordance-based or dictionary-based, if either, promotes learners' initial learning of receptive knowledge of form and meaning of collocations? And which one is more effective?), an overall two-way GEE analysis

was run on tests measuring receptive knowledge of collocations including all the treatments. The result revealed a statistically significant two-way interaction effect of treatment and time on the receptive short-term delayed test scores and receptive long-term delayed test scores (Wald Chi-Square = 15.998, *p*. < .001).

A one-way GZLM analysis was performed on the receptive short-term delayed test scores focusing on all the treatments. The result shows a statistically significant difference between all the treatments (Wald Chi-Square = 86.825, *p*< .001). Therefore, simple main effect comparisons were run between pairs of treatments with Bonferroni adjustment for multiple comparisons to see which experimental treatment yielded significantly higher initial learning of collocation receptive knowledge. Receptive short-term delayed test scores were statistically significantly different for the control experimental condition compared to the superior DDL treatment test scores (Wald Chi-Square = 80.038, *p* < .001). Receptive short-term delayed test scores were also significantly different for the control experimental condition compared to the higher scores achieved with the dictionary treatment (Wald Chi-Square =71.157, *p* < .001). However, receptive short-term delayed test scores were not statistically significantly different between the DDL treatment and the dictionary treatment (Wald Chi-Square =1.925, *p* = .495).

These results indicate that both experimental treatments, DDL and dictionary, were significantly superior to the control experimental condition, and the difference in participants' performance between the two instructional treatments mean and median scores is small and not statistically significant.

4.15.5   Retention of receptive knowledge of collocations

I next tackle the fifth research question (What type of instructed input, concordance-based or dictionary-based, if either, promotes learners' retention of receptive knowledge of the form and meaning of collocations? And which one is more effective?). After the statistically significant overall GEE analysis result that I found by including all three treatments and the receptive short-term delayed test and the receptive long-term delayed test scores, multiple GEE analyses with Bonferroni adjustments for multiple comparisons were carried out on pairs of treatments over the receptive short-term delayed test scores and the receptive long-term delayed test scores to see

which treatment achieved significantly larger loss of the gained knowledge. A repeated measures GEE analysis was performed on the receptive short-term delayed and the receptive long-term delayed test scores between the control experimental condition and the DDL treatment. There was no significant difference between the two treatments (Wald Chi-Square = 4.751, p = .087). However, when comparing the control experimental condition to the dictionary treatment for loss of previously gained knowledge between the receptive short-term delayed test and the receptive long-term delayed test scores, the difference found between the two treatments was statistically significant with participants losing gained knowledge following the dictionary treatment more than with the control experimental condition (Wald Chi-Square =14.994, p < .001). The final comparison was between the two instructional treatments, DDL and dictionary, and the difference was not significant (Wald Chi-Square =2.906, p = .264).

These results, parallel with those for RQ2, show that the loss of gained knowledge with the DDL instructional treatment is on a similar level to the control experimental condition, in which the items did not receive any type of instruction. This is evidenced by the non-significant difference between the two conditions on differences between test scores. The findings also indicate that participants were worse at retaining their gained knowledge with the dictionary treatment than they were with the control experimental condition and the difference was significant, however, the difference was not significant between the DDL and the dictionary treatments.

4.15.6   Residual learning of receptive knowledge of collocations

Looking at the sixth research question (What type of instructed input, concordance-based or dictionary-based, if either, promotes learners' residual learning of receptive knowledge of form and meaning of collocations? And which one is more effective?), a one way between groups GZLM analysis was performed on the receptive long-term delayed test scores between all the treatments (using these as a measure of residual learning in the absence of pretest scores). The result was highly significant (Wald Chi-Square= 141.247, p < .001). Therefore, to find out whether the experimental treatments differ significantly in their impact, multiple GZLM comparisons with Bonferroni adjustment for multiple comparisons were run on the long-term delayed test scores between the three treatments. There was a statistically significant difference between the control

experimental condition and the DDL treatment, with the DDL clearly scoring significantly higher (Wald Chi-Square = 45.858, $p < .001$). The second main effect was run between the control experimental condition and the dictionary treatment, and a statistically significant difference was also found. The dictionary treatment had significantly higher test scores (Wald Chi-Square = 89.676, $p < .001$). The final comparison was conducted between the two experimental treatments, DDL and dictionary, and indeed the DDL instructional treatment had significantly higher scores than the dictionary instructional treatment (Wald Chi-Square = 8.538, $p < .01$).

These results, parallel with those for RQ3, demonstrate that when examining the effects of the three types of treatments over an extended period of time on the receptive knowledge of the form and meaning of collocations, there are important differences. As might be expected, there was a statistically significant difference between the control experimental condition and the two experimental treatments, DDL and dictionary, both of which promote residual learning of receptive knowledge of collocations. The most interesting finding is the statistically significant difference that was found between the DDL and the dictionary instructional treatments. This result mirrors the results I found for RQ3 that show that the DDL treatment emerges as more effective and significantly outperforms the other two treatments when the examined effect is residual learning of the productive knowledge of form and meaning of collocations (i.e. retention of the gained knowledge over a longer period of time).

4.16 Discussion

Learners' poor performance in the pretest reflects their struggle with collocations, the class of the target collocations in the current study, in particular. In answer to the first research question, the results indicate that both DDL and dictionary treatments contributed to initial learning of productive knowledge of form and meaning of collocation. Each one of the instructional conditions contributed to significant gains in productive knowledge of collocations. No learning gains were seen for the control experimental condition, meaning that the gains seen under experimental treatments cannot be due to a test effect alone. These findings indicate that after receiving explicit collocation instruction, students' collocation knowledge was significantly enhanced in light of their

progress evidenced in the short-term delayed posttest. These findings are consistent with those of T. Chan and Liou (2005); Sun and Wang (2003): explicit collocation instruction was effective in promoting EFL learners' collocation knowledge. Although, comparing the improvement in the dictionary treatment with the DDL treatment, the difference was not significant (p = .261), a result that requires further examination.

In answer to the second research question, the results of learners' retention of productive knowledge of form and meaning of collocation indicated that the difference between the results of the two instructional conditions: the DDL and dictionary, was not significant (p= .321) for retention. Nonetheless, the comparison between the DDL treatment and the control experimental condition was not significant, while it was significant between the dictionary treatment and the control experimental condition. Besides, when comparing the changes between successive tests in each treatment, the difference between the short and long term delayed tests was not significant in the DDL treatment (p= .249), but was significant in the dictionary treatment (p <. 001). The dictionary treatment is weaker at promoting retention than the DDL treatment as learners seem to lose more of their gained knowledge, but the difference is not significant.

A similar finding to my own here is that by Boulton (2010a), who also included a comparison between DDL and dictionary treatments. In his study a non-significant difference was found between the two treatments. Nevertheless, as in the current study the p value was close to significant (p=. 15). The posttest in Boulton's study was administered after three weeks to evaluate medium-term recall.

The first issue that needs to be pointed out here is that it might be overly optimistic to expect experiments of similar types to my own to lead immediately to a significantly better progress than traditional treatments. There might be several factors that play a role in this (and which add force to my argument). One of these factors is that participants had not had any previous experience in using the DDL materials; though they were trained and taught techniques for working on concordance lines and for retrieving information from them, this method is still an innovative approach that students had never encountered before. Nonetheless, it must be pointed out here that although it was a new approach for the students, this was likely compensated by administration of simple previously prepared printed worksheets focusing on the target collocations for the students to explore quickly and efficiently. Frankenberg-Garcia (2005) explained nicely a similar event in

her study of using corpora and dictionaries in translation tasks:

> The students in the present study were no better at using dictionaries, even though they had been using them all their lives, than at using corpora, search engines and comparable texts for language research . . . These findings suggest that the amount of training needed to use unmediated resources does not seem to be any greater than the amount of training needed to use dictionaries and other resources mediated by lexicographers and terminologists (p. 352).

Another possible factor in accounting for the insignificant difference in the results between the two experimental treatments might be the nature of the DDL approach that involves exposure to a vast amount of data which could result in wider incidental learning rather than the target items. Moreover, the concordance lines were not in order in the collocation worksheets—an element that could lead to wider "incidental" learning than the target items which are the focus of the study (Boulton, 2010a). A similar finding was reported by Allan (2006) in her study where significant improvement was found in the experimental DDL group for both target and non target items:

> The fact that this was true both for words explored through concordances and those not included on the concordance tasks may be seen as an indication that the benefits of the approach extended beyond reflection on individual word learning to strategy use (p. 44).

Learners' different reactions to the DDL approach represent another crucial point in explaining the results of the initial learning and retention of productive and receptive knowledge of form and meaning of collocations. Below in section 4.17 and 4.18, I look more closely at learners' differing reactions and attitudes and find different students do indeed exhibit very different reactions, from the negative to the positive, to both experimental treatments, which appears likely to have impacted upon their performance.

Learners' different learning styles and preferences is also an area that merits further discussion and research. Boulton (2010a) summarized this major question as several important sub-questions:

> First, what type of learner takes to DDL most readily, and is it possible to provide some kind of profile? Second, is it possible to increase the benefits for those who initially find little gain, and if so, how—what kind of training or alternative materials or introduction might be useful? Third, if DDL is found to be simply unsuitable for some types of learners, it leaves open the possibility of having different parts of a class doing different things, with the DDL element based on individual discovery and small group work rather than whole-class teaching (p. 555).

In answer to the third research question, the results indicate a significant difference between the DDL treatment and the dictionary treatment at promoting residual learning of the productive

knowledge of the form and the meaning of collocations. A similar empirical finding is given in Cobb (1999), where concordances and dictionary treatments both had brought short-term knowledge gain, but only the concordance group was able to retain their knowledge and even increase it with time. T. Chan and Liou (2005) provide further support in their study, which was also on verb-noun collocations taught by two methods: a web-based unit and a web-based Chinese-English bilingual concordancer. In their study, T. Chan and Liou talked about retention and residuals effects as follows:

> [T]he residual effects were significantly better than those taught without the use of a concordancer ($p = .004 < .05$). It is likely that the concordancing effects take a longer time for learners to assimilate and demonstrate in their performance of collocation knowledge; thus, its instant effects were not shown in the immediate post-test but in the delayed post-test (p. 241)

Many previous studies did not include a long-term delayed posttest and their retention and residual effects are thus unknown. In this study, it seems that although the mean score in the DDL and the dictionary treatment decreased between the short-term delayed test and the long-term delayed test, the residual traces of collocation instruction remained since students' performance in the long-term delayed test was still superior in comparison with their knowledge in the productive pretest. That is, lack of instruction during the time interval may cause losing the knowledge gained after the treatments, however, some amount of the knowledge was sustained as evidenced by the better results obtained in the long-term test in comparison to baseline knowledge at the entry level. Furthermore, when comparing the changes between tests in each treatment, the difference between the productive pretest and the long term delayed test was significant in both the DDL and the dictionary treatments, $p < .001$.

In answer to the fourth research question, the results were parallel to the findings in the first research question and they indicate that both DDL and dictionary treatments contributed to initial learning of receptive knowledge of form and meaning of collocations. Comparing the improvement in the dictionary treatment with the DDL treatment in the short-term delayed test for promoting initial learning of the receptive knowledge of the meaning and the form of collocation revealed a non significant difference ($p = .495$), a result that requires further examination.

In answer to the fifth research question, the results of learners' retention of receptive knowledge of the meaning and the form of collocation in the current study indicated that the difference between

the two instructional conditions was not significant (p= .264). Along the same lines of retention of the productive knowledge of the meaning and the form of collocations, the DDL instructional condition was not significantly better than the dictionary instructional condition, nevertheless, the comparison between the DDL treatment and the control experimental condition was not significant, while it was significant between the dictionary treatment and the control experimental condition. Besides, when comparing the changes between tests in each treatment, the difference between the short term delayed test and the long term delayed test was not significant in the DDL treatment, p=. 068, and significant in the dictionary treatment, p <. 001. With the dictionary treatment learners seem to have lost more of their gained knowledge, but the difference is not significant.

In answer to the sixth research question, the results indicate a significant difference between the DDL treatment and the dictionary treatment at promoting residual learning of the receptive knowledge of form and meaning of collocation. In this study, it seems that although the mean score in the DDL and the dictionary treatment decreased between the short-term delayed test and the long-term delayed test, the residual effects of collocation instruction in the DDL treatment were sustained. Put another way, lack of instructed input during the time lapse may cause learners to forget but larger amounts of the gained knowledge in the DDL condition were retained in comparison to the dictionary condition.

The fact that the results are consistent on productive and receptive knowledge of form and meaning of collocations suggests that the results are likely to be valid. However, the findings merit further research. The results of the receptive test should be interpreted with caution because receptive knowledge of the form and meaning of collocations was not pretested. Two pretests were not administered in order not to alert participants to the purpose of the study. In addition, researchers who have carried out studies on collocation learning claimed that seeing the form of the collocation in a test administered before the productive test might help learners recall the form of the collocations during productive tests of form and meaning (Webb & Kagimoto, 2009, 2011; Webb et al., 2013). Nevertheless, in the current study, the results of the receptive test support the findings of the productive test.

Explicit collocation instruction in the current study as represented by the DDL method and the dictionary method was found to differently affect students' performance on the posttests. The DDL worksheets was only significantly more effective than the dictionary worksheets in residual

learning of productive and receptive knowledge of form and meaning of collocation. This might be attributed to the fact that more cognitive efforts were exerted by students in order to locate and understand verb collocates in concordance lines and this resulted in a deeper level of processing and consequently enhanced learning and retention. This is a possible interpretation; however, future research is called for to address this issue. Interestingly, some students touch upon this aspect in their comments on the activities as reported in sections 4.17.1 and 4.18.

Nevertheless, I need to clarify that the dictionary worksheets were also effective at promoting learners' initial learning ($p < .001$), and residual learning ($p < .001$) of productive knowledge of form and meaning of collocation as the results of the changes between the pretest and the short-term and long-term delayed posttests revealed. The first activity in both types of worksheets, DDL and dictionary, was based on translation and contrastive analysis. Contrastive analysis may have facilitated learning and retention of the non-congruent collocations. Translating sentences from Arabic into English using the DDL or the dictionary input seems to have assisted noticing, and consciousness raising of the non-identical semantic nature of the target verb collocates in Arabic and English. The L1-based approach was strongly recommended in Nesselhauf (2003), and later supported empirically by T. Chan and Liou (2005) and Laufer and Girsai (2008). Reference to L1 was particularly important in the current study because of the non-congruency nature of the target collocations, and the fact that they are often negatively affected by learners' L1.

It is interesting that learners achieved significant residual learning results on productive and receptive knowledge of form and meaning of collocation following the DDL treatment in comparison with the dictionary treatment. Learners were able to achieve these high scores when tested on the most difficult aspects of form-meaning knowledge: productive knowledge (form recall) and receptive knowledge (meaning recall) of multiword unit form and meaning. Receptive knowledge of form (form recognition) and meaning (meaning recognition) were not tested. Self-evaluation tests that ask whether the student is familiar with the multiword unit or not were not utilized either. Since the acquisition of word knowledge is incremental and the more difficult aspects, such as productive knowledge of form and meaning (active recall), are learnt last, I believe we should be confident that since learners' productive knowledge of form and meaning and receptive knowledge of form and meaning were improved by DDL, the easier aspects of collocation knowledge were acquired as a result of the DDL worksheets as well (Laufer & Girsai, 2008). I would suggest from my own experience as a FL teacher and a FL learner that all the other

aspects of collocation knowledge could be enhanced by DDL worksheets.

The effectiveness of DDL worksheets in the current study can be explained by the hypotheses of 'noticing' (Robinson, 1995; Schmidt, 1990, 1995, 2001, 2012), 'task-induced involvement load' (Hulstijn & Laufer, 2001; Laufer, 2012; Laufer & Hulstijn, 2001), 'pushed output' (Swain, 1988; Swain & Lapkin, 1995), and the framework of contrastive analysis (CA). The 'pushed output' hypothesis and the CA framework are related to the translation activity, which was identical in both types of worksheets. The translation activity aim was to attract learners' attention to the collocation form and create a need for discovering the right form through translation from L1 to L2. As James (2005) argues, the role of CA is to highlight specific features in FL input and in so doing may assist L2 learning by raising learners' cross-language awareness:

> CA can now come out of the closet and cross-language Awareness can be practised in classrooms as a legitimate activity, for it will at the very least sensitise learners to the decisions to be made in their FL production, advising them when they can and can not resort with profit to the MT [mother tongue] (James, 2005, p. 11)

Laufer and Girsai (2008, p. 710) pointed out that "translation into L2 is a perfect 'pushed output' task that requires stretching one's linguistic resources". To produce accurate translation, L2 learners cannot avoid difficult vocabulary items because they are set by the provided L1 text. 'Pushed output' may have increased the rate of success in learning in general, and may have enhanced recall of productive and receptive knowledge of form and meaning of collocations. Productive knowledge of form and meaning signifies a better memory trace than receptive knowledge of form and meaning, and is harder to achieve. Indeed, productive knowledge of form and meaning of collocations is more difficult than any other vocabulary task that demands recall of collocation meaning, or recognition of collocation form or meaning (Laufer, Elder, Hill, & Congdon, 2004; Laufer & Goldstein, 2004).

In terms of the involvement load hypothesis, the DDL worksheets had a higher involvement load than the dictionary worksheets. Let us look at the involvement load in each one of the instructional conditions. In both treatments, the translation activity required learners to translate sentences from L1 to L2. The 'need' element was present as there was no possible way to avoid focusing on the target collocations. The need to use a word (a verb collocate of a noun) and/or know its form or meaning is induced by the teacher not the learners; hence the 'need' element is moderate. Translation into L2 required searching for form. The second activity in the DDL worksheets was

searching the concordance lines to learn the verb collocates of the node noun. The search element was present in the DDL worksheets as learners attempt to find the form and/or the meaning of a word on their own, i.e. inductively. Thus, the search aspect is strong in the DDL condition and moderate in the dictionary worksheets, being weaker in the dictionary condition since decoding information would presumably be easier than in the DDL condition, since the collocation meaning is provided. The second cognitive element, 'evaluation,' is moderate in both DDL and dictionary conditions as learners evaluate the information they gained from either the concordance lines or the dictionary entry section on the worksheets to translate the sentences. Learners are asked to evaluate and judge their previous answers to the first activity and whether they would change them (Batia Laufer, personal communication), (Jan Hulstijn, personal communication).

The different involvement loads of the two experimental treatments are influential in the results. The participants in the dictionary condition learnt collocations, in particular during the initial learning phase. However, the DDL condition yielded the highest scores in all three learning stages: initial learning, retention and residual learning and was significantly better at fostering residual learning than the dictionary treatment. It seems that participants' engagement in a cognitively demanding task during the search phase in the DDL treatment led to better learning and remembering of the collocations. The deep involvement under the DDL instructional condition resulted in longer lasting memory traces of the collocation knowledge. Correct production of productive knowledge of form and meaning of collocation can be considered a good achievement since this aspect of collocation knowledge is difficult and problematic, even to advanced learners, and more so in non-congruent collocations.

No meaning was provided in the concordance lines section of the worksheet and learners needed to search, read, and discover on their own. The third activity in the worksheet refers learners back to the first activity so that a final version of translation must be selected after an evaluation of several options. Furthermore, in this final translation activity the entire L2 context was produced by the L2 learner. Consequently, the component of 'evaluation' was moderate in the last activity.

In this section I have discussed the test results with reference to the Involvement Load Hypothesis, and other relevant concepts in SLA and FL learning and teaching literature. In the next sections, the results of the questionnaire and students' and teachers' interviews will be presented and discussed.

4.17 Students' views on collocations worksheets: questionnaire data

The findings of the evaluation questionnaire were quite encouraging and showed that students held positive attitudes towards learning English verb-noun collocations via the DDL instructional method. Positive views were also held towards the dictionary-based instructional condition. Small differences were noticed in their evaluation between the two experimental treatments in some aspects.

A principal component analysis (PCA) was carried out on the 27 closed items with oblique rotation (direct oblimin). The Kaiser-Meyer-Olkin measure verified the sampling adequacy for the analysis (KMO =. 76, 'good', according to Field (2009); Hutcheson and Sofroniou (1999); Kaiser (1974), and all KMO values for individual items were > .63, which is above the acceptable limit of .5 (Field, 2009). Bartlett's test of sphericity (x^2 (351) = 1522.196, p. < .001), showed that correlations between items were sufficiently large for PCA. An initial analysis was conducted to attain eigenvalues for each component in the data. Six components had eigenvalues over Kaiser's criterion of 1 and in combination explained 56.23% of the variance. The scree plot showed inflexions that would justify retaining all the six components. Given the sample size, the convergence of the scree plot and Kaiser's criterion on six components, this is the number of components that were retained in the final analysis. Table 4:13 shows the pattern matrix. The items that cluster on the same components suggest that component 1 represents whether or not students would like to use dictionary worksheets in the future to learn collocations, component 2 is about difficulty of working on the DDL worksheets, component 3 deals with whether or not students would like to use DDL worksheets in the future to learn collocations, component 4 relates to the difficulty of working on the dictionary worksheets, component 5, the usefulness of the dictionary worksheets for learning collocations, and component 6, the usefulness of DDL worksheets for learning collocations. The questionnaire internal reliability was measured via Cronbach's Alpha and it was α= .84. The percentage of variance that each factor explained and the eigenvalue are reported in Appendix 4M. The scree plot is shown in Appendix 4N, and factor correlation matrix table is presented in Appendix 4O.

The analysis of the closed items in the collocations questionnaire will include presenting

participants' responses as numbers and percentages for each item on all of the five points of the Likert scale. The analysis will also include providing descriptive statistics of the participants' responses. Inferential statistics will also be performed on some of the questionnaire items, which target critical issues in participants' attitude, and evaluation of the two instructional conditions.

The closed items in the questionnaire can be grouped under six main research questions. The raw number and percentage, in parentheses, of participants' responses are shown in Tables 4:14, 4:15 and 4:16. Participants' responses to the eight questionnaire items that were designed to answer the following research question: 'How helpful do learners find concordance worksheets for learning collocations?' and their responses to the items related to the research question that was asking the same question regarding the dictionary treatment: 'How helpful do learners find dictionary worksheets for learning collocations?' are displayed in Table 4:14. The third research question targets the difficulty aspect of the worksheets 'How difficult do students find working with concordance examples in collocations worksheets?', and the fourth research question looks at this aspect on the dictionary treatment 'How difficult do students find working with dictionary information in collocations worksheets?' and their results are presented in table 4:15. The fifth and the sixth research questions shed light on the participants' liking or disliking of the two types of worksheets 'Would they like to use concordance worksheets in the future to learn collocations?' and 'Would they like to use dictionary worksheets in the future to learn collocations?'. The results addressing these two research questions are shown in table 4:16.

Pattern Matrix[a]

	Factor					
	1	2	3	4	5	6
Q18	.964					
Q22	.707					
Q19	.636					
Q23	.550					
Q10		.871				
Q11		.770				
Q12		.689				
Q1		.687				
Q14		.503				
Q13		.478				
Q5			.820			
Q9			.738			
Q8			.672			
Q4			.596			
Q24				.761		
Q25				.722		
Q27				.641		
Q26				.631		
Q15				.474		
Q21					.886	
Q16					.654	
Q20	.320				.486	
Q17					.391	
Q6						-.841
Q2						-.807
Q7						-.637
Q3						-.394

Table 4:13 Pattern matrix of the questionnaire in the collocations study

Extraction Method: Principal Axis Factoring.

Rotation Method: Oblimin with Kaiser Normalization.

a. Rotation converged in 13 iterations.

The descriptive statistics (mean, mode, standard deviation) of the students' responses for all the questionnaire items are presented in a parallel format in Appendix 4P. Inferential statistical tests on the questionnaire results were analyzed using a non-parametric test (Wilcoxon test) because the assumptions of the appropriate parametric test (paired samples t-test) were not met by the

questionnaire data set in the current study. The assumption of normality of distribution for questionnaire items scale scores for both experimental groups was violated as assessed by the Shapiro-Wilk's test and the Kolmogorov–Smirnov test ($p > .05$), and by visual inspection of their histograms. Inferential statistics results are presented in Appendix 4Q.

As can be seen in table 4:14, the majority of respondents 90.3% agreed that DDL worksheets were useful for learning collocation, and 80.5% thought the same about the dictionary worksheets (see items 2 and 16). Although using the DDL approach for teaching collocations is a new venture in this context, students felt strongly that this approach improved their knowledge of collocations. This supports the finding in Geluso and Yamaguchi (2014) where 97% of respondents agreed the DDL approach improved their knowledge of collocations. In line with this finding, 75.2% of respondents believed in the efficacy of the DDL worksheets in helping them avoid making collocational errors, while a lower number of respondents 62.85% believed the same for the dictionary worksheets (see items 3 and 17). Another encouraging finding is that 89.4% of respondents thought the DDL worksheets helped them learn the meaning of collocations, and 88.5% thought the same about the dictionary worksheets (see items 6 and 20). This lends support to Geluso and Yamaguchi (2014) finding that 93% of respondents thought the DDL approach helped them learn new vocabulary. 84.1% of respondents also believed that the DDL worksheets helped them learn the usage of collocations, while 80.6% believed the same for the dictionary worksheets (see items 7 and 21). This provides support for Frankenberg-Garcia (2012) finding that concordances are useful for learning the usage of vocabulary. It also supports the same claim by Geluso and Yamaguchi (2014).

1. How helpful do learners find concordance worksheets for learning collocations?					
2. How helpful do learners find dictionary worksheets for learning collocations?					
Items	Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree
2.Using the concordance worksheets to learn collocations was useful.	75 (66.4%)	27 (23.9%)	5 (4.4%)	3 (2.7%)	3 (2.7%)
16.Using the dictionary worksheets to learn collocations was useful.	53 (46.9%)	38 (33.6%)	18 (15.9%)	4 (3.5%)	-
3.After learning using these concordance worksheets, I think I will avoid making collocation errors in the future	26 (23%)	59 (52.2%)	18 (15.9%)	7 (6.2%)	3 (2.7%)
17.After learning with the dictionary worksheets, I think I will avoid making collocation errors in the future.	21 (18.65%)	50 (44.2%)	33 (29.2%)	9 (8%)	-
6.Using the concordance worksheets helps me in learning the meanings of collocations.	66 (58.4%)	35 (31%)	7 (6.2%)	5 (4.4%)	-
20.Using the dictionary worksheets helps me to learn the meanings of collocations.	53 (46.9%)	47 (41.6%)	11 (9.7%)	2 (1.8%)	-
7.Using the concordance worksheets helps me to learn which verb collocate to use for expressing certain meanings	53 (46.9%)	42 (37.2%)	12 (10.6%)	6 (5.3%)	-
21.Using the dictionary worksheets helps me to learn which verb collocate to use for expressing certain meanings	36 (31.9%)	55 (48.7%)	16 (14.2%)	6 (5.3%)	-

Table 4:14 How helpful do learners find concordance/dictionary worksheets for learning collocations?

Items	Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree
3. How difficult do students find working with concordance examples in collocation worksheets?					
4. How difficult do students find working with dictionary information in collocation worksheets?					
1. Using the concordance worksheets to learn collocations was easy.	23 (20.4%)	47 (41.6%)	14 (12.4%)	25 (22.1%)	4 (3.5%)
15. Using the dictionary worksheets to learn collocations was easy.	41 (36.3%)	39 (34.5%)	18 (15.9%)	14 (12.4%)	1 (.9%)
10. It was difficult to adapt to reading the concordance examples.	12 (10.6%)	46 (40.7%)	32 (28.3%)	19 (16.8%)	4 (3.5%)
24. It was difficult to adapt to reading the dictionary information.	11 (9.7%)	40 (35.4%)	27 (23.9%)	28 (24.8%)	7 (6.2%)
11. It was difficult to understand the concordance examples due to cut-off sentences (where I couldn't see the beginning and/or the end of the sentence).	6 (5.3%)	26 (23%)	32 (28.3%)	42 (37.2%)	7 (6.2%)
12. It was difficult working on the concordance examples due to the time limit.	11 (9.7%)	50 (44.2%)	21 (18.6%)	26 (23%)	5 (4.4%)
25. It was difficult working on the dictionary information due to the time limit.	12 (10.6%)	39 (34.5%)	24 (21.2%)	32 (28.3%)	6 (5.3%)
13. Working on the concordance examples required a lot of effort.	19 (16.8%)	36 (31.9%)	30 (26.5%)	22 (19.5%)	6 (5.3%)
26. Working on the dictionary information required a lot of effort.	5 (4.4%)	45 (39.8%)	27 (23.9%)	30 (26.5%)	6 (5.3%)
14. It was difficult to understand the concordance examples due to unfamiliar vocabulary	8 (7.1%)	47 (41.6%)	32 (28.3%)	20 (17.7%)	6 (5.3%)
27. It was difficult to understand the dictionary information due to unfamiliar vocabulary.	5 (4.4%)	32 (28.3%)	46 (40.7%)	26 (23%)	4 (3.5%)

Table 4:15 How difficult do students find working with concordance examples/dictionary information in collocation worksheets?

Table 4:15 presents the items related to the difficulty of working on DDL and dictionary worksheets. More than half of the respondents thought that using the DDL worksheets was easy 62%. When compared to the admittedly somewhat higher figure of 70.8% of respondents who thought the same about the dictionary worksheets (see items 1 and 15), this finding may lend some support to Frankenberg-Garcia (2005) conclusion that learners are no better researchers with dictionaries than they are with corpora.

The next two items, items 10 and 24, asked learners about the difficulty of adapting both to working with concordance examples and dictionary information. Nearly half of the respondents 51.3% believed it was difficult to adapt to concordance examples and slightly less than half 45.1% believed the same about the dictionary entries. This finding is very close to the findings of Geluso and Yamaguchi (2014) where 59% of respondents thought that learning to use Corpus of Contemporary American English (COCA) was difficult, and 48% thought that it was difficult to use concordancing. We need to bear in mind though that Geluso and Yamaguchi (2014) study focused on the hard version of DDL. When respondents were asked in item 11 if it was difficult to understand the concordance examples due to their cut off nature, 28.3% agreed it was difficult, an equal number of respondents remained undecided, and 43.4% disagreed. In Geluso and Yamaguchi (2014), more students 83% thought that the cut off sentences were difficult. In items 12 and 25 respondents were asked if it was difficult working on DDL worksheets within the time limit and 53.9% agreed it was difficult, while 45.1% agreed with respect to the dictionary worksheets. Items 13 and 26 asked respondents about the effort needed to work on both types of worksheets. 48.7% of respondents believed the DDL worksheets required a lot of effort, while a slightly lower percentage 44.2% believed that the dictionary worksheets required a lot of effort. Respondents were asked if it was difficult to work on the DDL worksheets due to unfamiliar vocabulary. 48.7% of respondents agreed, and 32.7% agreed regarding the dictionary worksheets. A considerably larger percentage of respondents 76% in Geluso and Yamaguchi (2014) study thought that it was difficult to use the corpus because of unfamiliar vocabulary. This could be because participants on their study were working on the COCA corpus hands-on, while in the current study the concordance lines were prepared by me and selected as to not include unfamiliar vocabulary as much as possible.

5. Would they like to use concordance worksheets in the future to learn collocations?					
6. Would they like to use dictionary worksheets in the future to learn collocations?					
Items	Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree
4. I would like to do other activities on collocations using concordance worksheets.	47 (41.6%)	44 (38.9%)	14 (12.4%)	6 (5.3%)	2 (1.8%)
18. I would like to do other activities on collocations using the dictionary worksheets.	50 (44.2%)	32 (28.3%)	17 (15%)	13 (11.5%)	1 (.9%)
5.Using the concordance worksheets to learn collocations was interesting.	47 (41.6%)	42 (37.2%)	16 (14.2%)	7 (6.2%)	1 (.9%)
19. Using the dictionary worksheets to learn collocations was interesting.	45 (39.8%)	38 (33.6%)	19 (16.8%)	9 (8%)	2 (1.8%)
8. I would recommend the concordance worksheets for learning collocations to other students.	57 (50.4%)	40 (35.4%)	12 (10.6%)	3 (2.7%)	1 (.9%)
22. I would recommend the dictionary worksheets for learning collocations to other students.	61 (54%)	28 (24.8%)	21 (18.6%)	2 (1.8%)	1 (.9%)
9. As I have worked more on the concordance worksheets, I have come to like them more.	32 (28.3%)	52 (46%)	18 (15.9%)	8 (7.1%)	3 (2.7%)
23. As I have worked more on the dictionary worksheets, I have come to like them more.	36 (31.9%)	36 (31.9%)	19 (16.8%)	16 (14.2%)	6 (5.3%)

Table 4:16 Would students like to use concordance/dictionary worksheets in the future to learn collocations?

Table 4:16 includes items about liking or disliking the two types of worksheets. Items 4 and 18 ask whether students would like to do other activities on collocations using DDL worksheets, and 80.5% agreed they would like to, while 72.5% agreed they would like to use dictionary worksheets. 78.8% thought using the DDL worksheets to learn collocations was interesting, and 73.4% thought using the dictionary worksheets was interesting (see items 5 and 19). When asked whether they would recommend the DDL worksheets for learning collocations to other learners, 85.8% agreed,

and a slightly smaller percentage of respondents 78.8% agreed they would recommend the dictionary worksheets (see items 8 and 22). Items 9 and 23 ask whether learners come to like the worksheets more the more they worked on them, 74.3% agreed with respect to the DDL worksheets, and 63.8% agreed regarding the dictionary worksheets.

With respect to inferential statistics, presented in Appendix 4Q, the difference was significant only in two cases. The difference was significant between items 1 and 15 on the easiness of using the two types of worksheets, with the dictionary worksheets being rated significantly easier than the DDL worksheets ($p < .01$). The second case was between items 2 and 16 on the usefulness of the two types of worksheets. The difference was significant between the two types of worksheets with DDL being significantly more useful for learning collocations ($p <. 05$). Participants in Boulton (2010a) also rated DDL data as being significantly more useful than dictionary information.

4.17.1   Open questions

There were six open questions in the questionnaire, which aimed to get more details from the respondents regarding several key aspects of the worksheets. Tables 4:17-4:22 present responses in percentages and in order to the open questions in the collocation questionnaire: 1. What type of worksheets was more useful for learning collocations?; 2. What type of worksheets did you prefer for learning collocations?; 3. What are the strengths and weaknesses of each type?; 4./5. How can the concordance worksheets and the dictionary worksheets for teaching collocations be improved in the future?; and 6. What did you like and dislike about the translation activity?

DDL more useful 43%	Dictionary more useful 31%	Both equally useful 26%	Neither useful 0%
▪ The meaning can be easily understood from the many provided contexts (23%)	▪ As a meaning is provided for every collocation (18%)	▪ Much information is learned from both, and they improve my language (24%)	
▪ Many exemplary usages of the collocations are provided, in assorted contexts (19%)	▪ Accurate definitions of the meaning of collocations are provided (16%)	▪ In DDL I learn more words and collocations, and the meaning are more clearly defined when using the dictionary (22%)	
▪ It helps me discover my errors myself so that I don't forget them (15%)	▪ Clear (11%)		
▪ DDL is based on many examples and sentences, the best way to explain the meaning of a specific lexical item to the learner (13%)	▪ Easy (9%)	▪ Both are easy and useful pedagogically (17%)	
	▪ More confidence in the correct answers (9%)	▪ No answer (37%)	
▪ A better knowledge of the exact meaning of this collocation is developed (11%)	▪ Concise/short (6%)		
▪ Clear (7%)	▪ Familiar (6%)		
▪ Easy (4%)	▪ Simple (4%)		
▪ No answer (8%)	▪ Direct (4%)		
	▪ Provides more information about collocations (3%)		
	▪ Includes complete sentences (2%)		
	▪ Can be used by students of any level (2%)		
	▪ No answer (10%)		

Table 4:17 What type of worksheets was more useful for learning collocations?

Prefer DDL 37%	Prefer Dictionary 30%	Liked both 32%	Didn't like either 1%
▪ New, useful method (16%) ▪ As there are more examples, it is easy and quick to understand (14%) ▪ More interesting/exciting (13%) ▪ Have more information about new verbs that would help me to use them in the future (12%) ▪ Improve many skills for learners (10%) ▪ Because the dictionary is tedious and limited (10%) ▪ More beneficial (7%) ▪ I feel I understand the DDL sentences better than the dictionary ones (6%) ▪ Because it teach us how to understand sentences/contexts (4%) ▪ Clear (2%) ▪ No answer (6%)	▪ Explains the collocation in an easy and clear way (23%) ▪ Saves time (14%) ▪ Because I'm more confident of the correct answer (13%) ▪ Concise/short (10%) ▪ Due to the familiarity of using dictionaries, which are common across students (9%) ▪ Have complete sentences (8%) ▪ Familiar layout/sentences (6%) ▪ Simple (2%) ▪ Direct (2%) ▪ Interesting (1%) ▪ No answer (12%)	▪ Prefer to use both together as it is beneficial to get exposure to many examples with the definition of the collocation (34%) ▪ Each is applicable to different contexts (16%) ▪ As each has its own benefits/strengths. (15%) ▪ Both are useful because both allowed us to learn by ourselves (12%) ▪ Because I learnt a lot of information from both of them (5%) ▪ Both are interesting, not tedious like our regular lectures (3%) ▪ No answer (15%)	

Table 4:18 What type of worksheets did you prefer for learning collocations?

DDL strengths

- Easy to use (many examples make the collocations easier) (12%)
- A variety of examples from different contexts (11%)
- Clear (due to the exposure to many sentences of the same collocation) (11%)
- Exposure to many contexts helps in learning the application of the collocation (10%)
- I learn new vocabulary along the way (9%)
- It teaches me new syntax (7%)
- Self-reliance is required to discover the meaning (7%)
- Information learned from sentences is easier to remember later (6%)
- An effort is required to be involved in learning, allowing us to learn better (6%)
- Interesting/exciting (5%)
- Authentic/real examples (4%)
- It consolidates knowledge already gained (4%)
- I learn new vocabulary in a different but very interesting way (2%)
- DDL examples improve language and the way we speak and write in English (2%)
- More information is learned (1%)
- Increase our understanding to the nuances in the same meaning (1%)
- It generally improves language more than the dictionary does (1%)
- Quick (1%)

Dictionary strengths

- Easy (17%)
- Clear, in general (13%)
- A meaning is provided for every collocation (10%)
- Clear definitions (9%)
- Quick (9%)
- Concise (8%)
- Accurate (8%)
- Saves time (7%)
- Simple usage (6%)
- Simple sentences (5%)
- Direct way of delivering the information (4%)
- No answer (4%)

Table 4:19 what are the strengths of each type?

DDL weaknesses

- It doesn't have any weak points (15%)
- Incomplete sentences which can cause comprehension difficulties (11%)
- Too many sentences (10%)
- Not very clear (9%)
- Confusing sometimes, as you feel sceptical about the right answer due to multiple possible choices (9%)
- No explanation of the meaning (7%)
- Requires effort (6%)
- More than one meaning can be correct and fit the context (5%)
- If I don't understand a word I get frustrated (5%)
- You can rely only on the examples as there are no explanations (4%)
- Not organised (4%)
- Requires more time (4%)
- Long (3%)
- More difficult to use than the dictionary (2%)
- Difficult vocabulary (2%)
- Tedious, to some extent (1%)
- Requires a strong background in English (1%)
- No answer (2%)

Dictionary weaknesses

- Tedious (21%)
- Insufficient examples (17%)
- Learning is quicker than with DDL but information is difficult to retain (14%)
- Once you don't understand it, that's it! No further examples or help are available (11%)
- Answers are provided; we don't have to do anything (11%)
- As we don't see many examples, the information isn't retained (10%)
- Misleading examples (8%)
- Sometimes difficult to understand (5%)
- No answer (3%)

Table 4:20 What are the weaknesses of each type?

Improving DDL

- Group examples of the same verb together (22%)
- No improvement required (19%)
- Clearer (larger) font/typing (12%)
- Combining the DDL with the dictionary would be beneficial (11%)
- Information should be collected into a book (10%)
- Access from computers, tablets and mobile applications (7%)
- Provide the meaning of the collocation (6%)
- Have fewer sentences (4%)
- Include complete sentences (4%)
- No answer (5%)

Improving dictionary

- Provide more examples (37%)
- Include authentic examples (10%)
- Provide the dictionary on computers and mobile devices (8%)
- No answer (45%)

Table 4:21 How can the concordance and the dictionary worksheets for teaching collocations be improved in the future?

Liked about the translation activity

- Everything (26%)
- Beneficial (17%)
- Interesting, very exciting, filled us with enthusiasm (15%)
- We are provided with a chance to guess, think, and discover, something we rarely do otherwise (13%)
- The three examples are very helpful in distinguishing the meaning, usage and appropriate context of collocations (10%)
- Encourages active participation and learning, in contrast to the usual, tedious way of being 'fed' the information or memorising it during lectures (8%)
- It can improve the ability to use the language accurately in the future (5%)
- Good competition (2%)
- No answer (4%)

Disliked about the translation activity

- More time required (14%)
- Difficult vocabulary (6%)
- Nothing (53%)
- No answer (27%)

Table 4:22 What did you like and dislike about the translation activity?

4.18 Students' views on collocations worksheets: interview data

The interview results are presented and discussed with reference to the sections of the interview schedule, and accompanied by illustrative extracts from the transcripts.

(1) Section 1: how easy/difficult it was to use these worksheets

This section addresses the easiness/difficulty of both types of worksheets in relation to the cut-off sentences, time limit, effort required to find the information, unfamiliar vocabulary, and contexts of concordance examples.

As reported in the questionnaire results, several students experienced a few problems working on the concordance examples in general, especially at the beginning. However, working on the concordance worksheets seemed to run smoothly after the training session. The training session clearly played a role in familiarizing the students with the DDL worksheets and in helping them develop techniques for reading the concordance examples.

 "At the beginning, concordance worksheets were a strange new method. We haven't seen them before and it was something we didn't get used to but soon after that it was clear how we can work

on them and use them to learn collocations. The slight difficulty we face was just at the beginning. I was able to easily work on the concordance worksheets after the training session" P1

"Yes, the method was new, that's true. Strange at the beginning but I quickly learned how to use it and it is very useful." P2

With respect to the cut off examples in the DDL worksheets, students stated that although it was the first time they had been presented with this type of examples and although they seemed different from the format of examples they are accustomed to, they did not find them difficult. In fact some of them found them advantageous since they save time and their layout and the key word in context (KWIC) bold format made it easy to focus on the target vocabulary items.

"The cut off sentences in the concordance worksheets didn't bother me at all. I was able to read the relevant part of the line when I was looking for the two parts of the collocations. I just ignore the incomplete phrases and sentences and focus on my aim" P3

"Cut off sentences was not a problem for me, as long as I can pick up a meaning from the phrase. It is a phrase with a meaning. It doesn't affect me if I don't see the whole context." P2

Students did not report problems with the time allocated to the worksheets, yet a few of them pointed out that time given was appropriate, albeit tight, nevertheless.

"Yes time was enough. I was able to find the answers in the worksheets, but we needed to start reading as soon as you have given the permission. No time to be wasted." N2

Students did not find the DDL worksheets laborious, however a few admitted they required more effort than dictionary worksheets.

"Concordance worksheets don't require a lot of effort, but they definitely need more time than dictionary worksheets." P1

Students did not report vocabulary or the different and varied contexts of the DDL worksheets to be problematic.

"The vocabulary of the concordance examples was easy and clear. Only 10% approximately were unknown to me." P3

"Vocabulary was not a problem. I was able to understand all the sentences, but for very few sentences, yes, I do understand the meaning but I can't translate it word by word because I'm not 100% sure about the meaning of one or two words, for instance." P2

(2) Section 2: General preference of type of worksheets

The majority of students as shown by the questionnaire results preferred DDL worksheets, although the reverse was true in some cases. Interviewees were duly selected to be representative of the two views: those who liked the DDL worksheets and those who preferred the dictionary worksheets. Students who preferred the dictionary worksheets nonetheless stressed the effectiveness of using DDL worksheets for learning collocation usage and to widen their scope of knowledge, and so, called for combining the two methods. In sum, even those who did not favour the approach acknowledged the usefulness of the DDL worksheets, and their wish to learn by them as a second stage in addition to dictionary consultation. Although the selection of interviewees was purposive, the way students explained their preferences emphasizes the presence of different learning styles and their role in favouring one teaching approach more than another, and the impact of their motivations in preferring a certain approach over another.

"I like the concordance worksheets more than the dictionary ones because I don't want to learn these vocabulary items temporarily or just for the exams. I want to learn for life. I also prefer them because we lack practice and exposure to native speakers and authentic language and concordance examples can compensate for that. That's why I like to learn through them." P3

"I preferred the concordance examples because they include different and varied sentences and different tenses. I search for the vocabulary item and find it myself in the concordances and I learn better this way. With dictionary worksheets and similar resources, I learn directly and forget directly." P1

"I prefer the concordance worksheets. They are more interesting. They arouse my curiosity and attract my attention to search and guess the meaning and think about the general context. Concordances are challenging and fill me with enthusiasm." P2

"I preferred dictionary worksheets method because it saves time. It is faster. Although DDL method is the one which will clearly enrich my language. When I have time and I feel I'm in the mood I'll choose to learn by the concordance worksheets because it is better for improving my language" N3

" [referring to the DDL method] *I didn't like it. Why do I have to read millions of sentences to find the answer. I'm not interested. If there were like three sentences, then ok that's fine with me. I'm the type of people who like to get to the heart of the matter quickly… Dictionary method is concise and quick but it doesn't teach me about usage. I mean where can I use it. What are the common and appropriate contexts for this collocation in English and how should I use it. I think the best*

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approach is to combine them as one worksheet. The most effective way is to combine them together. Dictionary part provides the meaning and concordance part provides sentences on usage." N1

"I'd like to learn by concordance worksheets, but I would want them to be step number two with dictionary worksheets being step number one." N2

(3) Section 3: Usefulness

In general, students who thought the DDL worksheets were more useful than the dictionary ones attributed this to the nature of their examples. The authentic rich contexts and the self-study approach were the main pros.

DDL more useful

"Because we see the collocations in real rich contexts I learn how to use them in real life in speaking and writing" P1

"Because concordances have more condensed language, it is more useful for learning collocations. The language and wording are rich as is learning through them" P2

"I search, I think and I learn. I'm involved. I use my mind and my knowledge, and I rely on myself. Most of teaching approaches in the other classes don't let me work myself on anything. It is like you are a recording machine. Just sit and record." P3

"If someone will spoon-feed me the information, I'll soon forget them. The easy way will always make you forget the information" P1

Dictionary more useful

In contrast, students who considered the dictionary more useful mentioned mainly the characteristics of easiness, clearness, specificity, directness, quickness and the clear presentation of information.

"Vocabulary in dictionary worksheets is clearer and in general they are easier. Dictionary worksheets give me the meaning and an example and this confirm the information in my mind. But from a linguistic point of view, concordance method is better. They will improve your language definitely because we see many contexts and meet and learn new vocabulary along the way. It also teaches me how to say or write these sentences in English. So it improves my language tremendously." N2

"Dictionary information is direct and specific and helps me focus more on the collocations. I learn the information better when it is presented clearly for me" N2

"Dictionary worksheets are better for learning collocations because we know the meaning of the noun. We just need someone to tell us the right verb. So, a quick and a simple approach would be helpful." N3

Both useful

However, N1 below argues the best way forward would be to combine both approaches:

"I think the best approach is to combine them as one worksheet. The most effective way is to combine them together. Dictionary part provides the meaning and concordance part provides sentences on usage " N1

Useful for learning the meaning

For teaching the meaning of collocations, students who thought DDL was more effective talked mainly about the feature of the many varied contexts that help depict the meaning vividly. Others who believed the dictionary worksheets were more useful thought so because they can get the meaning quickly.

"Concordance method is more useful because it has many sentences. Each one has its own wording for the meaning of the vocab item. This helps you understand the meaning better." P3

"Dictionary worksheets as step number one so that I can get the meaning quickly then for more depth of knowledge I move to concordance worksheets as step number two." N2

Useful for learning the usage

All the interviewees argued that the DDL worksheets are more useful than the dictionary ones for learning the usage of collocations. The reason being the many authentic examples therein.

"Concordance worksheets are more useful because in real life we need to use the collocations in sentences like the ones in concordance worksheets." P2

DDL is more useful than being told the right answer by the teacher or vice versa

Interestingly, interviewees all agreed that the DDL approach is more beneficial than the traditional deductive approach by the teacher. Nearly all of them stated that the advantage of the DDL self-

study approach is them remembering what they learnt for longer spans of time. One interviewee, however, although agreeing that DDL is a better approach for learning, stressed that she still needs teacher confirmation of her findings. This statement can be seen as illustrative of the reluctance of some Saudi students to let go of their reliance on their teacher as the sole source of information.

"It is better if I find the information myself because in this way I'll never forget it." P2

"With no doubt when I search for the information myself and exert some effort in the process, it will remain in my memory. I personally believe and from my experience in learning English: anything I learn with effort, I'll remember it later. It will stick in my memory" P1

"I search but I should get the teacher confirmation after searching and guessing" N2

Dictionary is more useful than being told the right answer by the teacher or vice versa

Interviewees did not seem to think that there is a difference between getting information about collocations from their teacher and the dictionary worksheets method.

"No difference really. Our teacher would try to explain the meaning and after that provide an example. That's exactly the same as these dictionary worksheets" N1

(4) Section 4: strengths and weaknesses

Interviewees talked about several strengths of the DDL worksheets. They spoke of better recall of information they had deduced for themselves, valuable information on the usage of collocations, repetition, vivid examples, varied contexts, authentic English, and its rich and expressive style.

DDL strengths

Interestingly, learners seemed aware of the greater cognitive effort exerted when working on the DDL tasks and felt it led to better recall as we can see in the following extracts.

"When someone gives me the answer or teach me the right verb collocate of a noun, I'll realize it quickly at that moment, but I'll soon forget it." P3

"I remember better with concordance method because I think deeply about it. I spend more time reading and thinking. So, when I find the information, it stays in my memory. Anything learnt with effort is remembered better." P1

Learners' appreciation of the strength of concordance examples was apparent, even in the responses of two interviewees who favoured the dictionary worksheets for learning collocations.

"Concordance method tells me exactly when and how to use the collocation. When this collocation is appropriate to be used? In which contexts and how to use it?" N3

"When I read the sentences in concordance worksheets, I learn about usage and I can later produce them myself in speaking and writing." N2

"It teaches me about usage. When, where and how to use this collocation. Where it is appropriate and fluent." N2

The interviewees praised the quality and the variety of the concordance examples and spoke favourably of the rich and expressive language and the different types of grammar and vocabulary in each example.

"Because there was a variety of examples, I was able to find examples that I myself liked and I read them more than once. Unlike dictionary which gives limited number of examples and they are often bland examples as if they were not real. There is no life in them. In concordance worksheets, I almost always find a sentence that attract my attention and I feel it helps my learning" P1

"The concordance examples contain beautiful and fluent English. The sentences are expressive and colourful. It attracts my attention. I feel this is what I needed to say or write in the past in some situations." P3

"Having sentences from different fields and contexts is a huge advantage. I read the sentence I like more than once. I go home and I can remember them and repeat them to myself" P1

The fact that the concordance examples are sourced from native speakers was another appreciated feature. Learners felt that it is of paramount importance to them since they lack exposure to authentic English language.

"Sentences are from native speakers. This is what we need. If we are going to learn a language we need to learn it from its source, and this is what the concordance examples provide. I don't want short or simplified sentences. This is what hinders learning. If I'll get the chance to speak to native speakers after the type of teaching we are receiving, they'll laugh at my language. I'll be speaking like a child. My English language is prosaic." P2

"If I'm going to work let's say as a translator. I need to be able to select the appropriate word for the context. The word that suits the time and the place. We need to have native speakers language in our courses. Simplified English is only needed for beginners. We as language learners end up producing what we get as input. So if we are only taught vocabulary items through simple and short sentences, we will end up only able to produce these vocabulary items in limited short and

simple sentences. That's why we need more focused exposure to native speakers English so we can learn the real language that is spoken in real life, and this is what will help us in our jobs in the future." P2

The implicit learning feature is often talked about in the literature. Similarly, interviewees referred to this and explained their ability to learn other language items as a by-product of the process.

"Many varied sentences and rich contexts that teach me more than just the target collocations" P3

"I learned some vocabulary and phrases from the concordance worksheets which were not the focus of the lesson and I'm sure they will be very helpful for me in the future." P3

The interviewees stated that the DDL worksheets were effective in providing a number of examples of the same collocations which help them learn the variety of meanings that can be expressed by the same collocation, which also helps recall.

"Since the concordance worksheets give you many sentences. I discover other meaning of the collocation like different shades of the same meaning. Unlike dictionary worksheets, which only provide me with one single meaning with its example." P3

"Because I see the verb in like three sentences. I remember it better because I saw it in varied contexts repeatedly and I even was able to teach it later to my sister." P1

The distinctive layout of the concordance examples was also considered an advantage, particularly for easy and effective focus as can be seen, for example, in the extract below:

"The layout of the concordance lines and the bold font are very effective and help you focus easily" P2

DDL weaknesses

On the whole, interviewees didn't mention many disadvantages for the DDL worksheets. In their answers to the weaknesses of the DDL approach some students mainly reported the lack of explicit explanation of the meaning, the small font size featuring in the worksheets and the danger of the approach being boring after some time or if used excessively.

"It doesn't give me the meaning explicitly. I can guess and have some answers in my mind but the concordance method by itself and without the teacher can't confirm if my answer is accurate or not. I feel I know the meaning but is it exactly this… or not? I feel I know the meaning but because it doesn't provide it explicitly, I'm not 100% sure." N1

"I personally didn't have troubles in dealing with them and learning from them but one of my colleagues who was next to me in the first class faced troubles in trying to figure out where the sentence start or end." P1

"Small typing. I don't have problems in my sight myself but there are some of my colleagues who wear glasses and their sight is not perfect. It would be clearer and easier for them if you'd enlarge the typing" N2

"It can be interesting and exciting the first few times but it might become boring after some time." N3

Dictionary strengths

The main strength points of the dictionary worksheets were easiness, clearness, and accessibility to all learners at any time and speed. The explanation of the meaning was also a plus point.

"I can study 50 collocations with the dictionary in less time than concordance worksheets. If it would be with the concordance worksheets they would be 25." N1

"It doesn't only explain the meaning for me. It follows it with an example to confirm my understanding." N2

"I think everyone at anytime can deal with the dictionary worksheets unlike concordance worksheets" N2

Dictionary weaknesses

The dictionary worksheets cons were mainly the scarcity of examples (only one example was provided for each collocation), inauthentic or overly simplistic examples of usage, and the information being easy to forget.

"It just give one example of the common usage of the collocation, so concordance method is better for learning the usage" P3

"It is traditional. It has always been there but learning from it is sometimes limited because of vague presentation of information…it gives you the information directly and you forget them directly" P1

"It feeds you the information. You don't really search or do anything to learn. That's boring" P2

"Dictionary sentences don't seem as real sentences. They are made up sentences. Sometimes I feel that the writer was pushing the sentence to accommodate the target vocabulary item. Concordance examples seem real, eloquent and palatable, above all." P2

(5) Section 5: Improvements

One of the main suggestions mentioned by some of the interviewees for improving the DDL worksheets was putting the concordance examples in order, i.e. examples of the same verb collocates together. Students also mentioned having a larger font. Most students wanted that the DDL approach to be included in their textbooks and modules. One student suggested having the concordances on audio files so that students could hear the pronunciation and get a feel of the context. The only suggestion mentioned for the dictionary worksheets was adding more examples and some students suggested they should be concordance examples.

"If we can have the concordances on audio, it would be perfect because I would be able to hear the pronunciation and the tone and get a feel of the context. Listening while reading suits more learning styles. I personally learn more by listening." P2

"I believe that putting the concordance examples in order will improve them tremendously. I mean putting the examples of each verb together" P3

"Small typing. I don't have problems in my sight myself but there are some of my colleagues who wear glasses and their sight is not perfect. It would be clearer and easier for them if you'd enlarge the typing" N2

"I'd say add more examples to the dictionary section. Examples like theses concordance lines would be good." N3

(6) Section 6: the translation task

All the interviewees expressed their positive opinion of the translation task. They viewed it as interesting, challenging and rewarding.

"I liked it a lot. It seemed easy at the first sight but it turns out to be challenging." P1

(7) Section 7: additional comments

At the end of the interviews and when asked for any additional comments, all the interviewees apart from one asked about the source of the DDL worksheets, and where they could access them. Students expressed their surprise that there are resources like concordances that had never been mentioned or used by any of their teachers during all their years of study.

"I was thinking from the first time I saw them, where can I get them? After you left the class I started asking the students who were sitting in the front row whether you have mentioned where we

can get access to these concordance lines." P1

4.19 Teachers' views on collocations worksheets: interview data

(1) Section 1: how easy/difficult it was for students to use these worksheets

Based on their classroom observations, teachers said they noticed that although a few students found the concordance examples strange at the beginning and did not know how to deal with them, most of the students became comfortable working on them quickly. The two teachers agreed that the concordance examples were not difficult for the students to read and interpret although this was the first time students had encountered concordance examples.

"[referring to DDL worksheets] *No. I don't think it was difficult for them. I don't think they can be difficult unless we are giving them to students of much lower English language proficiency level."* T1

As for the cut off format of the concordance examples, interestingly, one of the teachers pointed out that she did not think they are so different from the complete sentences that are normally used in class. Furthermore, the teachers mentioned that students quickly mastered the technique of reading the concordance examples in which they just focus on the target item and the surrounding words. This format was also praised as able to draw students' attention to specific vocabulary items.

"Students were able to handle the cut off examples. I noticed that they became quicker in reading them and retrieving the information because they quickly realized they don't have to read the whole line or know the meaning of every word. The cut off format itself helped them focus on the important parts by its layout." T1

(2) Section 2: General preference of type of worksheets

Both of the teachers seemed to have a favourable opinion of the DDL worksheets over the dictionary exercises. However, at the same time they were not critical of the dictionary worksheets. One of them also pointed out that students might not all be able to work on the DDL worksheets and the dictionary worksheets at the same speed. So, when the allocated time is limited she would opt for the dictionary worksheets.

"I'd say I prefer the DDL worksheets, but I'd never discard the dictionary worksheets altogether. They also have their own merits, in particular when you have a shorter span of time to teach the vocabulary items." T2

(3) Section 3: Interest

Both teachers agreed that DDL was more interesting than the dictionary worksheets, and they pointed out that this quality generated more dedication to the assigned task by the majority of students.

"DDL worksheets were clearly more interesting for the students. I noticed that nearly all the students were working on them during the classes. Even students who are often not active in my classes were enthusiastic and engaged with the DDL task." T1

(4) Section 4: Usefulness

DDL more useful

Both teachers found the two types of worksheets to be useful. One of the teachers thought the DDL worksheets to be more useful, and while the other thought the same she stressed it is only because it seemed more interesting for the learners.

"Concordance method was engaging, more interesting and required more cognitive effort." T2

Similarly, both teachers agreed that DDL was more useful for teaching collocation usage. Interestingly, the same pattern was noticed among the student interviewees.

"Definitely the DDL was more useful because it gave many excellent examples, while the dictionary just gave one." T1

Without teacher help

When asked about whether they think students can work on the DDL worksheets by themselves, both teachers thought the task to be manageable; nevertheless they referred to the different types of learners and the fact that some need teacher intervention, regardless of the type of teaching materials.

"I think they can work on them by themselves but I also believe it depends on the student. Some students can't proceed without teacher confirmation, while others are happy with their own

conclusion." T2

(5) Section 5: strengths and weaknesses

DDL strengths

Teachers described many interesting strengths associated with the DDL approach. They thought that the DDL worksheets generate enthusiasm and hunger for information, and that this leads to long-term learning. A selection of the main pros is presented below:

"DDL was more interesting for students. It kept them busy. They were trying to prove themselves. Students also see many examples and this improves their comprehension. It is an innovative approach in many respects." T1

"The brainstorming method in the DDL worksheets is more effective for learning collocations. When the information are given readily, students might not grasp them as intensely and deeply as they would do with the DDL worksheets." T2

"The DDL search element creates hunger for learning in learners. When the information is arrived at, they are ready to take it and internalize it because hunger for this information has been created by searching." T1

"The effort and time they spend on the DDL worksheets will enhance their long term memorization of the information." T1

The learner autonomy fostered by the DDL worksheets was a strength in the eyes of the teachers. They thought it empowering and that it could improve comprehension and confidence when dealing with English texts in the future.

"The DDL could be more memorable because students found the information themselves, as the Chinese proverb says you see you forget, you do you remember." T1

"The DDL method teach them how to fish instead of just giving them fish" T2

"Students will become more confident in using the vocabulary items that have been taught via DDL worksheets after they had studied them in many varied contexts." T1

"Students enjoy the varied contexts and the concordance contexts are quite enriching for students who want to enlarge their scope of knowledge and who want to get more exposure to authentic English." T2

Teachers also stated that the set of varied concordance examples is an effective method for

teaching collocation usage.

"When I'm teaching any vocabulary item, I spend 25% of the time explaining the meaning and 75% of the time explaining the usage. DDL method seems to be very efficient in the area of teaching vocabulary items usage." T2

Like their students, teachers described the concordance examples as providing many contexts, and repeated exposure without the necessary overload of information.

"The format of the concordance lines is an advantageous feature because it only provide the necessary and relevant information and discard unnecessary parts." T2

DDL weaknesses

Neither of the teachers described many weaknesses apart from those associated with font size and layout.

"I think the small typing and the lack of spaces between lines" T2

Dictionary strengths

Both teachers thought that the dictionary worksheets' strength derived from their accessibility and ease of use.

"It is clear, accessible and provide the meaning" T2

"Retrieving the information from the dictionary worksheets is quite straightforward." T1

Dictionary weaknesses

However, at the same time they mentioned that the dictionary worksheets are traditional and they don't really involve learners in the process of learning.

"Students will not be involved. They will be passive, not active." T1

"There is no creativity or novelty in carrying out the tasks of the dictionary worksheets. Students would be performing a traditional task like what they have been doing for years." T2

(6) Section 6: Improvements

Interestingly, the suggestions for improvements that have been mentioned by the teachers were suggested by students earlier.

"If more examples could be added to the dictionary information section." T1

"Put the concordance examples in order [organized so that every verb collocate examples is seen one after another rather than scattered in the worksheets] " T2

(7) Section 7: the translation task

Both teachers were positive towards the translation task and believed that it was appropriate for teaching collocations.

"It is a wise choice for teaching collocations because students would have to use the target collocation to translate correctly." T2

(8) Section 8: additional comments

Both teachers seemed appreciative of the strengths of the DDL approach. When asked where DDL could fit into the teaching of English at a curriculum level, teachers saw the potential especially for teaching speaking, writing and translation by these means.

"DDL is excellent for teaching learners writing styles by examining the styles of the different contexts. It will help learners speak and write more precisely and more beautifully. I believe DDL is appropriate for teaching speaking and writing as well." T1

"I think DDL can be very useful for teaching translation." T2

4.20 Summary and conclusion

This chapter presented an account of the collocation study that aimed at evaluating the effectiveness of two types of teaching materials: DDL and dictionary. The chapter began with a review of the relevant literature and after that the methodology employed in the collocation study was described. Finally, test results and the findings from a questionnaire and learner and teacher interviews were provided and discussed. The next chapter reports the research conducted on deliberate learning of lexical phrases using DDL and dictionary materials and follows the same organization as the current one.

Chapter 5 The Lexical Phrases study

5.1 Introduction

In this chapter a detailed account of the study conducted to evaluate the efficacy of two types of teaching materials for teaching lexical phrases is provided. The report begins with a review of the relevant literature in section 5.2, followed by the study research questions in 5.3. The research instruments employed to collect the data will be presented in sections 5.4-5.9. In section 5.10 the test findings will be reported and discussed in 5.11. Students' questionnaire results are reported and discussed in section 5.12. Students' and teachers' interview findings are presented in section 5.13 and 5.14.

5.2 Research on L2 learners' learning of lexical phrases

Most research into lexical phrases has been descriptive in nature, often analyzing either native speaker corpora (Biber, 2009; Biber et al., 1999; Martinez & Schmitt, 2012; Simpson-Vlach & Ellis, 2010; Sinclair, 2004b) or L2 learners' output (Granger, 1998b; Hasselgren, 1994) to examine the produced formulaic language segments. There is little research, however, on how lexical phrases can be taught and learned. The following section will briefly review the research on lexical phrases learning. The studies reviewed below, like the current study, are classroom-based studies and they are all largely intervention studies carried out to gauge the impact of different types of input on learning lexical phrases.

A pioneering study in investigating the learning of multiword units in a classroom setting is the study carried out by Schmitt, Dörnyei, Adolphs, and Durow (2004) to test the learning of 20 multiword units during a two-to-three month pre-sessional EAP university course. Participants were pretested and posttested on knowledge of the multiword units using two tests: a receptive test in the form of a multiple-choice recognition test and a productive test in the form of a recall cloze task. The authors reported that the treatment ensured exposure to the target multiword units at least

once during the normal EAP instruction classes, and that the teacher drew participants' attention to each one of the multiword units during the course. However, the amount and nature of the exposure received by the participants was not controlled for during the treatment period. Furthermore, the study suffered from a ceiling effect since the pretest scores were high. In addition, a number of other measures (VLT, aptitude test, attitude questionnaire) were administered in the study to determine any interaction between these variables and gains in multiword unit knowledge. The study showed evidence of learning, but no straightforward relationship was found between gain in multiword units and vocabulary size or language aptitude and attitudes. Although this is one of the pioneering studies in investigating multiword unit learning in classroom setting, it did not attempt to evaluate the effectiveness of different instructional conditions and/or materials in developing knowledge of multiword units.

Another study from the same edited collection by Schmitt (2004) is the study by Jones and Haywood (2004) which investigated the effect of awareness raising in the recognition and production of frequent multiword units used in academic discourse. Throughout an eight-week EAP course, teachers raised students' awareness of multiword units through exercises and usage activities. Students were also encouraged to use these multiword units in their writing. Three measures of multiword units knowledge were used before and after the treatment: a recognition test, a productive test (a cloze task), and a form recall measure of production in writing (number of multiword units used in essays). The study found that students improved in recognition of multiword units, but they only showed a slight improvement in the cloze task, and no improvement was shown in students' written essays which was judged by a panel of five experienced EAP teachers.

In another study, Bishop (2004) compared two conditions of learning academic lexical phrases: incidental (called the control group in the study) and enhanced (the treatment group). Participants were upper intermediate ESL learners in the US. Participants read the same text on global warming which contained 20 target low frequency words and 20 target lexical phrases. All the target words and lexical phrases were unknown to the participants and this was controlled for through a pretest before the treatment. Target words were non-salient in both conditions, however the target lexical phrases were made typographically salient (colour and underlining) for the treatment group. Participants in both groups were allowed access to an online dictionary through a single click on target words and a double click on target lexical phrases. Bishop's assumption was that if an

unknown word or lexical phrase had been noticed, a request for a gloss should be made through a mouse click. The results showed that unsurprisingly the number of lookups for target words did not vary significantly in both treatments, which is to be expected as they were not enhanced in any way for both groups. On the other hand, salient lexical phrases were clicked upon significantly more than their non-salient counterparts. In the control group, target words were looked up significantly more than the non-salient lexical phrases. However, in the treatment group, unknown salient lexical phrases were looked up significantly more frequently than the unknown words. Thus, Bishop concluded that his study findings lend support to Wray's (2002) claim that adult L2 learners do not notice formulaic sequences in normal (unenhanced) context. The study, nonetheless, suffers from a serious limitation, as it did not test knowledge of target lexical phrases after treatment. Consequently, it seems difficult to conclude that mouse clicks result in memory traces of the target lexical phrases. Another issue is whether non-clicking on the target lexical phrases can be taken as a proof of the absence of noticing and later memory traces in the control condition.

L2 learners' widely acknowledged struggle with formulaic sequences and the importance of advancing learners' knowledge and learning of them has been discussed in sections 1.3, 1.5 and 4.4. As in the collocation study, the study reported below is an attempt to help fill this gap and raise our knowledge of effective tasks for deliberate learning of lexical phrases and learners and teachers' attitudes towards them.

5.3 Research questions

1. What type of instructed input, concordance-based or dictionary-based, if either, promotes learners' initial learning of productive knowledge of the meaning and the form of lexical phrases? And which one is more effective?

2. What type of instructed input, concordance-based or dictionary-based, if either, promotes learners' retention of productive knowledge of the meaning and the form of lexical phrases? And which one is more effective?

3. What type of instructed input, concordance-based or dictionary-based, if either, promotes learners' residual learning of productive knowledge of the meaning and the form of lexical phrases? And which one is more effective?

4. What type of instructed input, concordance-based or dictionary-based, if either, promotes learners' initial learning of receptive knowledge of the meaning and the form of lexical phrases? And which one is more effective?

5. What type of instructed input, concordance-based or dictionary-based, if either, promotes learners' retention of receptive knowledge of the meaning and the form of lexical phrases? And which one is more effective?

6. What type of instructed input, concordance-based or dictionary-based, if either, promotes learners' residual learning of receptive knowledge of the meaning and the form of lexical phrases? And which one is more effective?

7. To what extent are concordance worksheets and a data-driven learning approach appropriate for learning lexical phrases, in contrast with a dictionary based approach, in the Saudi university context?

This is broken down into the following research questions:

1. How helpful do learners find concordance worksheets for learning lexical phrases?
2. How helpful do learners find dictionary worksheets for learning lexical phrases?
3. How difficult do students find working with concordance examples in lexical phrases worksheets?
4. How difficult do students find working with dictionary information in lexical phrases worksheets?
5. Would they like to use concordance worksheets in the future to learn lexical phrases?
6. Would they like to use dictionary worksheets in the future to learn lexical phrases?
7. Do they think concordance worksheets are more helpful for learning lexical phrases than the dictionary worksheets or vice versa?
8. Do they think concordance worksheets are more difficult for learning lexical phrases than the dictionary worksheets or vice versa?
9. Do learners like concordance worksheets for learning lexical phrases more than dictionary worksheets or vice versa?
10. How do learners think we can improve the concordance worksheets for teaching lexical phrases?
11. How do learners think we can improve the dictionary worksheets for teaching lexical phrases?
12. What do learners believe to be the best advantages and disadvantages of the sentence making activity (usage activity)?
13. What do learners believe to be the main strengths and weaknesses of the concordance worksheets, the DDL approach and the dictionary worksheets for teaching lexical phrases?

5.4 Participants

109 Saudi female sophomore English majors learning English as a foreign language at a Saudi university participated in the study. Their age range is between 20-26 (*M*=21.47, *SD*= 1.21). Their first exposure to English at school was at an average age of 10.61 years (*SD*= 3.28, *Min*=4, *Max*=14). They were all Arabic native speakers, and none of the participants had lived in an English speaking country. Initially, 149 Saudi female students participated in the study for course credit. However, later a number of participants were excluded for a number of reasons: (1) students who had lived abroad for a period of time (N=1); (2) students who scored below 20 on the Vocabulary Levels Test on the most frequent 2000 word families (VLT) (N=20); and (3) due to the longitudinal nature of the study design, students whose pretest or posttests data were missing (N=19). Thus, they were excluded from the experiment. Participants' average raw score was 24.39/30 on the K2 level of Schmitt et al.'s (2001) Vocabulary Levels Test demonstrating that they had receptive knowledge of the meanings of almost 81% of the most frequent 2000 word families; while their average raw score was 16.93 at the 3000 word level indicating that they had receptive knowledge of the meanings of about 56.43% of the word families at that level. Their educational background has been described earlier in section 1.4.1.

5.5 Target items

The target lexical phrases in the current study included 10 lexical phrases. A list of the target lexical phrases and their errors that were found in the SLC is shown in Appendix 5A. The first issue that needs to be considered here is nomenclature. Researchers often stress that "[t]erminology in the area of phraseology has always been messy" (Martinez & Schmitt, 2012, p. 304). This is reflected in the enormous number of terms that have been used to describe multiword units, with Wray (2002, p. 9) writing 56 terms used to describe the phenomenon of formulaic language. Wray (2002) and Schmitt (2004) suggested the term *formulaic sequence* for each individual case of the phenomenon they also referred to by the umbrella term *formulaic language.* A formulaic sequence is defined by Wray (2002, p. 9) as:

> a sequence, continuous or discontinuous, of words or other elements, which is, or appears to be, prefabricated: that is, stored and retrieved whole from memory at the time of use, rather than being subject to generation or analysis by the language grammar.

Nation and Webb (2011, p. 176) argue that, by this definition, formulaic sequences is the term describing units stored whole in memory and consequently the term multiword units may be a term largely based on "frequency-based formal description" whereas formulaic sequence refers to "mental storage and use". Nation and Webb (2011) pointed out the fact that the use of different terms in the phraseology field indicates different focuses, however, it does also in the majority of cases "indicate a lack of carefully thought-out and applied criteria" (p. 176).

The target set of formulaic sequences or multiword units in the current study is from a subset of formulaic language. I opted for the descriptive term *lexical phrases*, using a definition adopted from Martinez and Schmitt (2012). Lexical phrases are operationalized here as "a fixed or semi-fixed sequence of two or more co-occurring but not necessarily contiguous words with a cohesive meaning or function that is not easily discernible by decoding the individual words alone" (p. 304).

All the target lexical phrases were selected based upon the following criteria: (1) they should not be semantically transparent (i.e. less compositional), as this criterion would likely increase their difficulty potential for L2 learners of English (Hinger & Spöttl, 2002; Spöttl & McCarthy, 2003); (2) learners' L1 (Arabic) appears to negatively affect accurate production and interpretation; (3) each lexical phrase should carry a meaning and/or a function; and (4) they should not consist of less than three parts or more than four parts; and (5) they should be among the most frequent 5,000 families in a native speaker corpus (BNC), based on (Martinez & Schmitt, 2012).

The issue of compositionality may not always be clear-cut. There are varying degrees of compositionality in lexical phrases. Lewis (1993) maintained that formulaic expressions vary in the degree to which "the meaning of the whole is not immediately apparent from the meanings of the constituent parts" and he described these graded degrees of compositionality as "a spectrum of idiomaticity " (p. 98). As has been argued by Taylor (2006) "[f]ull compositionality is rarely the case" (p. 61).

The final set of the target lexical phrases was confirmed after pretesting all the actual participants in order to confirm that they are indeed problematic The test is shown in Appendix 5E, and a detailed description of the test is provided in section 5.7. These lexical phrases are: *in a position to, take account of, in accordance with, for the sake of, at the expense of, to some extent, on the whole, in line with, on the part of, on behalf of.* The list of the target lexical phrases was also pretested with a group of EFL learners who were students from the same institution and in the same semester

and similar to the target group in English language proficiency almost three months prior to conducting the study. This was done to ensure that the set of lexical phrases in the preliminary test were indeed problematic for the majority of students, and to ensure the designing of teaching materials for these lexical phrases could begin.

5.6 Teaching materials

As was the case in the collocation study, the training session materials (Appendix 5B) and the experimental instructional materials for teaching lexical phrases (Appendix 5C) followed the exact same design. Concordance-based worksheets and dictionary-based worksheets were designed for each item of the target set of lexical phrases because the dictionary and the concordance treatments were reversed for each experimental group. In a similar manner to the teaching worksheets in the collocation study, the lexical phrases' teaching worksheets were designed and presented to students as single pages. This was necessary because of the design of the worksheets and the experiment itself. Every attempt was made to produce equivalent instructional materials for both the concordance-based and the dictionary-based treatments. Both types of treatments, concordance-based and dictionary based, started with an introductory question. The introductory question was a translation exercise from L2 English into L1 Arabic. The aim of this exercise was to draw learners' attention to the target lexical phrase, stimulate their interest and enable them to guess its meaning. The L2 sentences presented to learners in the first exercise were deliberately made to be less transparent and semantically opaque in order not to give away the meaning of the lexical phrase. This technique proved to be efficient for this purpose in the pilot study. It was difficult for learners to correctly interpret the meaning of the lexical phrases, and such difficulty is widely attested in the literature in guessing the meaning of lexical items (Bensoussan & Laufer, 1984; Haynes, 1993; Laufer, 1989). The second exercise in the worksheets asks learners to provide their translation of the target lexical phrase only based on the sentence in the first exercise. The third part of the worksheets consisted of a single page with either concordance lines or dictionary entry information preceded by a question to guide students in their search and analysis of the input. The fourth and final exercise asks learners to use the target lexical phrases in sentences.

All the sentences in exercises one and four in all the worksheets were checked for their vocabulary level using the Vocabprofile, one of the tools available from Tom Cobb's Compleat Lexical Tutor site (http://www.lextutor.ca). Nearly all of the running words that made up the sentences in

exercises no.1 and no.4 are highly frequent words from the first two thousand level in the BNC. The four words that did not appear at the two thousand level in the BNC were *abroad, beliefs, personalities, and networking*. They are all at the 3K level, apart from *networking* that is at the 4K level. Nonetheless, all these four words are in the New General Service list (Browne et al., 2013). Six words were off-list in the BNC, however, they are highly likely to be known by the participants as they are the same words in their L1: Saudi, Arabia, website, Internet, Facebook, Twitter.

The corpus data were retrieved from the Collins WordBanks Online corpus (formerly known as the Bank of English). The WordBanks online corpus was described earlier (see section 4.9). This corpus was used because its content is clear and current, and it is the corpus used by Collins publishing house for their dictionaries, consequently, it should be a representative and balanced corpus as claimed by Collins. The input section in the concordance-based worksheets consisted of concordance lines. The concordances themselves were in the key word in context (KWIC) format because the aim was to keep them as they appear originally in the corpus with all their distinctive features, and later gauge their effectiveness and learners' attitudes toward them. In the concordance-based worksheets for teaching lexical phrases the keywords were the lexical phrases, and they were centred in bold with an average of 7 words left and right. The concordance lines were not modified in any way. They were just abridged to fit onto the page. The concordances were selected by me from the many pages provided by the WordBanks corpus of the target lexical phrases. The concordances were presented in a group of 10 concordances for each lexical phrase. I tried to select concordance lines that exhibited the meaning of the lexical phrase through contextual clues as clearly and accurately as possible, and seemed to be accessible to the target group. The same precautions that were taken in the collocations study were followed in selecting the concordances for the lexical phrases worksheets (see section 4.9).

Since the experiment was designed to compare the effectiveness of dictionary-based teaching materials against paper-based DDL materials in helping learners to learn lexical phrases, a set of comparison materials needed to be developed. Again, dictionaries seemed a strong candidate. For one thing, they present the meaning of the lexical phrases followed by examples. However, in comparison to the concordance-based materials, they contain a weaker search and discover component. In the dictionary-based materials, learners would read the meaning then the provided examples; hence, they do not appear to require the same amount of processing load as the concordance-based materials.

It was necessary to find a resource that presents the lexical phrases in a traditional style. That, however, proved not to be a straightforward task. The decision was made to use a dictionary, specifically an idioms dictionary. The major publishers' general dictionaries were examined for the target items. These included: *Oxford Advanced Learner's Dictionary* 8th edition (2010), *Longman Dictionary of Contemporary English* (2009), *Macmillan English Dictionary for Advanced Learners* 2nd edition (2007), *Cambridge Advanced Learner's Dictionary* 3rd edition (2008), and *The Cobuild English for Learners Dictionary* (accessed online): http://www.collinsdictionary.com/dictionary/english-cobuild-learners). The two dictionaries that include all the target items are *Oxford Advanced Learner's Dictionary* and *Macmillan English Dictionary for Advanced Learners*. Consequently, *Oxford Advanced Learner's Dictionary* together with *Oxford Idioms Dictionary for Learners of English* formed the main source of the information for the dictionary entries in the worksheets. The definitions and the examples of the lexical phrases entries in both dictionaries are nearly the same. *Longman Dictionary of Contemporary English* included all the target items apart from one: *on the part of*. Similarly, *the Cobuild English for Learners Dictionary* has all the target phrases except for *on the part of*. Whereas *Cambridge Advanced Learner's Dictionary* has the target set with the exception of *at the expense* of and *on the part of*.

Surprisingly, the results of searching in idioms dictionaries were not similar. Most of the idioms dictionaries available on the market did not explain how they prioritized the inclusion of their multiword items in terms of the principled measures behind the selection and/or their corpus-informed data. Although the idioms dictionaries consulted *Collins Cobuild Idioms dictionary* (2012), *Longman Idioms Dictionary* (1998), *Cambridge Idioms Dictionary* (2006), *Oxford Idioms Dictionary for Learners of English* (2006)) are all directed to language learners, the majority of the target lexical phrases were not found in the first three dictionaries although these expressions are derived from the 5,000 most frequent word families according to the BNC. The blurbs in all four dictionaries stated that they were informed by the publishers' in-house native speaker corpora. The subjective distinctions required for the different degrees of semantic transparency, Fernando (1996); Moon (1998), or what Lewis (1993) called degrees of compositionality could be one of the reasons behind their exclusion. Nonetheless, the inclusion process seemed arbitrary at times. For instance, the lexical phrase *take account of* was found in the *Cambridge Idioms Dictionary,* but neither in *Collins Cobuild Idioms dictionary* nor *Longman Idioms Dictionary*. Furthermore, the

phrase *at the expense of* was found in *Longman Idioms Dictionary,* but in neither *Collins Cobuild idioms dictionary* nor *Cambridge Idioms Dictionary*.

The entire group of the target lexical phrases, apart from three phrases, *in a position to, in accordance with and on the basis of*, was found in *Oxford Idioms Dictionary for Learners of English.* Thus it was selected as the main source of the dictionary-based worksheets. Data for the phrases that were not available in the *Oxford Idioms Dictionary* were taken from secondary sources in the following order: *Oxford Advanced Learner's Dictionary, Longman Dictionary of Contemporary English, and Macmillan English Dictionary for Advanced Learners. Oxford Idioms Dictionary and Oxford Advanced Learner's Dictionary* were selected as the main sources of information in the dictionary-based worksheets because of the easiness and accuracy of the language used in the entries' definitions and examples, and the detailed description of the meaning in comparison to the other dictionaries. For instance, see the entries of the target phrase *to some extent* in all the dictionaries that contain this phrase in Appendix 5D. Two of the entries of the three target lexical phrases that were not available in *Oxford Idioms Dictionary* were taken from *Oxford Advanced Learner's Dictionary,* and one was taken from *Longman Dictionary of Contemporary English.*

Every entry of the target lexical phrases consisted of the meaning description and two examples. Examples that contained words that might be difficult for the participants and could thus affect their understanding of the target lexical phrase were avoided, and other examples were selected. For instance, the example of the phrase *in line with* in *Oxford Advanced Learner's Dictionary* has the word *inflation*, and the example in *Longman Dictionary of Contemporary English* has the words *pensions* and *inflation.* Since only one version of the target lexical phrases was taught and later tested, some modifications were necessary for some examples. Some changes were minor as in changing the phrase in the first example of the entry for *take account of* from *take into account* to the target phrase. Another adaptation was slightly more substantial as in the examples of the phrase *on the part of* which were selected from *Longman Dictionary of Contemporary English.* The first original example was *'It was probably just a mistake on her part'*, and it was adapted to *'It was probably just a mistake on the part of the doctor'*. The second example was originally *'There has never been any jealousy on my part'*, and it was modified to *'There has never been any jealousy on the part of her sisters'.* This was done to avoid having some lexical phrases requiring more learning effort than others, and for testing and teaching purposes in the experiment.

Vocabulary level in both sections of input: concordances and dictionary entries, in the two types of materials was checked through the vocabprofile tool, available at the Lextutor website, and the data are presented in Tables 5:1-5:4. The platforms used were the BNC and the BNC-COCA K25. As in the collocations study, I decided to include the coverage of the BNC-COCA K25, since it is the most recent one and it ensures combining both British and American English. Every attempt was made to try to make them within the target group of participants' lexical knowledge without adapting them in any way. This was also done to try and make them as comparable as possible, while still keeping their inherent differences, so they are part of an ecologically valid study. Nation (personal communication) advised that vocabulary tasks should be analyzed and compared through the two best-known frameworks in the vocabulary learning research literature: involvement load hypothesis, and techniques feature analysis, Nation and Webb (2011), and even when the two types are not exactly equal in every aspect, it is valid to compare and experiment with them since they are "common and useful and thus it is worth seeing which is the best".

	BNC-2 original	BNC-3 Original	BNC-off list-original	BNC-2 After adding proper names	BNC-3 After adding proper names	BNC-off list After adding proper names
At the expense of	91.52	93.78	6.21	93.78	96.04	3.95
For the sake of	91.54	94.53	5.48	96.02	99.01	1.00
In a position to	98.97	100.00	-	98.97	100.00	-
In accordance with	87.58	88.76	11.23	90.53	91.71	8.28
In line with	96.43	98.22	1.79	89.22	100	-
On behalf of	94.32	94.89	5.12	98.3	98.87	1.14
On the part of	95.29	96.86	3.13	96.33	97.90	2.09
On the whole	96.13	96.68	3.31	98.89	99.44	0.55
Take account of	98.23	98.23	1.77	98.82	98.82	1.18
To some extent	94.67	98.81	1.18	95.26	99.40	0.59
When it comes to (training)	97.07	98.53	1.46	100	100	-
On the basis of (training)	97.39	98.95	1.04	97.91	99.47	0.52

Off list here means everything above 3K+

Table 5:1 The lexical frequency profile of the concordances in the lexical phrases worksheets (BNC)

	BNC-COCA-2 original	BNC-COCA-3 original	BNC-COCA- off list original	BNC-COCA-2 After adding proper names	BNC-COCA-3 After adding proper names	BNC-COCA- off list After adding proper names
At the expense of	89.27	94.92	5.08	92.89	98.31	1.69
For the sake of	91.54	94.53	5.48	96.02	99.01	1.00
In a position to	97.42	99.48	0.52	97.94	100	-
In accordance with	81.07	90.54	9.47	84.62	94.09	5.92
In line with	91.07	96.43	3.57	94.64	100	-
On behalf of	85.79	89.20	10.79	90.27	93.68	6.32
On the part of	93.19	96.33	3.66	95.28	98.42	1.57
On the whole	96.68	97.23	2.76	99.44	99.99	-
Take account of	94.12	99.41	0.59	94.71	100	-
To some extent	87.57	98.81	1.18	88.16	99.40	0.59
When it comes to (training)	95.12	98.53	1.46	100	100	-
On the basis of (training)	92.19	98.96	1.04	93.23	100	-

Off list here means everything above 3K+

Table 5:2 The lexical frequency profile of the concordances in the lexical phrases worksheets (BNC-COCA)

	BNC-2 original	BNC-3 Original	BNC-off list-original	BNC-2 After adding proper names	BNC-3 After adding proper names	BNC-off list After adding proper names
At the expense of	90.91	-	9.09	100 (sb-sth)	100 (sb-sth)	-
For the sake of	84.61	-	15.38	100 (sb-sth)	100 (sb-sth)	-
In a position to	98.04	-	1.96	100 (sb-sth)	100 (sb-sth)	-
In accordance with	84.85	-	15.15	87.88	-	12.12
In line with	91.18	-	8.82	100 (sb-sth)	100 (sb-sth)	-
On behalf of	94.87	-	5.13	100 (sb-sth)	100 (sb-sth)	-
On the part of	92.31	-	7.69	97.44	-	2.56
On the whole	100	-	-	-	-	-
Take account of	95.75	-	4.26	100 (sb-sth)	100 (sb-sth)	-
To some extent	97.50	-	2.50	100 (sb-sth)	100 (sb-sth)	-
In terms of (training)	97.50	-	2.50	100 (sb-sth)	100 (sb-sth)	-
Take for granted (training)	92.46	-	7.55	100 (sb-sth)	100 (sb-sth)	-

Off list here means everything above 3K+

Table 5:3 The lexical frequency profile of the dictionary entries in the lexical phrases worksheets (BNC)

	BNC-COCA-2 original	BNC-COCA-3 original	BNC-COCA-off list original	BNC-COCA-2 After adding proper names	BNC-COCA-3 After adding proper names	BNC-COCA-off list After adding proper names
At the expense of	90.90	-	9.09	100 (sb-sth)	100 (sb-sth)	-
For the sake of	82.05	-	17.95	94.01	-	5.98
In a position to	98.04	-	1.96	100 (sb-sth)	100 (sb-sth)	-
In accordance with	84.85	-	15.15	87.88	-	12.12
In line with	91.18	-	8.82	100 (sb-sth)	100 (sb-sth)	-
On behalf of	84.61	-	15.39	89.74	-	10.26
On the part of	92.30	-	7.69	97.43	-	2.56
On the whole	100	-	-	-	-	-
Take account of	93.62	95.75	4.26	97.88	100	-
To some extent	87.50	97.50	2.50	100 (sb-sth)	100 (sb-sth)	-
In terms of (training)	97.50	-	-	100 (sb-sth)	100 (sb-sth)	-
Take for granted (training)	92.45	100 (sb-sth)	-	100 (sb-sth)	100 (sb-sth)	-

Off list here means everything above 3K+

Table 5:4 The lexical frequency profile of the dictionary entries in the lexical phrases worksheets (BNC-COCA)

5.7 Dependent measures

A pretest, two short-term delayed posttests, and two long-term delayed posttests were developed to measure formulaic knowledge of the target lexical phrases. The pretest was designed to assess productive knowledge of form and meaning and the posttests measured participants' knowledge of the form and meaning of the target lexical phrases at two levels of sensitivity: receptive and productive knowledge. Ideally, participants' knowledge of form should be pretested to evaluate whether they can produce the forms and then after completing the treatment, they should be posttested on receptive and productive knowledge of form and meaning of the target lexical

phrases. Although measuring both receptive and productive knowledge of form and meaning in the pretest would seem ideal, it was problematic in the present study. It would have alerted participants to the purpose of the study, and it might have contributed to learning gains.

As has been aforementioned in section 4.10, research on multiword units faces many methodological problems. The golden rule is to accurately specify what aspect of knowledge the test is designed to measure, as for any vocabulary test. In section 4.10, I reported that three procedures need to be followed to link a construct to a target performance. Starting by defining the construct theoretically, I worked from the working definition of lexical phrases presented in section 5.5. To operationalize the construct, I worked from the following definition of receptive lexical phrase knowledge:

The knowledge necessary for appropriately recognizing the written form of the lexical phrase and recalling the meaning of this lexical phrase.

While the construct of the productive knowledge of lexical phrase is defined as follows:

The knowledge necessary for appropriately recognizing the meaning of the lexical phrase and recalling the written form of this lexical phrase.

On the pretest and the posttests, productive knowledge of lexical phrases' form and meaning was tested using a translation format blended with a C-test technique in which the L1 meanings cued the answers. To guide the choice of the lexical phrase, the translation of the lexical phrase was provided on the right of the items, and the initial letter of every word in the lexical phrase was provided as in item (1) below. Participants' task was to provide the proper target form given these cues. The blanks in all the tests were kept the same length, so that they would not provide hints of the target words' length. The test of productive knowledge of form and meaning (Appendix 5E) followed the exact design in the pretest and the posttests, except that the order of items in all the three tests varied.

(1) **o_____ t_____ p_____ o _____**   من جانب

The pretest aimed at measuring participants' productive knowledge of the meaning and form of the lexical phrases. The two short-term posttests were administered to measure any learning gains acquired after completing the treatment. The two long-term posttests were used to determine

whether participants would retain any acquired learning gains over a longer period of time. All the lexical phrases have a low level of congruence between the L1 and the L2 form and meaning. Therefore, the productive test of form and meaning required that they produce the proper L2 form guided by the initial letter of every word, rather than simply provide the corresponding L2 items. To be judged correct in (1) for example, participants had to write the lexical phrase *on the part of* next to its L1 translation.

The second posttest tested participants' receptive knowledge of form and meaning (Appendix 5F). For this test, I adopted a translation format. In the test, the L2 lexical phrases were the cues and the participants had to write the L1 meanings to achieve the full score. For example, in (2) the participants needed to show their knowledge of the lexical phrase meaning rather than the meaning of the individual words of the lexical phrase.

(2) *on the part of*   _____

The productive knowledge of form and meaning task tested participants' productive knowledge of the lexical phrases since participants move from the given lexical phrase meaning in Arabic to the L2 written form. The test is a recall test or more accurately a cued recall test because the testee has to recall the form of the lexical phrase. The movement in this test is from meaning to form, and the test assesses recognition knowledge of the meaning of the lexical phrase, the form-meaning connection, and recall knowledge of the written form. The movement in the test of receptive knowledge of form and meaning was from the given lexical phrase to meaning. This test also is a recall task, as the L1 translation would have to be provided by the test taker. The test tests recognition knowledge of the written form of the lexical phrase, the form meaning connection, and recall knowledge of the meaning of the lexical phrase.

Both the receptive and the productive tests are recall tasks, and as has been discussed in section 4.10, it is important to have them of the same task type when a comparison is aimed for. When the two types of tests were designed, every attempt was made to eliminate confounding variables. Both tests were written tasks and all test items were decontextualized.

As is the case in the majority of studies that administer the productive test before the receptive test, this might lead to a learning effect from the prompts used in the productive test. In the present study, however, participants were not aware that a second test would be administered or what the test format would be. Furthermore, for participants to score correctly on the receptive test, they

needed to demonstrate clear and accurate knowledge of the meaning in their responses. Thus, any possible learning effect is highly likely to have been minimal. In order to decrease any possible learning effect, participants were administered a grammar test after administering the productive test, and the order of test items was varied between all the tests.

To check the validity of the tests, after they were developed, they were piloted with two groups of native speakers of Arabic (10 in each) who were proficient speakers of English, too. All of the participants were students in universities in the UK. All the participants in the pilot study had achieved at least 6.5 as an overall score on IELTS or its equivalents, i.e., scores of 79-93 on the TOEFL internet-based test. This was done to ensure that the testees were in possession of an adequate level of language proficiency that would enable them to carry out the task successfully.

Each group of participants was handed one test type—either the productive or the receptive test. Participants who were administered the productive test were able to produce the target lexical phrases. At least 9 (out of 10) were able to produce the proper form of each one of the target lexical phrases (*M*= 29.20, *SD*= .788, 97.33%). Similarly, in the receptive test group, participants were able to provide proper meanings of the target lexical phrases. At least 9 (out of 10) were able to supply the meaning of each one of the target lexical phrases (*M*= 29.40, *SD*= .699, 98%).

In order for participants to score correctly in the productive test, they needed to supply the correct written form of all of the lexical phrase components. Participants needed to supply the form of all the words in the lexical phrase to receive a score. For the receptive test, participants received one mark for providing the meaning of the lexical phrase accurately.

5.8 Qualitative data collection instruments

5.8.1 Questionnaire

In order to arrive at a clear understanding about participants' attitudes toward the concordance-based worksheets, the dictionary-based worksheets and the DDL approach, data were collected via a questionnaire (Appendix 5G). As has been reported in the questionnaire used in the collocation study in section 4.11.1, the lexical phrases attitude questionnaire was adapted from a number of relevant sources (Boulton, 2010a; D. J. Lee, 2007; H. Yoon & Hirvela, 2004) and some items were

specifically designed by me for this study. The final version of the questionnaire was arrived at after refining several versions with comments from members of my supervisory committee. The questionnaire is very similar to the one used in the collocations study, apart from minor modifications to suit the focus on lexical phrases in this study. The questionnaire was piloted and revised as a result.

The questionnaire design is also like the one used in the collocations study in that it has two sections: closed ended and open-ended sections. The closed-ended part contains 27 statements to which the respondents were asked to indicate their degree of agreement on a 5-point Likert scale. The open-ended part has 6 open-ended questions. The design and wording of the questionnaire items followed the same design and division of the collocations study's questionnaire (described in section 4.11.1). The questionnaire went through a final piloting phase before its administration to the target population with the same respondents as in the piloting of the collocations study's questionnaire. Based on the data collected during this piloting process, internal reliability which was calculated via Cronbach's Alpha was $\alpha = .83$. The lexical phrases' study questionnaire piloting highlighted the same problematic items as those revealed in the piloting of the collocations questionnaire. Consequently, the same changes were implemented in the lexical phrases questionnaire (see section 4.11.1).

5.8.2 Interviews

5.8.2.1 Student interviews

Interviews were semi-structured with lead questions based on the questionnaire results (See Appendix 5H for interview questions). The interviews were designed to provide an in-depth view of participants' impressions of and attitudes towards the two types of materials. The same procedures (described in section 4.11.2.1 of the collocations study) for recruiting and selecting interviewees were followed. The interview schedule consisted of the same sections that were in the collocations study's interview schedule. However, section (6) was about the sentence-making task instead of the translation task in the collocations study. Interviewees were interviewed in Arabic, the native language I shared with all the participants. Interviews were audio recorded via a digital voice recorder and later transcribed for the purposes of coding and analysis. The quotes presented

in the results and discussion sections were translated into English by me.

5.8.2.2 Teacher interviews

Having interviews with teachers would shed light on different issues on the study from different angles. Teachers are a permanent part of the classroom, and it was deemed important to understand their impressions and attitudes. The same teachers who attended the collocation study's experimental sessions attended the lexical phrases study's experimental sessions and were likewise interviewed. The interview questions can be seen in Appendix 5J, and some of the interview questions were based on their responses in the retrospective questionnaire that they completed during the teaching sessions, see Appendix 5I.

5.9 Procedure

The same procedure described in the collocations study (section 4.13) was carried out in the lexical phrases study. The two counterbalanced versions of the target items that the experimental groups received were divided based on their BNC-COCA off-list score (after adding proper names) to produce two sets which are as close as possible, in terms of their total off-list score, see Appendix 5L. Data analysis procedures are presented in section 4.14.

5.10 Overall test results

The descriptive statistics (mean, median, minimum, maximum, standard deviation) of the scores for all the tests measuring productive knowledge of lexical phrases and receptive knowledge of lexical phrases on a 0 to 5 scale are presented in Table 5:5. First, I performed two overall GEE analyses to determine if there were any significant differences between mean scores in my data.

Initially, an overall GEE analysis was performed with the two independent variables: type of learning input or the lack of it (three treatments) and time (three test occasions). The dependent variable was productive knowledge of lexical phrases scores. The result revealed a statistically significant two-way interaction effect between treatment and time on the test scores measuring

productive knowledge of lexical phrases (Wald Chi-Square =112.168, p < .001). This result indicates that score changes over time were not the same with each treatment, which means that the three types of input led to different changes in productive lexical phrases knowledge over the period of the study, as expected. More precise details of these changes will be presented in sections 5.10.1, 5.10.2, 5.10.3.

A second overall GEE analysis was conducted in order to ascertain the effects of type of knowledge tested (receptive versus productive). For this analysis I included: treatments (3), knowledge types (2), and test occasions (2): short term delayed vs. long term delayed. Two significant interaction effects were found. The first was for treatment and time (on scores regardless of type of knowledge tested) (Wald Chi-Square =15.385, p < .001). This shows that the retention of lexical phrases knowledge (productive and receptive) is not the same under different treatments. The second was for treatment and type of knowledge (receptive and productive), regardless of test time (Wald Chi-Square =262.305, p < .001). This shows that effects of the experimental treatments on lexical phrases knowledge after the direct treatment phase do genuinely differ depending on what type of lexical phrase knowledge is tested.

There are different ways to examine the data, for example by changes between the test occasions, and differences among the three treatments. Because the aforementioned GEE analyses revealed many significant combined effects of treatment, test occasion and type of knowledge, there is a wide variety of more specific follow up analyses that could be carried out. However, for the purposes of the current study, I will focus only on those analyses that answer my research questions which we start dealing with in section 5.10.1.

First, I need to refer to a possible criticism that is sometimes raised in studies with a similar design to that of the current study, that is that improvement in scores might be mainly a result of a 'testing effect' and not a result of any effect of the experimental treatments. This claim has been considered in other studies on language learning experiments (e.g. Boulton, 2010a; Laufer & Girsai, 2008; Webb & Kagimoto, 2009, 2011; Webb et al., 2013). One possibility is that there might have been such an effect during the second and third times learners were tested with students becoming used to the test design and its components. By 'testing effect' here I mean (see section 4.15) the claim that any testing whether done for research or pedagogical purposes is not actually only measuring participants' knowledge level but also has a side effect of promoting some learning as if it is to a certain extent another experimental treatment. All the GEE analyses reported above have yielded

significant two way interaction effects between treatment and time on the test scores (whether productive or receptive), proving that changes in knowledge were not the same under the three conditions. Thus, even if there was any test effect, which would be the same in all the three treatments, there was clearly an attested treatment effect as well, as we will discuss more here.

	control condition					concordance condition					dictionary condition				
	M	Mdn	Min	Max	SD	M	Mdn	Min	Max	SD	M	Mdn	Min	Max	SD
Productive pretest	.94	1.00	.00	1.50	.25	.94	1.00	.00	2.00	.73	.86	1.00	.00	2.00	.66
Productive short term posttest	.96	1.00	.00	1.75	.26	1.96	2.00	.00	4.00	1.15	1.48	2.00	.00	4.00	1.06
Productive long term posttest	.95	1.00	.00	1.50	.24	1.82	2.00	.00	4.00	1.02	1.23	1.00	.00	4.00	1.01
Receptive short term posttest	.97	1.00	.00	1.75	.24	3.50	3.00	.00	5.00	1.02	2.72	3.00	.00	5.00	.84
Receptive long term posttest	.96	1.00	.00	1.50	.22	3.33	3.00	.00	5.00	1.10	2.49	2.00	.00	4.00	.92

Table 5:5 Descriptive statistics for the three instructional conditions at each test time (lexical phrases scores/5)

A list of GEE analyses with Bonferroni adjustment was carried out to compare successive times for each treatment and each knowledge type (production or reception). When we look into these analyses closely we see from Table 5:5 that there was a small improvement between the productive pretest and the productive short-term delayed test in the control items, but it is not significant ($p >$ .05). This shows that the significant difference must have come from the treated items: a significant increase for the dictionary taught items ($p < .001$) and for the items under the DDL treatment ($p <$ .001).

Looking at the results of the long-term delayed test, we see a similar pattern, with a non-significant improvement ($p > .05$) between the productive pretest and the long-term delayed test in the untreated control items. An increase in scores is achieved under the dictionary-based treatment, and

also an improvement in scores took place under DDL in the long-term delayed test. Both improvements of the experimental treatments were significant (p < .001). The statistically significant effect of both the DDL and the dictionary experimental treatments on the productive short-term delayed test scores and the productive long-term delayed test scores reinforces their status as effective learning methods of lexical phrases. Another important finding here is that the test effect is minimal as shown by the non-significant result of the control items. Indeed both instructional conditions do have a significant effect, especially the DDL treatment, which promoted L2 learners' knowledge more than the dictionary treatment.

When looking at the changes between the productive short-term delayed test and the long-term delayed test, it was found that there is no significant difference under the control experimental condition ($p > .05$). A similar result is found under the DDL instructional treatment ($p > .05$). However, the difference between the two tests in the dictionary experimental treatment was significant with the productive short-term delayed test scores being significantly higher than the productive long-term delayed test scores ($p < .05$.).

Interestingly, carrying out the same test between the receptive short-term delayed test and the long-term delayed test revealed a similar outcome. There was no significant difference between the two tests in the control experimental condition or in the DDL experimental treatment (both, $p > .05$). The difference was, on the other hand, significant between the two tests under the dictionary instructional treatment ($p < .05$). Likewise the receptive short-term delayed test scores were the significantly higher ones. These findings indicate that loss of the gained knowledge in the long-term delayed tests is high in the dictionary treatment as supported by the statistically significant differences, and minimal in the control and the DDL treatments as shown by the statistically non-significant results.

The lack of any considerable change under the control experimental condition clearly indicates that the results in all the comparisons above cannot be attributed to the 'testing effect'. Consequently, it seems there is no evidence of the effect of testing on the findings of the study.

5.10.1   Initial learning of productive knowledge of lexical phrases

In order to answer the first research question (What type of instructed input concordance-based or dictionary-based, if either, promotes learners' initial learning of productive knowledge of form and meaning of lexical phrases? And which one is more effective?) I first carried out a GEE analysis on the three treatments over the productive pretest and productive short-term delayed test scores. Differences between them I consider representative of 'initial learning'. There was a statistically significant two-way interaction between treatment and time on productive pretest and productive short-term delayed test scores (Wald Chi-Square =108.842, $p < .001$).

In order to ascertain whether the experimental treatments genuinely differ in their learning effects, I needed to carry out GEE analyses with Bonferroni adjustment for multiple comparisons between treatments over the productive pretest and the productive short-term delayed test scores to see which treatment resulted in significantly higher initial learning. There was a statistically significant difference in improvement between the control experimental condition and the DDL treatment on the productive pretest and the productive short-term delayed test scores with the DDL outperforming the control experimental condition (Wald Chi-Square =93.085, $p < .001$). There was also a statistically significant difference in improvement between the control experimental condition compared to the dictionary treatment on the productive pretest and the productive short-term delayed test scores with the dictionary treatment initial learning being significantly higher than that with the control experimental condition (Wald Chi-Square =36.827, $p < .001$). Lastly, to answer the key question of whether DDL was significantly more effective than the dictionary treatment, a GEE analysis was run between the two experimental treatments on the productive pretest and the short-term delayed test scores. The analysis shows a significant difference between the DDL instructional treatment and the dictionary instructional treatment (Wald Chi-Square =7.974, $p <. 05$). This result means that the DDL treatment was statistically significantly more effective than the dictionary treatment at improving learners' initial learning of the productive knowledge of form and meaning of lexical phrases.

Both experimental treatments promoted learners' initial learning of productive knowledge of the meaning and form of lexical phrases, and their learning effect was significantly better than the control experimental condition ($p < .001$). Furthermore, the DDL treatment was significantly better than the dictionary treatment at promoting learners' initial learning of productive knowledge of

lexical phrases ($p <. 05$).

5.10.2   Retention of productive knowledge of lexical phrases

As for the second research question (What type of instructed input concordance-based or dictionary-based, if either, promotes learners' retention of productive knowledge of the meaning and the form of lexical phrases? And which one is more effective?), an overall two-way repeated measures GEE was run on the productive short-term delayed test and the productive long-term delayed test scores between all the three treatments. Any differences between the experimental treatments over this period was taken as indicating differential 'retention'. The difference found between the treatment and time was significant (Wald Chi-Square = 9.209 = p = .010).

The descriptive statistics show that both experimental treatments appear to have lost some of the gained knowledge in the productive long-term delayed test, albeit not to the exact same level, with the dictionary treatment achieving the largest loss of gained knowledge. Loss of the gained knowledge is almost non-existent with the control experimental condition, which is to be expected of course because there had been a negligible initial gain in knowledge to begin with, and consequently there was almost nothing to be forgotten.

Next, in order to find out whether the experimental treatments differ in their impact on retention of productive knowledge of lexical phrases, I needed to perform GEE analyses with Bonferroni adjustment for multiple comparisons to compare each pair of treatments over the productive short-term delayed test and the productive long-term delayed test scores to determine which treatment resulted in significantly larger loss of gained knowledge. A GEE analysis was performed on the interaction between the productive short-term delayed test and the productive long-term delayed test scores between the control experimental condition and the DDL treatment and the result was not significant (Wald Chi-Square 3.147, p = .288), indicating that the loss of gained knowledge is similarly small under both treatments. Interestingly, by running the analysis between the control experimental condition and the dictionary treatment, I found a significant difference (Wald Chi-Square =9.985, p = .006). This result indicates that the loss of the knowledge between the two tests scores was marginal with the control experimental condition, while larger loss occurred in the gained knowledge between the two tests under the dictionary treatment. Conducting the same GEE analysis between the DDL instructional treatment and the dictionary instructional treatment

revealed a non-significant difference (Wald Chi-Square =1.026, *p* = .933). Although by comparing the loss in points and percentages the DDL treatment seems to be better at helping learners retain the gained knowledge than the dictionary treatment, this difference is not statistically significant.

In sum, the answer to the second research question is that the DDL treatment is not significantly better at promoting retention of productive knowledge of lexical phrases than the dictionary treatment. The statistical test showed a no difference result between the DDL treatment and the control experimental condition where there was nothing much to be forgotten. At the same time, the results showed that the difference between the dictionary treatment and the control experimental condition was significant.

5.10.3   Residual learning of productive knowledge of lexical phrases

To answer the third research question (What type of instructed input, concordance-based or dictionary-based, if either, promotes learners' residual learning of productive knowledge of the meaning and the form of lexical phrases? And which one is more effective?), an overall two-way GEE analysis was conducted on the productive pretest and the productive long-term delayed test scores between all the three treatments. Difference between these two times I take to represent 'residual learning', once initial gains and later lack of retention are all taken into account. The result was significant (Wald Chi-Square = 53.787, *p* < .001).

For the purposes of ascertaining whether the experimental treatments differ in their effects on residual learning of lexical phrases productive knowledge, I carried out GEE analyses between pairs of the three treatments with Bonferroni adjustment for multiple comparisons over the productive pretest and the productive long-term delayed test scores. The GEE analyses will also serve to determine which treatment yielded significantly greater residual learning of productive knowledge of lexical phrases. The result of the first GEE analysis between the control experimental condition and the DDL treatment tests scores was significant with the DDL treatment as might be expected scoring significantly higher (Wald Chi-Square =55.913, *p* < .001). The second comparison for this research question was carried out between the control experimental condition and the dictionary treatment test scores and the result was also significant (Wald Chi-Square

=9.061, $p < .01$, $p = .009$). Similarly, the difference was also found to be significant between the two experimental treatments. The DDL instructional treatment statistically significantly outperformed the dictionary instructional treatment (Wald Chi-Square =13.839, $p. < .001$). These findings show that both experimental treatments were superior to the control condition and the difference was statistically significant, but more importantly under the DDL experimental treatment participants performed significantly better at acquiring and then retaining knowledge over an extended period of time than they did under the dictionary experimental treatment and the difference is statistically significant.

Both experimental treatments promoted residual learning. This is shown by their significantly more effective results in comparison with the control experimental condition. In addition, the DDL treatment is significantly more effective at promoting residual learning than the dictionary treatment as has been described in the section above.

5.10.4   Initial learning of receptive knowledge of lexical phrases

In order to answer the fourth research question (What type of instructed input, concordance-based or dictionary-based, if either, promotes learners' initial learning of receptive knowledge of the meaning and the form of lexical phrases? And which one is more effective?), an overall two-way GEE analysis was run on tests measuring receptive knowledge of lexical phrases: the short and long term delayed test including all the treatments. The result shows a non-statistically significant interaction effect of treatment and time on the receptive short term delayed test scores and receptive long term delayed test scores (Wald Chi-Square = 5.365, $p = .068$). Then, a two-way repeated measures GEE analysis was performed on the receptive short-term delayed test scores including all the three treatments. The result shows a statistically significant interaction between all the treatments (Wald Chi-Square = 111.527, $p < .001$).

With a view to test whether the experimental treatments differ in their effects on initial learning of receptive knowledge of lexical phrases, multiple one-way GZLM analyses (with Bonferroni adjustment for multiple comparisons) comparing each pair of treatments over receptive short-term delayed test scores were run. Receptive short-term delayed test scores were statistically significantly different for the control experimental condition than the superior DDL treatment test

scores (Wald Chi-Square = 56.228, *p* < .001). Along the same lines receptive short-term delayed test scores were also statistically significantly different for the control experimental condition than the higher scores achieved with the dictionary treatment (Wald Chi-Square =65.397, *p* < .001). Finally, looking at the main comparison, there was a statistically significant difference in improvement on receptive short-term delayed test scores between the DDL treatment and the dictionary treatment with the DDL showing significantly higher scores (Wald Chi-Square =48.242, *p* < .001).

These results indicate that both experimental conditions were superior to the control experimental condition at promoting initial learning of receptive knowledge of form and meaning of lexical phrases, and the difference in improvement with both the DDL and the dictionary treatment was statistically significant compared to the control experimental condition. In addition, the DDL treatment is obviously the most effective between all the three treatments in promoting learners' initial learning of receptive knowledge of the meaning and the form of lexical phrases, and the difference in participants' performance between the two instructional conditions is statistically significant.

5.10.5   Retention of receptive knowledge of lexical phrases

We next tackle the fifth research question: What type of instructed input, concordance-based or dictionary-based, if either, promotes learners' retention of receptive knowledge of the meaning and the form of lexical phrases? And which one is more effective? We refer back to the aforementioned overall two-way repeated measures GEE analysis (section 5.10.4) that was run on the receptive short-term delayed and the receptive long-term delayed test scores including all the treatments (differences between which we take to represent 'retention'). The result shows a non-statistically significant interaction between treatment and time on receptive short-term delayed test and receptive long-term delayed test scores (Wald Chi-Square = 5.365, *p* = .068). Although this result is not statistically significant, it is very close; it is minimally significant. It means that there is only a 7% likelihood that the interaction effect between treatment and time is due to chance alone, and this percentage is very close to the accepted alpha level of p $\leq$ .05. Nonetheless, because of the overall non-significant result, no further tests were performed on pairs of treatments.

However, this result still highlights important outcomes; the loss of previously gained knowledge with the DDL instructional condition is on a similar level with the control condition, in which there was no instruction. There are no gains in the control experimental condition that can be lost later, to begin with. Participants' performance with the control and the DDL treatment did not differ a lot between the receptive short-term delayed test and the receptive long-term delayed test. This indicates that participants seem to be better at retaining their gained knowledge with the DDL treatment than they were with the dictionary treatment. This is further supported by the very close to statistically significant difference that was found by performing a GEE analysis with Bonferroni adjustment for multiple comparisons between the control experimental condition and the dictionary treatment, $p =. 051$.

5.10.6   Residual learning of lexical phrases receptive knowledge

Looking at the sixth research question (What type of instructed input, concordance-based or dictionary-based, if either, promotes learners' residual learning of receptive knowledge of the meaning and the form of lexical phrases? And which one is more effective?), a one way between groups GZLM analysis was performed on the receptive long-term delayed test scores focusing on all the three treatments (using these as a measure of residual learning in the absence of pretest scores). The result was highly significant (Wald Chi-Square= 170.737, $p < .001$).

In order to determine whether the experimental treatments differ in their effects on residual learning of lexical phrases receptive knowledge of form and meaning, I needed to perform GZLM analyses with Bonferroni adjustment for multiple comparisons. The aim was to compare each pair of treatments over the receptive long-term delayed test scores to find out which treatment yielded significantly greater residual learning of lexical phrases receptive knowledge. There was a statistically significant greater improvement with the DDL treatment than with the control experimental condition (Wald Chi-Square = 73.542, $p < .001$). The second comparison was run between the control experimental condition and the dictionary treatment, and again a statistically significant difference in improvement was found on the receptive long-term delayed test scores, with the dictionary treatment residual learning of lexical phrases receptive knowledge being significantly greater than that with the control experimental condition (Wald Chi-Square = 83.512,

p < .001). Finally, there was a statistically significant difference in improvement between the DDL instructional condition and the dictionary instructional condition on the receptive long-term delayed test scores, with the DDL treatment residual learning of lexical phrases' receptive knowledge being significantly greater than that with the dictionary treatment (Wald Chi-Square= 35.024, *p* < .001).

These results show that when examining the effects of the three types of treatments over an extended period of time on the receptive knowledge of the form and meaning of lexical phrases, there are important differences. While it might be expected to find a statistically significant difference in improvement between the control experimental condition and the two experimental treatments, both of which promote residual learning of receptive knowledge of lexical phrases, the most interesting finding is the statistically significant difference that was found between the DDL and the dictionary instructional conditions. This result supports the results I found earlier in section 5.10.3 for RQ 3 that show that the DDL treatment emerges as more effective and significantly better than the other two treatments when the examined effect is residual learning of productive knowledge of form and meaning of lexical phrases (i.e., retention of the knowledge gained over a longer period of time). Interestingly, a similar pattern was found when examining the results of the productive type of knowledge.

5.11 Discussion

In answer to the first research question, the results indicate that both DDL and dictionary treatments contributed to initial learning of productive knowledge of the meaning and the form of lexical phrases. Each one of the instructional conditions contributed to significant gains in productive knowledge of lexical phrases. There were hardly any learning gains in the control experimental condition.

This means that improvement cannot be due to a test effect alone. Furthermore, these findings indicate that after receiving explicit lexical phrases instruction, students' lexical phrase knowledge was significantly enhanced in light of their progress in the short-term delayed posttest. These findings are consistent with those of (Jones & Haywood, 2004; Schmitt et al., 2004): teaching lexical phrases is beneficial, and does enhance learners' knowledge. In comparison to the

improvement in the dictionary treatment, the DDL treatment showed the greatest improvement in the short-term delayed test for promoting learners' initial learning of the productive knowledge of the meaning and the form of lexical phrases and the difference was significant at the p ≤.001 level.

In answer to the second research question, the results indicated that the DDL treatment was not significantly better at promoting learners' retention of productive knowledge of the meaning and the form of lexical phrases than the dictionary treatment (*p* = .933). The comparison between the DDL treatment and the control experimental condition was not significant, while it was significant between the dictionary treatment and the control experimental condition. When comparing the changes between tests in each treatment, the difference between the short term delayed test and the long term delayed test was significant at the p ≤.05 level in both the DDL treatment (p = .037), and the dictionary treatment (p = .005). The dictionary treatment is weaker at prompting retention than the DDL treatment as learners seem to have lost more of their gained knowledge under the dictionary treatment, but the difference is not significant.

A similar conclusion to my own here was also reached by (Schmitt et al., 2004). Their study shows that participants increased their knowledge of the target formulaic sequences, both receptively and productively. The increase was statistically significant at the p ≤.001 level. However, their study included only one posttest administered after a 2-3 month English for academic purposes university program. In addition, Schmitt et al. (2004) pointed out in their study that it is not clear what the enhancement stemmed from: explicit instruction or exposure to a rich ESL environment.

The significant results achieved by the DDL treatment in promoting learners' initial learning of productive knowledge of lexical phrases might be attributed to several factors. First, the possibility that a few of the glosses provided by the dictionary entries were not entirely clear and informative, which was in fact asserted by several students in their interviews. Another factor could be the number of concordance lines in the worksheets as there were ten concordances in every DDL worksheet, providing repeated exposure to the target phrases. Furthermore, these concordance lines were all focusing on the same lexical phrase. The lexical phrases study took place after the collocations study and some students stated in the interviews that they had gained some experience through the training session and the collocation study session. They declared that they were more competent and faster in working with the DDL worksheets in the lexical phrases study since they had become more accustomed to the approach and they had developed their own techniques for reading and studying the concordance lines.

In answer to the third research question, the results indicate a significant difference between the DDL treatment and the dictionary treatment at promoting residual learning of the productive knowledge of the form and the meaning of lexical phrases. A similar empirical finding is given in Cobb (1999), where concordances and dictionary treatments both had short-term benefits, but only the concordance group was able to retain their knowledge and even increase it with time. In this study, it seems that although the mean score in the DDL and the dictionary treatment decreased between the short-term delayed test and the long-term delayed test, the residual impact of lexical phrase instruction remained since students' performance in the long-term delayed test was still better than their knowledge baseline in the productive pretest. In other words, with participants being without instruction during the time interval, it may be expected that they'll lose what they learnt but some of the gained knowledge sustained compared with their level of knowledge at the very beginning. Furthermore, when comparing the changes between tests in each treatment, the difference between the productive pretest term and the long term delayed test was significant in both the DDL and the dictionary treatments ($p <. 001$).

In answer to the fourth research question, the results mirrored the findings of the first research question and they indicate that both DDL and dictionary treatments contributed to initial learning of receptive knowledge of the meaning and the form of lexical phrases. In comparison to the improvement in the dictionary treatment, the DDL treatment showed the greatest improvement in the short-term delayed test for promoting learners' initial learning of the receptive knowledge of the form and the meaning of lexical phrases and the difference was significant ($p < .001$).

In answer to the fifth research question, the results indicated that the DDL treatment was better at promoting learners' retention of receptive knowledge of form and meaning of lexical phrases than the dictionary treatment. However, no paired comparison tests were conducted because the result of interaction between treatment and time on the short- and long-term delayed test scores was non-significant. Similarly, concerning retention of the productive knowledge of form and meaning of lexical phrases, the comparison between the DDL and the control experimental condition was not significant, while it was very close to being significant between the dictionary and control experimental condition ($p= .051$). Besides, when comparing the changes between tests in each treatment, the difference between the short term delayed test and the long term delayed test was not significant in the DDL treatment ($p. = .089$), and significant in the dictionary treatment ($p <. 001$).

In answer to the sixth research question, the results indicate a significant difference between the

DDL treatment and the dictionary treatment at promoting residual learning of the receptive knowledge of form and meaning of lexical phrases. In this study, it seems that although the mean score in the DDL and the dictionary treatments decreased between the short- and long-term delayed test, the residual effects of explicit lexical phrases instruction in the DDL treatment was sustained. In other words, lack of instruction and input during the time lapse may cause learners to forget but larger amounts of the gained knowledge in the DDL condition remained in comparison to the dictionary condition.

The fact that the results of receptive knowledge of form and meaning of lexical phrases support the data from the productive test suggests that the results are likely to be valid. However, the results of the receptive test should be interpreted with caution because receptive knowledge of the meaning and form of lexical phrases was not pretested. Two pretests were not used because they might have given away the purpose of the study. In addition, researchers who have carried out studies on formulaic language learning claim that seeing the form of the multiword unit in a test administered before the productive test might help learners recall the form of the multiword unit during productive tests of form and meaning (Webb & Kagimoto, 2009, 2011; Webb et al., 2013).

Explicit lexical phrases instruction in the current study as represented by the DDL method and the dictionary method was found to differently affect students' performance on the posttests. The DDL worksheets were more only significantly more effective than the dictionary worksheets in initial learning and residual learning of productive and receptive knowledge of form and meaning of lexical phrases. These superior results might be attributed to the fact that more cognitive effort was exerted by students on the DDL worksheets to decode the meaning and the usage of the lexical phrases and this resulted in deeper level of processing and consequently enhanced learning and retention. This is a possible interpretation, but future research is called for to address this issue. Nevertheless, we need to clarify that the dictionary worksheets were also effective at promoting learners' initial learning ($p < .001$) and residual learning ($p < .001$) of productive knowledge of form and meaning of lexical phrases as the results of the changes between the pretest and the short- and long-term delayed posttests under the dictionary treatment revealed.

It is noteworthy that learners achieved significant initial learning and residual learning results on productive and receptive knowledge of form and meaning of lexical phrases following the DDL treatment in comparison with the dictionary treatment. Learners were able to achieve these high scores in tests of the most difficult aspects of form-meaning knowledge: productive knowledge of

multiword unit form and meaning (form recall), and receptive knowledge of multiword unit form and meaning (meaning recall). Receptive knowledge of form (form recognition) and receptive knowledge of meaning (meaning recognition) were not tested. Self-evaluation tests that ask whether the student is familiar with the word or not were not utilized either. It is widely acknowledged in the literature of vocabulary learning that the acquisition of word knowledge is an incremental process and the harder to learn aspects, such as productive knowledge of form and meaning (active recall), are learnt last, thus, we should be sure that since learners' productive knowledge of form and meaning and receptive knowledge of form and meaning were improved by DDL, the easier aspects of lexical phrases knowledge were acquired as a result of the DDL worksheets as well (Laufer & Girsai, 2008). I would suggest from my own experience as a FL teacher and learner that all the other aspects of lexical phrases knowledge could be enhanced by DDL worksheets. However, this remains an empirical question worthy of further investigation.

The effectiveness of DDL worksheets in the current study can be accounted for by the hypotheses of 'noticing', 'Involvement Load Hypothesis', and 'pushed output'. The last hypothesis is related to the translation activity, which was identical in both types of the worksheets, the DDL and the dictionary worksheets. The translation activity aim was to attract learners' attention to the lexical phrase and create a need for discovering its meaning through translation from L2 to L1.

To produce accurate translation, learners cannot avoid problematic vocabulary items since they are already preset by the provided L1 text. 'Pushed output' may have promoted learning in general, and good recall of productive and receptive knowledge of form and meaning of lexical phrases. Productive knowledge of form and meaning means a better memory trace than receptive knowledge of form and meaning, and is more difficult than receptive knowledge of form and meaning. Productive knowledge of form and meaning of lexical phrases is more difficult than any other vocabulary task that requests recall or recognition of lexical phrases' meaning, or recognition of their form (Laufer et al., 2004; Laufer & Goldstein, 2004).

As for the involvement load hypothesis, the DDL worksheets had a higher involvement load than the dictionary worksheets. Let us examine the involvement load in each one of the instructional conditions in more detail. In the DDL and the dictionary treatments, the translation activity required learners to translate sentences from L2 to L1. The 'need' element was present as there was no possible way to avoid focusing on the target lexical phrases. The need to know the meaning of the lexical phrase is induced by the teacher not learners; hence the 'need' element is moderate (+).

Translation into L1 required searching for meaning. The second question simply singled out the target lexical phrase and asked learners what translation they provided for it in the first exercise sentence. The third activity was searching the concordance lines to figure out the meaning of the lexical phrase. The search element was present in the DDL worksheets as learners attempt to find the meaning of the lexical phrase on their own, i.e. inductively. No meaning was provided in the concordance lines section of the worksheet and learners needed to search, read, and discover on their own. Thus, the search aspect is strong in the DDL condition and moderate in the dictionary worksheets. The search aspect is weaker in the dictionary condition since decoding information would presumably be easier than in the DDL condition. The second cognitive element, 'evaluation,' is strong in both DDL and dictionary conditions as learners evaluate the information they gained from either the concordance lines or the dictionary entry section on the worksheets to make the sentences in the last activity (Batia Laufer, personal communication), (Jan Hulstijn, personal communication).

The different involvement loads of the two treatments are mirrored in the results. The participants in the dictionary instructional condition learnt lexical phrases, in particular at the initial learning phase. However, the DDL condition yielded the highest scores in all three learning stages (initial learning, retention and residual learning) and was significantly better at initial learning and residual learning than the dictionary treatment. It seems that participants' engagement in a cognitively demanding task during the search phase in the DDL treatment led to better learning and remembering of the lexical phrases. The deep involvement under the DDL instructional condition apparently resulted in longer lasting memory traces of lexical phrase knowledge. Correct production of productive knowledge of the form and meaning of lexical phrases can be considered a good achievement since this aspect of lexical phrase knowledge is difficult and problematic, even for advanced learners, and more so in relatively semantically opaque lexical phrases.

5.12 Students' views on lexical phrases worksheets: questionnaire data

The results of the evaluation questionnaire showed that students held positive attitudes towards learning English lexical phrases via both the DDL and the dictionary-based instructional conditions. Nonetheless, small differences were noticed in their evaluation between the two experimental treatments in some aspects.

A principal component analysis (PCA) was run on the 27 items with oblique rotation (direct oblimin). The Kaiser-Meyer-Olkin measure verified the sampling adequacy for the analysis (KMO =. 80 or 'great', according to Field (2009); Hutcheson and Sofroniou (1999); Kaiser (1974), and all KMO values for individual items were > .615, which is above the acceptable limit of .5 (Field, 2009). Bartlett's test of sphericity (x^2 (351) = 1640.354, p. < .001), demonstrated that correlations between items were sufficiently large for PCA. An initial analysis was carried out to retrieve eigenvalues for each component in the data. Six components had eigenvalues over Kaiser's criterion of 1 and in combination explained 61.29 % of the variance. The scree plot showed inflexions that would justify retaining all the six components. Given the sample size, and the convergence of the scree plot and Kaiser's criterion on six components, this is the number of components that were retained in the final analysis. Figure 5: 1 shows the pattern matrix. The items that cluster on the same components suggest that component 1 represents whether or not students would like to use dictionary worksheets in the future to learn lexical phrases, component 2 deals with whether or not students would like to use DDL worksheets in the future to learn lexical phrases, component 3 is about the difficulty of working on the dictionary worksheets, component 4 the usefulness of DDL worksheets for learning lexical phrases, component 5 the usefulness of the dictionary worksheets for learning lexical phrases, and component 6 is about the difficulty of working on the DDL worksheets. The questionnaire internal reliability was measured via Cronbach's Alpha and it was α= .86. The percentage of variance that each factor explained and the eigenvalue are reported in Appendix 5M. The scree plot is shown in Appendix 5N, and factor correlation matrix table is presented in Appendix 5O.

The analysis of the closed items in the lexical phrases questionnaire included presenting participants' responses as counts and percentages for each item on all of the five points of the Likert scale. The analysis also included providing descriptive statistics of the participants'

responses. Inferential statistics were also performed on some of the questionnaire items, which target critical issues in participants' attitude, and evaluation of the two instructional conditions.

The closed items in the questionnaire can be grouped under six main research questions. The raw number and percentage in parentheses of participants' responses are shown in Tables 5:6, 5:7 and 5:8. Participants' responses to the eight questionnaire items that were designed to answer the following research question: 'How helpful do learners find concordance worksheets for learning lexical phrases?' and 'How helpful do learners find dictionary worksheets for learning lexical phrases?' are displayed in Table 5:6.

Pattern Matrix[a]

	Factor					
	1	2	3	4	5	6
Q18	.693					
Q22	.685					
Q19	.588					
Q23	.572					
Q8		.744				
Q9		.721				
Q4		.699				
Q5		.581				
Q27			.881			
Q25			.735			
Q24			.715			
Q15			.685			
Q26			.680			
Q6				.830		
Q2				.821		
Q7				.812		
Q3				.692		
Q21					.809	
Q17					.711	
Q20					.705	
Q16					.672	
Q14						-.811
Q10						-.757
Q13						-.725
Q1						-.584
Q12						-.501
Q11						-.466

Extraction Method: Principal Axis Factoring.

Rotation Method: Oblimin with Kaiser Normalization.

a. Rotation converged in 11 iterations.

Figure 5:1 Pattern matrix of the questionnaire in the lexical phrases study

The third research question targets the difficulty aspect of the worksheets ('How difficult do students find working with concordance examples in lexical phrases worksheets?), and the fourth research question looks at this aspect of the dictionary treatment ('How difficult do students find

working with dictionary information in lexical phrases worksheets?') and results are presented in table 5:7. The fifth and the sixth research questions shed light on the participants' feelings about the two types of worksheets ('Would they like to use concordance/dictionary worksheets in the future to learn lexical phrases?'). The results of the items answering these two research questions are shown in table 5:8.

The descriptive statistics (mean, mode, standard deviation) of the students' responses for all the questionnaire items are presented in a parallel format in Appendix 5P. Inferential statistical tests on the questionnaire results (presented in Appendix 5Q) were analyzed using a non-parametric test (Wilcoxon test) because the assumptions of the appropriate parametric test (paired samples t-test) were not met by the questionnaire data. The assumption of normality of distribution for questionnaire items scale scores for both experimental groups was violated as assessed by Shapiro-Wilk's test and Kolmogorov–Smirnov test ($p > .05$), and by visual inspection of their histograms.

As can be seen in table 5:6, the majority of respondents 90.5% agreed that DDL worksheets were useful for learning lexical phrases, and 78% thought the same about the dictionary worksheets (see items 2 and 16). Although using DDL for teaching lexical phrases is a new venture, students felt strongly that this approach improved their knowledge of lexical phrases. This supports the finding in Geluso and Yamaguchi (2014) where 97% of respondents agreed the DDL approach helped them learn new lexical phrases. In line with this finding, 81% of respondents believed in the efficacy of the DDL worksheets at helping them avoid making lexical phrases errors, while a considerably smaller number of respondents 53.3% believed the same for the dictionary worksheets (see items 3 and 17). Another encouraging finding is that 87.6% of respondents thought the DDL worksheets helped them learn the meaning of lexical phrases, and 72.4% thought the same for the dictionary worksheets (see items 6 and 20). This is again in line with Geluso and Yamaguchi (2014) finding that 97% of respondents thought the DDL approach helped them learn new lexical phrases. 87.6% of respondents also believed that the DDL worksheets helped them learn the usage of lexical phrases, while a much smaller percentage 53.3% believed the same for the dictionary worksheets (see items 7 and 21). This provides quantitative support for Frankenberg-Garcia (2012) finding that concordances are useful for learning usage of vocabulary. It also supports the same finding by Geluso and Yamaguchi (2014) where 89% of learners thought DDL helped them learn the usage of phrases.

1. How helpful do learners find concordance worksheets for learning lexical phrases?					
2. How helpful do learners find dictionary worksheets for learning lexical phrases?					
Items	Strongly agree	agree	Neither agree nor disagree	disagree	Strongly disagree
2. Using the concordance worksheets to learn lexical phrases was useful.	50 (47.6%)	45 (42.9%)	7 (6.7%)	3 (2.9%)	-
16. Using the dictionary worksheets to learn lexical phrases was useful.	41 (39%)	41 (39%)	12 (11.4%)	10 (9.5%)	1 (1%)
3. After learning using these concordance worksheets, I think I will avoid making lexical phrases errors in the future.	42 (40%)	43 (41%)	13 (12.4%)	7 (6.7%)	-
17. After learning with the dictionary worksheets, I think I will avoid making lexical phrases errors in the future.	25 (23.8%)	31 (29.5%)	34 (32.4%)	14 (13.3%)	1 (1%)
6. Using the concordance worksheets helps me in learning the meanings of lexical phrases.	39 (37.1%)	53 (50.5%)	8 (7.6%)	5 (4.8%)	-
20. Using the dictionary worksheets helps me to learn the meanings of lexical phrases.	30 (28.6%)	46 (43.8%)	17 (16.2%)	11 (10.5%)	1 (1%)
7. Using the concordance worksheets helps me to learn the usage of lexical phrases (i.e. how to use these lexical phrases in English).	44 (41.9%)	48 (45.7%)	7 (6.7%)	6 (5.7%)	-
21. Using the dictionary worksheets helps me to learn the usage of lexical phrases (i.e. how to use these lexical phrases in English).	17 (16.2%)	39 (37.1%)	31 (29.5%)	17 (16.2%)	1 (1%)

Table 5:6 How helpful do learners find concordance/dictionary worksheets for learning lexical phrases?

3. How difficult do students find working with concordance examples in lexical phrases worksheets?					
4. How difficult do students find working with dictionary information in lexical phrases worksheets?					

Items	Strongly agree	agree	Neither agree nor disagree	disagree	Strongly disagree
1. Using the concordance worksheets to learn lexical phrases was easy.	13 (12.4%)	54 (51.4%)	26 (24.8%)	11 (10.5%)	1 (1%)
15. Using the dictionary worksheets to learn lexical phrases was easy.	14 (13.3%)	39 (37.1%)	37 (35.2%)	14 (13.3%)	1 (1%)
10. It was difficult to adapt to reading the concordance examples.	3 (2.9%)	46 (43.8%)	32 (30.5%)	22 (21%)	2 (1.9%)
24. It was difficult to adapt to reading the dictionary information.	9 (8.6%)	41 (39%)	28 (26.7%)	25 (23.8%)	2 (1.9%)
11. It was difficult to understand the concordance examples due to cut-off sentences (where I couldn't see the beginning and/or the end of the sentence).	6 (5.7%)	34 (32.4%)	27 (25.7%)	32 (30.5%)	6 (5.7%)
12. It was difficult working on the concordance examples due to the time limit.	7 (6.7%)	24 (22.9%)	35 (33.3%)	35 (33.3%)	4 (3.8%)
25. It was difficult working on the dictionary information due to the time limit.	8 (7.6%)	37 (35.2%)	26 (24.8%)	29 (27.6%)	5 (4.8%)
13. Working on the concordances examples required a lot of effort.	12 (11.4%)	29 (27.6%)	24 (22.9%)	37 (35.2%)	3 (2.9%)
26. Working on the dictionary information required a lot of effort.	7 (6.7%)	37 (35.2%)	31 (29.5%)	24 (22.9%)	6 (5.7%)
14. It was difficult to understand the concordance examples due to unfamiliar vocabulary.	6 (5.7%)	43 (41%)	30 (28.6%)	22 (21%)	4 (3.8%)
27. It was difficult to understand the dictionary information due to unfamiliar vocabulary.	10 (9.5%)	41 (39%)	30 (28.6%)	20 (19%)	4 (3.8%)

Table 5:7 How difficult do students find working with concordance examples in lexical phrases worksheets?

Table 5:7 presents the items related to the difficulty of working on DDL and dictionary worksheets. More than half of the respondents thought that using the DDL worksheets was easy 63.8%, and

more interestingly perhaps, a smaller figure 50.4% of respondents thought the same about the dictionary worksheets (see items 1 and 15). This finding lends some support to Frankenberg-Garcia (2005) conclusion that learners are no better researchers with dictionaries than they are with corpora (see section 4.16). The next two items, items 10 and 24, asked learners about the difficulty of adapting both to concordance examples and dictionary information. Nearly half of the respondents 46.7% believed it was difficult to adapt to concordance examples and a very similar percentage 47.6% believed the same about the dictionary entries. These findings are very close to those of Geluso and Yamaguchi (2014) where 59% of respondents thought that learning to use the Corpus of Contemporary American English (COCA) was difficult, and 48% thought that it was difficult to use concordancing. We need to bear in mind though that Geluso and Yamaguchi (2014) study featured the hard version of DDL. When respondents were asked in item 11 if it was difficult to understand the concordance examples due to their cut off nature 38.1% agreed it was difficult, 25.7% of respondents remained undecided, and 36.2% disagreed. In Geluso and Yamaguchi (2014), more students 83% thought that the cut off sentences were difficult. In items 12 and 25 respondents were asked if it was difficult working on DDL worksheets with the time limit and 29.6% agreed it was difficult and 37.1% disagreed, while 42.8% agreed with respect to the dictionary worksheets. Items 13 and 26 asked respondents about the effort needed to work on both types of worksheets. 39% of respondents believed the DDL worksheets required a lot of effort, while slightly more 41.9% believed that the dictionary worksheets required a lot of effort. Respondents were asked if it was difficult to work on the DDL worksheets due to unfamiliar vocabulary. 46.7% of respondents agreed, and 48.5% agreed regarding the dictionary worksheets. A considerably larger percentage of respondents 76% in Geluso and Yamaguchi (2014) study thought that it was difficult to use the corpus because of unfamiliar vocabulary. This could be because participants in their study were working on the COCA corpus hands-on, while in the current study the concordance lines were prepared by me and selected so as to avoid unfamiliar vocabulary as much as possible. Participants' slightly more negative responses regarding the dictionary worksheets with respect to the time limit, unfamiliar vocabulary and required effort might be due to the difficulty students had in decoding dictionary information, an issue that was widely noticed during the interviews. Students' views on DDL worksheets being easier than dictionary worksheets didn't reach significance, as can be seen in Appendix 5Q. However, participants in Boulton (2010a) found DDL data to be significantly easier than dictionary information.

	5. Would they like to use concordance worksheets in the future to learn lexical phrases?				
	6. Would they like to use dictionary worksheets in the future to learn lexical phrases?				
Items	Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree
4. I would like to do other activities on lexical phrases using concordance worksheets.	40 (38.1%)	40 (38.1%)	14 (13.3%)	10 (9.5%)	1 (1%)
18. I would like to do other activities on lexical phrases using the dictionary worksheets.	23 (21.9%)	49 (46.7%)	21 (20%)	10 (9.5%)	2 (1.9%)
5. Using the concordance worksheets to learn lexical phrases was interesting.	35 (33.3%)	51 (48.6%)	11 (10.5%)	8 (7.6%)	-
19. Using the dictionary worksheets to learn lexical phrases was interesting.	23 (21.9%)	48 (45.7%)	26 (24.8%)	6 (5.7%)	2 (1.9%)
8. I would recommend the concordance worksheets for learning lexical phrases to other students.	40 (38.1%)	42 (40%)	15 (14.3%)	7 (6.7%)	1 (1%)
22. I would recommend the dictionary worksheets for learning lexical phrases to other students	33 (31.4%)	40 (38.1%)	24 (22.9%)	6 (5.7%)	2 (1.9%)
9. As I have worked more on the concordance worksheets, I have come to like them more.	22 (21%)	49 (46.7%)	19 (18.1%)	13 (12.4%)	2 (1.9%)
23. As I have worked more on the dictionary worksheets, I have come to like them more.	12 (11.4%)	40 (38.1%)	42 (40%)	9 (8.6%)	2 (1.9%)

Table 5:8 Would they like to use concordance/dictionary worksheets in the future to learn lexical phrases?

Table 5:8 includes items about liking or disliking the two types of worksheets. Items 4 and 18 ask whether students would like to do additional activities on lexical phrases using DDL worksheets, and 76.2% agreed they would like to. 68.3% agreed they would like to use dictionary worksheets. 81.9% thought using the DDL worksheets to learn lexical phrases was interesting, and 67.6% thought using the dictionary worksheets was interesting (see items 5 and 19). When asked whether they would recommend the DDL worksheets for learning lexical phrases to other learners, 78.1% agreed, and a slightly smaller percentage of respondents 69.5 % agreed they would recommend the dictionary worksheets (see items 8 and 22). Items 9 and 23 ask whether learners came to like the

worksheets more the more they worked on them; 67.7% agreed with respect to the DDL worksheets, and 49.5% agreed regarding the dictionary worksheets.

There were statistically significant differences between a number of items on the questionnaire. The DDL worksheets were thought to be significantly more useful for learning lexical phrases than the dictionary worksheets (p<. 05). There was also a significant difference in students' beliefs regarding the efficiency of the worksheets to help them avoid future errors, with the DDL worksheets outperforming the dictionary ones (p <. 001). Furthermore, the DDL worksheets were rated significantly more interesting than the dictionary worksheets (p < .05), significantly better for learning the meaning of the lexical phrases (p < .01), and the usage of lexical phrases than the dictionary worksheets (p < .001). The DDL worksheets were significantly liked more by students than the dictionary worksheets, the more they worked on them (p ≤. 05). Participants in (Boulton, 2010a) also rated DDL as significantly more useful than dictionary information and significantly more helpful for avoiding target errors in the future.

Tables 5:9-5:14 present responses in percentages and in order to the six open questions in the lexical phrases questionnaire: 1. What type of worksheets was more useful for learning lexical phrases?; 2. What type of worksheets did you prefer for learning lexical phrases?; 3. What are the strengths and weaknesses of each type?; 4./5. How can the concordance worksheets and the dictionary worksheets for teaching lexical phrases be improved in the future?; and 6. What did you like and dislike about the sentence making activity?.

DDL more useful 57%	Dictionary more useful 29%	Both equally useful 14%	Neither useful 0%
- Provides more information about the LP, the meaning, the usage and other aspects, through seeing it in many different contexts, thus facilitating better learning (36%) - Easy (13%) - Encourages self-thought, which is more useful for learning, while the dictionary provides the definition straight away (13%) - DDL clarifies the exact meaning of the LP, unlike the dictionary explanation (9%) - Clear (7%) - Interesting, challenging, and very exciting; I enjoyed looking for the meaning (7%) - Organised (5%) - Further improves vocabulary and English language (2%) - No answer (8%)	- Useful to understand the phrase by its definition (16%) - Clear (14%) - Provides more information about the LP through a definition and examples (12%) - Quick (10%) - Easy (10%) - Familiar (9%) - Not complicated (8%) - Saves time (8%) - Interesting (2%) - No answer (11%)	- Dictionary explains the meaning and DDL explains the meaning, usage, and LP application (24%) - As both encourage consideration of the close meaning (9%) - No answer (67%)	

Table 5:9 What type of worksheets was more useful for learning lexical phrases?

Prefer DDL 55%	Prefer Dictionary 26%	Liked both 18%	Didn't like either 1%
- More on the LP meaning and usage is learned (21%) - Because the accurate meaning can be guessed through the examples, contrary to the dictionary definition (15%) - Easy to guess the meaning through examples (12%) - Useful (11%) - It provides me with a chance to think by myself (10%) - Not direct and forgettable (7%) - Easy (6%) - Interesting (5%) - Clear (5%) - Quick (3%) - No answer (5%)	- Easy (23%) - Clear (12%) - Provides the definition (11%) - Useful (10%) - Because it gives both the meaning and examples (8%) - Concise (7%) - Requires minimum or no effort (7%) - Interesting (1%) - No answer (21%)	- Both enrich your knowledge/teach you through different methods (26%) - Both help in understanding the meaning (8%) - Both are easy (7%) - No answer (59%)	

Table 5:10 What type of worksheets did you prefer for learning lexical phrases?

DDL strengths	Dictionary strengths
▪ Many examples are provided that explain the exact meaning and its accurate/appropriate usage (16%)	▪ Provides a definition (18%)
▪ Teach you more about meaning and application (12%)	▪ Easy and clear examples that depict the meaning (17%)
▪ Better delivery of the meaning and usage of the LP than the dictionary (11%)	▪ Clear (15%)
▪ Many examples to illustrate how to use the LP in English in different contexts/fields (11%)	▪ Useful (13%)
▪ Clearer (in meaning and usage) (9%)	▪ Save times (8%)
▪ Easy to understand (7%)	▪ Organised (7%)
▪ Interesting (a method different from what we are used to) (7%)	▪ Direct (5%)
▪ Enables you to think by yourself by reading, trying to understand, and guessing; ultimately you will actually learn / use the brain and guess the meaning / make the student think deeper and discover the meaning from the context (7%)	▪ Concise (5%)
	▪ Students are familiar with using the dictionary (4%)
	▪ Interesting (2%)
	▪ Provides a phonetic transcription (1%)
▪ Clarifies the exact meaning of the LP, unlike the dictionary explanation (5%)	▪ No answer (5%)
▪ Quicker than using the dictionary (4%)	
▪ Various sentences in different tenses and contexts (3%)	
▪ I feel it improves my vocabulary/my English language more (2%)	
▪ Organised (2%)	
▪ Encourages self-learning, without using the teacher (2%)	
▪ No answer (2%)	

Table 5:11 What are the strengths of each type?

DDL weaknesses	Dictionary weaknesses
• Nothing! No weakness at all! (26%) • Incomplete sentences (13%) • Requires more time (due to the many examples) (11%) • Difficult sentences and structures, with some sentences not clear (10%) • Font size was small (8%) • Requires more effort (6%) • Doesn't provide the meaning (5%) • Difficult vocabulary (3%) • Not interesting (1%) • No answer (17%)	• A definition is provided, but you don't quite understand the LP meaning as it is not clear enough and somewhat confusing (19%) • Needs more time (13%) • There are not enough examples (just two are provided) to help you to understand the exact meaning accurately (12%) • No specific action is required. The meaning and two examples are directly provided (10%) • Difficult, in terms of both definition and examples (10%) • Insufficient information provided on how to use the LP, leading to potential errors (8%) • Requires more effort to understand the meaning (7%) • Brief (5%) • Less information than DDL (5%) • Boring (4%) • Difficult vocabulary (3%) • Not attractive (2%) • Easy to forget (2%) • No answer (0%)

Table 5:12 What are the weaknesses of each type?

Improving DDL	Improving dictionary
• Great/good as it is now (27%) • Decrease the number of examples to five to allow more focus and thus discover the meaning more quickly (12%) • Make the layout like a book (10%) • More time (9%) • Clearer/larger font (7%) • Complete sentences to allow a quicker understanding of examples (6%) • Add the LP meaning; either provide the definition from the dictionary and then the examples of the concordance, or give the examples of the concordance first and then provide the definition so that students can attempt to guess it (6%) • Provide on computers and mobile applications (5%) • Use different colours for concordance lines (3%) • Put spaces between concordance lines (3%) • No answer (12%)	• Add more examples to allow a more accurate understanding of the meaning and usage (36%) • Show/add more details about the LPs (19%) • Provide the dictionary electronically, e.g., on computers and mobile devices (10%) • Use clear vocabulary both in the definitions and examples (9%) • Allow more time (9%) • Fine as it is (3%) • No answer (14%)

Table 5:13 How can the concordance and the dictionary worksheets for teaching lexical phrases be improved in the future?

Liked about the sentence making activity	Disliked about the sentence making activity
▪ Liked it a lot / liked everything (22%) ▪ It helps apply what I learnt and reinforce it in my mind (16%) ▪ Once you construct a sentence with the LP, its meaning (or all of the aspects of knowledge) will be reinforced in your mind and it is remembered better in the future. More practice results in better learning (15%) ▪ Allows me to test my understanding of the LP and my skills in English to help me judge my learning progress and whether more practice is required (13%) ▪ Allows me to use my mind actively (7%) ▪ Interesting / exciting (6%) ▪ Increases the ability to construct sentences correctly and widens the repertoire of vocabulary. (6%) ▪ Providing a set of suggested topics shortens the thinking time of an idea (5%) ▪ Helps me to learn how to use the LP correctly in various contexts (4%) ▪ Allows me to focus more (2%) ▪ No answer (4%)	▪ Sometimes I need more time than that provided (17%) ▪ Disliked having suggested topics (10%) ▪ Nothing (24%) ▪ No answer (49%)

Table 5:14 What did you like and dislike about the sentence making activity?

5.13 Students' views on lexical phrases worksheets: interview data

(1) Section 1: how easy/difficult it was to use these worksheets

Students thought the DDL worksheets were easy and clear. Two of them even stated that the DDL worksheets for teaching the lexical phrases were easier than the DDL worksheets that were used for teaching collocations. This might be due to the fact that concordance examples in the DDL worksheets for the lexical phrases referred to the same lexical phrase in each worksheet, a feature that students and teachers recommended for the collocations worksheets before actually seeing the lexical phrases worksheets. Furthermore, students sometimes state that getting training and working on the collocations worksheets earlier improved their techniques.

"Dealing with the DDL worksheets was easy and clear especially because we got the training and the collocation class earlier, so it was easy and clear for me. We were able to work faster with the lexical phrases worksheets because we developed techniques for reading concordance lines." P2

(2) Section 2: General preference

Students who preferred the DDL worksheets thought they were clearer for teaching lexical phrases. The ones who favoured the dictionary worksheets did so mainly because they are shorter, according to them.

"DDL is clearer for teaching lexical phrases than dictionary worksheets. I always prefer examples for learning vocabulary." P1

"Dictionary worksheets were better because they are a little bit shorter. I like to find out the answers quickly." N2

(3) Section 3: Usefulness

The most interesting point that was raised by students and teachers alike is that students read the definition of the lexical phrase in the dictionary worksheets but they were still not clear about the meaning of the lexical phrases. Furthermore, students who said the dictionary exercises were more useful seemed to base their opinion on a personal preference since they explain 'usefulness' by them being somehow shorter, easier, less challenging, and more directly providing the meaning than the DDL ones.

DDL more useful

"Concordance worksheets are more useful because yes the dictionary gives me a definition but I won't necessarily arrive at the meaning. It confuses me instead of helping me. Unlike concordance method, when I read the provided examples I reach the meaning easily and clearly. I get the meaning of the lexical phrase straight away from the concordance examples. I don't think that explaining the meaning or giving a definition is the proper way for teaching lexical phrases. Providing many good examples is the best way to teach lexical phrases." P1

"With the lexical phrases since they are consisted of three words or more, and the meaning of the word on its own is different from its meaning when combined by two more word in a lexical phrase. So, we start from scratch and concordance examples are best used for this purpose" P3

"With dictionary worksheets, I sometimes read the definition of the lexical phrase but still I don't understand the meaning of the lexical phrase. The concordance method was helpful for learning the lexical phrases because it presents the lexical phrase in several varied contexts and the usage is the same as in Arabic in these contexts. So, when I read them I figure out the meaning instantly easily and accurately." P2

Dictionary more useful

"With the concordance worksheets, I can guess and come close to the meaning but I won't arrive at the meaning myself accurately. With the dictionary worksheets I can get the meaning quickly." N1

"The dictionary worksheets are concise and easy. I think they are more useful sometimes" N3

DDL is more useful than being told the right answer by the teacher or vice versa

Interestingly, students seem to favour the self-study approach, and they connect it with their ability to remember the information for longer periods of time. On this basis, they thought the self-study approach is more useful than the teacher deductive teaching approach.

"I studied some lexical phrases as a handout list in a vocabulary module when I was in … university before coming to this university. I hardly remember anything from what I learnt." (P2)

Dictionary is more useful than being told the right answer by the teacher or vice versa

Similar to their views when comparing the dictionary exercises with the collocation worksheets, students argued that there was again no difference between dictionary worksheets and a teacher-directed style of learning.

"The only difference is that teacher explains things orally, and the dictionary worksheets you have to read the information yourself." N2

(4) Section 4: strengths and weaknesses

DDL strengths

Students highlighted many different strengths of the DDL worksheets, including their association with the discovery approach, varied rich contexts, learning by guessing from context, and their motivational impact.

"Because there are many examples in the concordance worksheets if I didn't understand the meaning from the first one I can move to the next one and so on. In general, I was able to figure out the meaning of the lexical phrase from nearly all the concordances you provided in the worksheets" P1

"Because the concordance examples are quoted from real contexts their language is rich and this

make them very effective for learning the meaning. The dictionary writers are native speakers but they write examples with us learners in their minds so they write in simplified language" P3

"To me it seems lexical phrases are abstract so it is better to learn them by examples rather than definitions. Varied sentences and contexts are the best method" P3

"It showed me the lexical phrase in many different sentences and this clarified the meaning and the usage and the common contexts of usage." P2

Students associated the discovery approach with better retention of the lexical phrases.

"You search for the information and find it yourself and this is better for learning. With the dictionary worksheets, you are given it on a plate and you will soon forget it" P1

"Whenever someone give me a vocabulary item in a context and ask me to guess the meaning, I learn the vocabulary item better and I don't know why." P2

Interviewees pointed out that the search and deduce element in the DDL tasks was exciting, motivating, and ultimately rewarding.

"Once I search and guess the meaning and succeed, I get excited and motivated to learn more. It is a very exciting method for learning." P2

DDL weaknesses

Students didn't identify many weaknesses of the DDL worksheets; indeed, some of them said that they don't think there were any. Only two of them commented on the very few unclear sentences and the small font size.

"Nothing really apart from very few not very clear sentences" (P2)

"If the typing could be larger, it would be easier and faster to read. Also the lines are compressed one after another, there is hardly any space" N3

Dictionary strengths

The main strength of the dictionary worksheets was providing the meaning of the lexical phrase.

"The main strength is that it tries to give me the meaning of the lexical phrase through the

definition". (N3)

Dictionary weaknesses

The two main weaknesses were the vague definitions and the limited number of examples.

"With the dictionary worksheets, if you are unable to figure out the meaning from the definition and the examples, then that's it. There is no other way. But with the concordance worksheets, I have a higher chance of success. If I didn't understand immediately from the first example, I can go to the next one and I'll surely find out the meaning from the concordance examples." P1

"With the dictionary worksheets as in the case of 'at the expense of', the explanation provided by the dictionary was not enough for me. I'm still confused about the meaning. In contrast to the concordance worksheets that provided me with examples one after another which all guided me to the same point. Dictionary worksheets don't explain the meaning of the lexical phrase clearly for me. A few of the definitions provided by the dictionary were fruitful, though, but not all." P2

"only one out of the five definitions in the dictionary worksheets helped me understand the meaning of the lexical phrase" P3

(5) Section 5: Improvements

Most of the interviewees argued that the DDL worksheets were 'perfect as they are', while the improvement suggested for the dictionary worksheets was adding more examples.

"Add two or three more examples to clarify the meaning since the definition and the two examples are not sufficient in some cases." (P2)

(6) Section 6: the sentence-making task

Students were positive about the sentence making activity. They thought it helped them greatly consolidate their knowledge and the suggested topics for writing were deemed encouraging.

"I like it and I liked that you provided suggested topics so that I don't spend my time wondering what can I write about. This exercise also helps me consolidate my knowledge of the lexical phrase" P1

"I liked it a lot. I liked that you gave us certain topics because we are English language majors. We should be able make sentences in any topic. Your suggestions encouraged us to use the lexical phrase in this specific context, and we did try to". N1

(7) Section 7: additional comments

It was interesting to find out that students wanted to learn more lexical phrases; and indeed some of them asked to be given more DDL worksheets.

"Some of the teachers just pass by them when we encounter them in a text. I sometimes do not even realize that this is actually one phrase. I meet them in my texts but somehow I don't recognize them. I want to learn as many lexical phrases as I can. I believe they'd improve my style. They would make me able to speak and write sophisticated English. I'm really eager to learn more lexical phrases." P2

5.14 Teachers' views on lexical phrases worksheets: interview data

(1) Section 1: how easy/difficult it was for students to use these worksheets

Both teachers agreed that the content and the instructions of the DDL worksheets were not difficult, and it was indeed an easily manageable task for the students.

"I don't think the DDL was difficult at all. On the contrary, the sentences were clear and simple." T1

(2) Section 2: General preference

Both teachers agreed that they preferred the DDL worksheets for teaching lexical phrases.

"If I'd teach lexical phrases in my class, I'd most probably try to teach them using the DDL worksheets. Students seemed enthusiastic about them." T1

(3) Section 3: Interest

Similarly, both teachers agreed that the DDL worksheets were more interesting for learners than the dictionary worksheets.

"I saw it in the class. They'd clutch the papers and read with focus immediately after your permission." T2

(4) Section 4: Usefulness

Both teachers considered the DDL worksheets more useful for teaching the lexical phrases.

"I was curious in the class to see which type would be more useful. I think it was clear the DDL approach wins here. Students were able to find out the meaning and use the lexical phrase in sentences in all the worksheets they were handed. The situation was not the same with the dictionary worksheets. Students were confused. You could see they were baffled easily." T2

When asked about which is more useful, DDL worksheets or teacher explanation, teachers thought that the DDL worksheets are more useful. They did not see a difference between the dictionary worksheets and teacher's explanation. As for the possibility of students working on the worksheets by themselves, they stated that it is definitely possible though some students prefer a teacher or some authority confirmation at the end.

"I don't think there is a difference between the dictionary and teacher explanation. They both give the information in the same way: First, explain the meaning in English, then provide an example." T1

(5) Section 5: strengths and weaknesses

DDL strengths

The main strengths included repetition, students' interest, learning more unconsciously and the inductive approach of the DDL approach.

"Repetition is an advantageous key feature in the DDL worksheets." T2

"Students can learn many words and expressions from the concordance examples unconsciously as a by-product of their study and examination of the concordance lines while learning about the lexical phrases." T2

"When teaching English you need to keep students interested and motivated and this is what DDL can achieve. You have to go with students' interest. You can't impose dictionary and other resources on them once they show no interest or boredom." T1

"The majority of students find dictionary worksheets and other similar traditional resources boring or difficult. DDL is both fun and informative." T1

"The DDL approach follows the inductive approach of teaching and from my experience as an English teacher and learner, this approach is always rewarding." T1

Teachers did not report any weaknesses; they said they could not think of any.

Dictionary strengths

Neither teacher described strengths associated with the dictionary worksheets.

Dictionary weaknesses

Students not being involved and interested, and the vagueness of the definitions in the dictionary worksheets were the main weaknesses.

"In my opinion, the meanings provided for the lexical phrases were not clear. I don't think they were clear for learners, either." T1

"Students were not learning much with the dictionary. Their learning was limited and there is no involvement with the dictionary worksheets." T2

"Students can't keep constant interest in dictionary worksheets." T1

(6) Section 6: Improvements

The only suggestion for improvement was adding more examples to the dictionary worksheets.

"By adding more examples to the dictionary worksheets, students can come closer to knowing the meaning of the lexical phrase and its usage in English." T2

(7) Section 7: the sentence-making task

Both teachers appreciated the sentence making activity highly.

"It is a great consolidating activity. It is crucial to encourage students to test themselves and see by themselves how much they have learnt and what they still need to learn. It is also a good idea because it trains them to use these lexical phrases later in their speaking and writing". T1

(8) Section 8: additional comments

T1 argued that DDL is an innovative and interesting approach, yet we need to be careful, as it could not replace all the other approaches and resources for teaching English that have been there for years and have actually been 'working well' for many generations. She also stressed that:

"Integrating DDL materials into our English teaching materials is a wise idea. I have seen its effect in the class, but if I'd want to think and design DDL materials like yours for my classes, I'd need lots of time, energy and focus. I'm actually surprised why they have not yet become part of the textbooks. It can't be left for teachers to design the teaching materials. Yes, we can work on the textbook and adapt it to our students' needs. The task is English language teaching materials job. They need to update their methods and include these useful interesting resources in their products." T1

T2 thought that more laboratory classes need to be added to students' classes because students'

exposure to extensive English language input will improve their proficiency level. In addition, once they learn how to access these resources themselves, they can access them and work in their own spare time.

"I understand from you that the concordance lines have been taken from large corpora available online, and I do believe students and even teachers need to know about them. I'd like my students to access them and search and learn themselves. I don't like or agree with the idea that students shouldn't come in contact with resources online because they don't yet have the required competence in English, and you know what they will never acquire high competence if they will be deprived such useful resources, and kept totally reliant on their teachers and the textbooks." T2

5.15 Summary

This chapter has presented the methods used and the results found on gauging the effectiveness of the two types of instructed input: DDL and dictionary. Their effect on initial learning, retention, and residual learning of the receptive and productive knowledge of form and meaning of lexical phrases was examined statistically and discussed. In general, the results showed that DDL was more effective, in particular, for initial and residual learning of the receptive and productive knowledge of form and meaning of lexical phrases.

The chapter has also described students' and teachers' perception and attitudes towards the DDL worksheets, the DDL approach, and the dictionary worksheets as relatively representing the traditional teaching approach to teaching lexical phrases. The evaluations were encouraging for the DDL approach as a whole. Most of the students were appreciative of the approach and they were able to pinpoint its strengths. They positively perceived the self-study approach as opposed to the traditional 'knowledge transmission' paradigm prevalent in Saudi Arabia. They also believed that working on many linguistically rich and authentic contexts can help them to learn the meaning and usage of lexical phrases. In their responses, teachers seem to agree with students, although, like their students, they highlighted a few issues with the DDL approach. Students and teachers pointed out that the approach will not always be a successful one as this depends on students' preferences and learning styles. Teachers also stressed that the old methods need not to be abandoned altogether and rather called for integrating DDL materials into updated textbooks and English language teaching materials.

Overall, the tests results indicate that the DDL worksheets are effective at teaching the receptive and productive knowledge of form and meaning of lexical phrases. Furthermore, they lead to longer lasting knowledge. Thus, we can conclude that they are appropriate for the target Saudi context and for teaching lexical phrases (keeping in mind the characteristics of the target lexical phrases in the current study). Nonetheless, teachers and materials designers need to take students' needs, learning styles and preferences into account, and try to make the DDL materials interesting, relevant and informative to learners.

Chapter 6 **Conclusion**

6.1 Overview of chapter

This chapter summarizes the major findings of the three studies reported in the previous chapters: the computer aided error analysis of a Saudi learner corpus (SLC) (chapter two) and the two empirical studies that utilized a DDL approach to teaching collocations and lexical phrases (chapters four and five). Pedagogical implications and contributions of each study are also discussed. Finally limitations of each study are presented with suggestions for future research on the CEA of learner corpora and the DDL approach for teaching formulaic language.

6.2 Summary of the computer-assisted error analysis of Saudi students' written English

The computer-aided error analysis of the Saudi sophomore English majors' corpus was carried out to answer the following research question: "What are the most common errors female Saudi English majors at Qassim University make in writing?" The Saudi Learner Corpus (SLC), consisting of about 16,023 words of written English compiled from Saudi sophomore university students, was constructed. The raw SLC was manually checked and errors in the Saudi learner corpus (SLC) were identified and tagged using a semi-automatic error-tagging software tool, the UCLEE (Université Catholique de Louvain Error Editor, Dagneaux et al., 2005). WordSmith Tools (Scott, 2008) was used for text retrieval purposes. Errors were classified following the guidelines in the Louvain Error Tagging Manual version 1.2 (2005) which provide definitions and examples of different error categories based on a descriptive classification. The error tagged SLC was then analysed using the text retrieval software tool WordSmith Tools (Scott, 2008). Each error category was searched and counted, and comprehensive lists of specific error subcategories were drawn up and investigated in detail.

6.2.1 Quantitative findings

A total of 3,348 errors were identified and tagged as a result of the analysis of the error-tagged SLC. Of the 56 error categories of the *UCLEE Manual version 1.2*, 44 of them were found in the SLC, whereas nine categories (GADVO, GADJO, GPI, GPU, GDT, XPRCO, XADJCO, XVCO, XCONJCO) were not found. The FSR (Form, Regional, Spelling) error category was excluded for reasons given earlier. Also the two categories LSF (Lexical single, False friends) and LPF (Lexical phrase, False friends) were not used in the current analysis (see section 2.7.4 for further details).

Based on a frequency count, the most common error categories were as follows: Grammar (G) was the most common error category (1239/ 37%). Form (F) errors were the second most common error category (786/ 23.5%), followed by Lexis (L) errors (469/ 14%). Word redundant/ word missing/ word order (W) came in fourth place (374/ 11.5), followed by Punctuation (Q) errors (270/ 8%), Style (S) (114/ 3.4%), Infelicities (Z) (50/ 1.5%) and finally Lexico-grammar (X) (46/ 1.4%).

The most common errors of the subcategories in the SLC were the following: FS (Form, Spelling) was the largest error subcategory (774/ 23.12%). The second largest subcategory was GVT (Grammar, Verb Tense) (341/ 10.19%), followed by LS (Lexical, Single) (279/ 8.33%), GA (Grammar, Articles) (232/ 6.93%), GVN (Grammar, Verb Number) (146/ 4.36%), GNN (Grammar, Noun, Number) (145/ 4.33%), WRS (Word Redundant, Singular) (141/4.21%), WM (Word, Missing) (125/3.73%), LP (Lexical, Phrase) (122/ 3.64%), and finally QM (Punctuation, Missing) (112/ 3.35%).

A further analysis of the subcategories of the (G) Grammar category revealed that the order of the grammatical areas of difficulty for the Saudi students is as follows: Verbs (619/ 49.95%), Articles (232/ 18.72%), Nouns (161/ 12.99%), Pronouns (92/ 7.43%), Word class (85/ 6.86%), Determiners (26/ 2.1%), Adjectives (24/ 1.94%), and finally Adverbs (0/ 0%). Thus, the three most problematic areas are: verbs, articles and nouns, respectively. These three categories account for (81.66%) of the total number of grammatical errors.

The second largest error category was Form errors (F). This category contains three subcategories: FM (Form, Morphology), FS (Form, Spelling), and FSR (Form, Regional Spelling). The same analysis that was carried out on the Grammar (G) category was repeated on all the major error

categories, and it revealed that FS was the most frequent error in this category (774/ 98.47%), followed by FM (12/ 1.53%), while the FSR type was excluded (see Section 2.7.4 for further details).

The third largest error category was the Lexis error category (L). This category consists of eight subcategories: LS (lexical, single), LSF (False Friends), LP (lexical, phrase), LPF (Lexical phrase, False friends), and the connectors LCLS (Single logical connectors), LCLC (Complex logical connectors), LCC (Coordinating conjunctions), and LCS (Subordinating conjunctions). The most frequent error in this category was found to be LS (279/59.49%). The second most common error was LP (122/26.02%). The third most occurring error was LCC (34/7.25%), followed by LCLS (18/3.84%), LCLC (12/2.56%), and finally LCS (4/0.85%).

The word category (W) came fourth and it consists of four error subcategories: WRS (Word redundant, Singular), WRM (Word redundant, Multiple), WM (Word missing), and WO (Word order). The most common error in the word category is WRS (141/37.70%). The second most frequent error is WM (125/33.42%), followed by WO (62/ 16.58%), and finally WRM (46/12.30%).

The punctuation errors category was the fifth largest error category in the SLC. It comprises four error subcategories: QM (Missing punctuation), QR (Redundant punctuation), QC (Confusion of punctuation marks), and QL (A Punctuation mark instead of a lexical item). The most common error of these in the SLC is QM (112/41.48%), followed by QR (72/ 26.67%), then QC (62/22.96%), and finally QL (24/8.89%).

Style errors category is the sixth error category. This category includes two error types: SU (sentence unclear) and SI (sentence incomplete). The largest in the SLC was SU (60/52.63%), while SI scored (54/47.37%).

The infelicities error category includes register problems, questions of political correctness and stylistic problems. There were 50 occurrences of these types of errors in the SLC, and this category constituted (1.50%) of all the major error categories in the SLC.

The lexico-grammar (X) error category is made up of nine subcategories: XADJCO (erroneous complementation of adjectives), XCONJCO (erroneous complementation of conjunctions), XNCO (erroneous complementation of nouns), XPRCO (erroneous complementation of prepositions), XVCO (erroneous complementation of verbs), XADJPR (adjectives used with the wrong

dependent preposition), XNPR (nouns used with the wrong dependent preposition), XVPR (verbs used with the wrong dependent preposition), and XNUC (nouns: uncountable/countable). The most common error of these subcategories is XVPR (30/65.22%). Three subcategories shared the second position XADJPR, XNPR and XNUC (5/10.87%). XNCO came in third position (1/2.17%). Four error subcategories were not found in the SLC: XPRXCO, XADJCO, XVCO and XCONJCO.

6.2.2 Qualitative Findings

The qualitative examination covered the ten most frequent error subcategories in the SLC. The FS (Form, Spelling) error subcategory was the most common error subcategory in the SLC. It is a result that most EFL teachers of Arabic students would expect, as pointed out by Alshabbi (1994), AlKasimi, Forouk and Khan (1990), and Beck (1979). Bowen, Madsen, and Hilferty (1985, p.284) argue that the system of English spelling is particularly problematic for foreign learners of English whose L1s have a precise correlation between pronunciation (phonemes) and spelling (graphemes), like Spanish, Turkish or Arabic. Haggan (1991) adds two factors to the reasons for the prevalence of spelling errors among Arabic-speaking EFL students. First, the scripts of Arabic and English differ. Second, Arabic-speaking EFL students have "to cope with the intricacies inherent in the English spelling system, and to particular spelling difficulties arising out of lack of phonological correspondences between English and Arabic (e.g. the phoneme /p/ is missing in Arabic)" (p.47). In a study of the sources of spelling errors in EFL Arab college students, Aljarf (2011) attributes Arab learners' spelling errors to five causes: ignorance of spelling rules, transfer of the Arabic spelling system, mispronunciation, overgeneralisation, and communication breakdown. Spelling errors in the SLC were found to be mainly due to the four causes identified by Aljrf (2011). The second error subcategory (Grammar, Verbs, Tense) exhibited a number of Saudi students' problems. There were cases where the present tense was used when the past tense should have been used. Some students used the present perfect tense instead of the past perfect tense. There were also some cases where confusion between the past perfect tense and simple past tense was attested. This difficulty can be attributed to the fact that no perfect tense system formally exists in Arabic (Alkhuli, 1999; Farghal and Shunnaq, 1999). There were also cases where the students opted to use the past continuous tense instead of the simple past tense or vice versa. Furthermore, there were also cases where the past continuous was used instead of the past perfect tense. There were also

cases where the present continuous tense or simple present tense was used where the simple future tense should have been used or vice versa.

There were many errors of the LS (Lexical Single) error subcategory in the SLC, and it proved to be the third most frequent error type. There were a wide range of misused verbs, adjectives and nouns in the SLC, as well as cases of misused independent prepositions. Nearly a third of the errors were collocational errors and (63%) could be the result of the L1. The GA (Grammar, Articles) error subcategory was the fourth most common error type in the SLC; 'zero form' errors accounted for nearly half of all article errors. The second most frequent GA error type was the misuse and insertion of the indefinite article 'a/an' (27.96% of all article errors). The third most frequent error type was the misuse and insertion of the definite article 'the' (20.25%). Crompton and others (2011) identified the main causes for Arab EFL errors in English articles, see section 2.7.6.4.

The GVN (Grammar, Verb, Number) error subcategory is the fifth most common error category in the SLC. GVN includes all errors of concord between a subject and its verb. Most of the errors of this type in the SLC were cases where students chose to use the single form of a modal or an auxiliary, while the plural form is appropriate. A few errors in this category were cases where students chose the plural form of a modal or an auxiliary instead of the singular. The sixth most frequent error subcategory is GNN (Grammar, Noun, Number). It consists of errors resulting from the addition/omission of the plural morpheme. Errors in this category can be one of two types: singular for plural or plural for singular. Most of the errors in this category were of the first type, that is, they were cases of using singular noun phrases instead of plural ones. The WRS (Word Redundant, Singular) error subcategory came seventh. This category involves the unnecessary repetition of words. The main category WR has two types: WRS and WRM. The former is for single redundant words and the latter is for multiple redundant words. Most of the errors in the present category are unnecessarily inserted prepositions. It seems that the unnecessary insertion of these prepositions in learners' production is the result of the effect of their L1 Arabic, since in Arabic these exact prepositions are used in these positions. The WM (Word Missing) error category is the eighth most common in the SLC. This category is for errors involving the omission of words.

The ninth most common in the SLC is the LP (Lexical Phrase) error subcategory. LP includes three types of errors: errors in (semi-) fixed multi-word expressions and idioms, or when the learner uses

a paraphrase instead of the corresponding English LP, and errors in phrasal verbs. The effect of the L1 was clear in this category errors. The PM (Punctuation Missing) error subcategory is the tenth most common error category in the SLC. This error type is entirely devoted to errors of missing punctuation marks.

6.3 Summary of the DDL approach for formulaic language pedagogy studies

Drawing on the findings of the CEA of the SLC, concordance-based materials were developed as DDL worksheets to raise Saudi English majors' consciousness regarding their collocation and lexical phrases errors and to enhance their knowledge of them.

Among the many collocational errors identified in the Lexical Single subcategory, ten verb-noun collocations were focused on in the teaching materials, in addition to ten lexical phrases selected from the Lexical Phrase subcategory. The Collins WordBanks corpus was used to extract concordance examples for the materials. For comparison purposes and to represent traditional teaching materials, dictionary entries from Longman Collocations Dictionary and Thesaurus were used in the collocation study and dictionary entries mainly from Oxford Idioms Dictionary for Learners of English were used in the lexical phrases study.

The worksheets in the collocation study feature three activities. The first activity is a translation from Arabic into English. The second activity is a search activity where learners search the concordance lines or the dictionary entry. The third activity asks learners to return to the first activity and evaluate their translation. The worksheets in the lexical phrases study also contain three activities. The first is a translation activity from English into Arabic. The sentences were deliberately made semantically opaque and they included the target lexical phrases. The second activity was a search activity as in the collocation worksheets. The third activity was a sentence making activity that required students to make a sentence that include the target lexical phrase.

A pilot study was carried out to identify and minimize any problems in the worksheets themselves or their execution. The piloting included the tests, questionnaire surveys and the interview schedules as well. Instructions were designed as a result of the piloting and small amendments took

place. A few items were deleted from the questionnaires and the interview schedule after piloting.

The study included five phases: pretests, training session, an experiment phase, short term-delayed tests and long term delayed tests. The administration of the questionnaires took place during the experiment phase. Interviewees were carried out on the same week. I was the teacher during all these phases. Two faculty members observed the classes systematically.

To explore the six research questions in the collocation study (see section 4.5) about the effectiveness of the two types of collocation worksheets, and a similar set of six research questions in the lexical phrases study (see section 5.3), a series of tests and experimental treatments were implemented and their results were analysed in answer to these research questions. To answer the research question on students' and teachers' perceptions and attitudes toward of the DDL approach, "To what extent are corpus-based materials and a DDL approach appropriate for and applicable in the Saudi university context?", three data collection instruments were utilized: a questionnaire survey and student and teacher semi-structured interviewees.

6.3.1 The collocation study

6.3.1.1 Results of tests

The first research question asked: What type of instructed input, concordance-based or dictionary-based, if either, promotes learners' initial learning of productive knowledge of form and meaning of collocation? And which one is more effective? The results indicated that both DDL and dictionary treatments promoted initial learning of productive knowledge of form and meaning of collocation. Each one of the instructional conditions contributed to significant gains in productive knowledge of collocations. No learning gains were seen for the control experimental condition. These results show that after receiving explicit collocation instruction, students' collocation knowledge was significantly enhanced in view of their progress in the short-term delayed posttest. In comparison to the improvement in the dictionary treatment, the DDL treatment showed the greatest improvement in the short-term delayed test for promoting learners' initial learning of the productive knowledge of form and meaning of collocation, although the difference was not significant (p = .261).

The second research question asked: What type of instructed input concordance-based or

dictionary-based, if either, promotes learners' retention of productive knowledge of form and meaning of collocation? And which one is more effective? The results of learners' retention of productive knowledge of form and meaning of collocation showed that the DDL instructed input was better at promoting learners' retention of productive knowledge of form and meaning of collocation than the dictionary instructed input. However, the difference between the two instructional conditions was still not significant (p= .321). The DDL instructional condition was considered superior to the dictionary instructional condition because the comparison between the DDL treatment and the control experimental condition was not significant, while it was significant between the dictionary treatment and the control experimental condition. In addition, the difference between the short term delayed test and the long term delayed test was not significant in the DDL treatment (p= .249), and significant in the dictionary treatment (p <. 001). Learners seem to have lost more of their gained knowledge under the dictionary treatment than they did under the DDL treatment.

The third research question was set to find out what type of instructed input, concordance-based or dictionary-based, if either, promotes learners' residual learning of productive knowledge of form and meaning of collocation? And which one is more effective? The results showed a significant difference between the DDL and the dictionary treatment at improving residual learning of the productive knowledge of form and meaning of collocation. Moreover, when the changes between tests were examined in each treatment, the difference between the productive pretest and the long term delayed test was significant in both the DDL and in the dictionary treatments (p <. 001).

The fourth research question enquired: What type of instructed input, concordance-based or dictionary-based, if either, promotes learners' initial learning of receptive knowledge of form and meaning of collocation? And which one is more effective? The results were consistent with the findings of the first research question and they indicated that both experimental treatments were significantly better than the control experimental condition. Though the DDL treatment was the most effective in improving learners' initial learning of receptive knowledge of form and meaning of collocation, the difference in participants' performance between the two instructional treatments was not statistically significant.

The fifth research question aimed to identify: What type of instructed input, concordance-based or dictionary-based, if either, promotes learners' retention of receptive knowledge of form and

meaning of collocation? And which one is more effective? The results, parallel to those of retention of the productive knowledge of form and meaning of collocations, indicated that the DDL treatment was superior at promoting learners' retention of receptive knowledge of form and meaning of collocation in comparison to the dictionary treatment. However, the difference between the two instructional conditions was not significant (p= .264). When comparing the changes between successive tests in each treatment, the difference between the short and long term delayed tests was not significant in the DDL treatment (p=. 068), but significant in the dictionary treatment (p <. 001).

The sixth research question asked: What type of instructed input, concordance-based or dictionary-based, if either, promotes learners' residual learning of receptive knowledge of form and meaning of collocation? And which one is more effective? The results, consistent with those of productive knowledge of form and meaning, indicated a significant difference between the DDL and dictionary treatments at promoting residual learning of the receptive knowledge of form and meaning of collocation. Learners were able to show the residual effects of collocation instruction in the DDL treatment. The time lapse may cause learners to forget but large amounts of the gained knowledge in the DDL condition were retained in comparison to the dictionary condition.

6.3.1.2 Results of the questionnaire

The findings concerning the impact of corpus-based materials were quite encouraging and in general suggest students' belief in the utility of DDL for learning collocations. Students felt strongly that the DDL worksheets were useful for learning collocations (90.3%), and (80.5%) felt the same about the dictionary worksheets. There were also positive results concerning the effect of DDL on learning collocation meaning (89.4%), and (88.5%) thought the same for the dictionary worksheets. Another encouraging finding is that (84.1%) of respondents also believed that the DDL worksheets helped them learn the usage of collocations, while (80.6%) believed the same for the dictionary worksheets.

As for students' opinions about working with concordance examples and corpus data in the DDL worksheets, it was encouraging to find that students were able to work with concordance examples and did not seem to have much trouble in handling them although it was the first time they had been exposed to cut off concordance examples. More than half of the respondents thought that

using the DDL worksheets was easy (62%), and a similar percentage (70.8%) of respondents thought the same about the dictionary worksheets. When asked about the difficulty of working with cut off concordance examples, (28.3%) agreed it was difficult, an equal number of respondents (28.3%) remained undecided, and (43.4%) disagreed. Furthermore, (53.9%) agreed it was difficult to work on the DDL worksheets within the permitted time limit, and (45.1%) agreed this was so with respect to the dictionary worksheets. (48.7%) of respondents believed the DDL worksheets required a lot of effort, while a slightly lower percentage (44.2%) believed that the dictionary worksheets required a lot of effort. As for the question of the difficulty of working on DDL worksheets due to unfamiliar vocabulary, (48.7%) of respondents agreed it was difficult, and (32.7%) agreed this was so on the dictionary worksheets

In addition, students expressed their willingness to work on other activities on collocations using DDL worksheets (80.5%), as did a lower figure for dictionary worksheets (72.5%). (78.8%) thought using the DDL worksheets to learn collocations was interesting, and (73.4%) thought so for the dictionary worksheets. (85.8%) would recommend the DDL worksheets for learning collocations to other learners, and (78.8%) would recommend the dictionary worksheets.

Students' assessment of the DDL worksheets in comparison to their dictionary counterparts was also strongly positive. (43%) thought that DDL worksheets were more useful than dictionary ones for learning collocations, while (26%) thought they are equally useful. Similarly, (37%) of respondents liked DDL worksheets more than dictionary ones, with (32%) liking them both. There were many advantageous responses associated with the DDL approach. Students found the DDL worksheets to be easy because of the many provided contexts. They also thought the worksheets were effective because they included many exemplary usage of collocations in assorted contexts. Respondents also liked the discovery approach and they asserted that this made them less prone to forget what they learnt because they had searched for it and discovered it themselves. They also appreciated the learner-centred nature of DDL by stating that the DDL worksheets let them rely on themselves. They believed that the DDL worksheets taught them incidental new vocabulary and structures. In addition, they thought that the DDL approach was interesting and consolidated their knowledge. They appreciated the authentic language of the concordance examples and it was described as rich and powerful in depicting the meaning.

Nevertheless, respondents pointed out a number of disadvantages with the DDL worksheets. (11%)

thought the incomplete sentences caused difficulties in understanding. (10%) believed the example sentences were sometimes 'too many', and they later suggested reducing the number of concordance examples or grouping concordances of the same verb collocate together for easy reading. (9%) of students thought that concordances are 'not so clear' sometimes, and (9%) stated that they were confusing because of their many possible meanings. (7%) believed not providing the meaning, at least at the end of the exercise/worksheet, is a disadvantage, while (6%) thought that the DDL format required more effort than the dictionary worksheets. (4%) thought that the concordances not being in order was problematic, and (4%) stated that they needed more time to complete DDL worksheets in comparison with dictionary-based exercises.

6.3.1.3 Results of the interviews with students and teachers

The semi-structured in depth interviews with six students provided a deeper insight into feelings about concordance data and the DDL approach in interviewees' own words. Teachers' interviews supported and complemented students' views. On the whole, both teachers and students' perspectives were positive and quite encouraging toward corpus-based materials and the DDL approach.

In terms of the strengths of the DDL worksheets and the DDL approach, students pointed out that concordance examples were excerpts of authentic rich language, which made it both clear and easy for them to figure out the meaning of collocation. This feature, together with the fact that concordance examples are extracted from various assorted contexts, was felt to be hugely beneficial for learning the usage of collocations that can later be produced by the learners themselves in speaking and writing. Interviewees also appreciated the 'discovery approach' and the 'learner-centred' nature of the DDL worksheets and they thought it made them involved and this could highly result in longer lasting learning. Concordance examples were described as 'rich', 'real', 'condensed', 'expressive', and 'colourful', and according to the interviewees this made them able to deliver the meaning accurately and show precisely how, when and where to use the collocations. Having examples from various fields was also a strength identified by participants and generated interest in the concordance examples and suited different learners' interests.

In addition, students felt that the extra time and effort exerted on the DDL worksheets, in

comparison to the dictionary worksheets, would lead to long-term retention of the learnt information. Teachers also supported this conclusion, and stated that the search element in the DDL worksheets 'create hunger' for the information. Students were also appreciative of the authentic language of the concordance data and felt that it enhanced their English language learning in general, not only their learning of the target items. Furthermore, they asserted that corpus data is native speakers' non-edited language, and enabled them to get exposure to this and to learn the language from 'its source'; they believed the corpus data would help them produce the 'real language' that is spoken in 'real life', rather than a mere simplified form of English.

However, students identified a number of weaknesses in the DDL worksheets. Students pointed out that incomplete sentences did cause some difficulties sometimes. Nevertheless, students also stated that with the benefit of the instructions and getting used to the approach it was not much of a problem. Additionally, the many other concordance examples featuring in the worksheets helped them gets to grips with the target language.

Two students mentioned that because the DDL worksheets do not provide the meaning explicitly, you can guess and feel really sure about your guess but you can never be 100% sure; hence they would always need confirmation from the teacher. This is an issue that is dependent on students' attitudes: some require this confirmation, while others are confident with their own conclusions. Teachers also were of this view. Nevertheless, providing students with clarification and confirmation sounds reasonable. On the one hand, it would be unlikely to negatively impact on students' learning and would not interfere with the discovery approach and the learner-centred nature of the DDL approach since confirmation would only be provided at the end. Besides it is ethically dubious to leave students unassisted to their own guesswork, as they might not be correct. Two students argued that the format and compressed layout of the DDL worksheets could be problematic, in particular for students with visual impairments. Students added that the DDL approach might be exciting and interesting at first, yet may become tedious if used excessively. Since the experiment was of a limited duration only, it is not possible to ascertain how students would have reacted toward concordance-based materials if used over longer periods. However, any type of materials or approach needs to be used in moderation and when and where it is most efficient in order not to cause boredom or rejection on the part of students.

Teachers described the DDL worksheets as interesting and engaging. They thought that the varied

contexts of the concordance examples were enjoyable to students and enriched their English. One teacher pointed out that she spent (75%) of vocabulary teaching time explaining the usage, and that is an area the DDL worksheets are very efficient at. Teachers thought that the effort exerted on the concordance data was useful and claimed it could lead to long-term recall of the information, especially because learners found the information themselves. Teachers believed that the search element in the DDL worksheets 'create hunger' for the information, so once students find them, they are ready to internalize them. They argued that students grasp the information 'intensely and deeply', unlike when they are merely spoon-fed the information. One of the teachers was also appreciative of the format of the concordance data. She thought it was very helpful for learners to focus, and it only presented 'relevant information and discarded unnecessary parts'. In contrast, the other teacher felt that the compressed formatting was problematic.

6.3.2 The lexical phrases study

6.3.2.1 Results of tests

The first research question set out to answer what type of instructed input, concordance-based or dictionary-based, if either, promotes learners' initial learning of productive knowledge of form and meaning of lexical phrases? And which one is more effective? The results indicated that both DDL and dictionary treatments contributed to initial learning of productive knowledge of form and meaning of lexical phrases. Both instructional conditions enhanced productive knowledge of lexical phrases to significant gains. The DDL treatment outperformed the dictionary treatment at promoting learners' initial learning of the productive knowledge of form and meaning of lexical phrases and the difference was significant at the $p \leq .001$ level.

The second research question asked: What type of instructed input concordance-based or dictionary-based, if either, promotes learners' retention of productive knowledge of form and meaning of lexical phrases? And which one is more effective? Results indicated that the DDL treatment was superior to the dictionary treatment at improving learners' retention of productive knowledge of form and meaning of lexical phrases. Nevertheless, the difference between the two instructional conditions was not significant ($p = .933$). When comparing the changes between successive tests in each treatment, the difference between the short and long term delayed test was

significant at the p ≤.05 level in both the DDL treatment (p = .037), and the dictionary treatment (p = .005).

The third research question aimed to find out what type of instructed input, concordance-based or dictionary-based, if either, promotes learners' residual learning of productive knowledge of the meaning and the form of lexical phrases? And which one is more effective? The results indicated a significant difference between the DDL and the dictionary treatment in this regard. Furthermore, when comparing the changes between tests in each treatment, the difference between the productive pretest and the long term delayed test was significant in both the DDL and the dictionary treatments (p <. 001).

The fourth research question asked: What type of instructed input concordance-based or dictionary-based, if either, promotes learners' initial learning of receptive knowledge of the meaning and the form of lexical phrases? And which one is more effective? The results were similar to the findings of the first research question and they indicated that both DDL and dictionary treatments improved initial learning of receptive knowledge of form and meaning of lexical phrases; however, the DDL treatment outperformed the dictionary treatment and the difference was significant (p < .001).

The fifth research question asked what type of instructed input, concordance-based or dictionary-based, if either, promotes learners' retention of receptive knowledge of the meaning and the form of lexical phrases? And which one is more effective? The DDL treatment was superior to the dictionary treatment at promoting learners' retention of receptive knowledge of lexical phrases. However, no paired comparison tests were carried out because the result of interaction between treatment and time on short- and long-term delayed test scores was non-significant. When comparing the changes between tests in each treatment, the difference between the short- and the long term delayed test was not significant in the DDL treatment (p. = .089), and significant in the dictionary treatment (p <. 001).

The sixth research question set out to answer what type of instructed input, concordance-based or dictionary-based, if either, promotes learners' residual learning of receptive knowledge of the meaning and the form of lexical phrases? And which one is more effective? The results indicate a significant difference between the DDL treatment and the dictionary treatment. Learners were better at sustaining their gained knowledge under the DDL instructional condition than under the dictionary instructional condition.

6.3.2.2 Results of the questionnaire

The results of the questionnaire indicated that students held very positive attitudes toward the DDL worksheets and they were able to pinpoint its pros. With respect to the effectiveness of DDL worksheets for learning lexical phrases, (90.5%) felt that DDL worksheets were useful for learning lexical phrases, and (78%) felt the same about the dictionary worksheets. Along the same lines, (81%) of respondents thought the DDL worksheets were effective at helping them avoid making lexical phrases errors, while a considerably smaller percentage (53.3%) thought the same for the dictionary worksheets. Furthermore, (87.6%) of learners stated the DDL worksheets helped them learn the meaning of lexical phrases, and (72.4%) stated the same for the dictionary worksheets. The difference between the two types of worksheets was larger once comparison was on the effectiveness of the worksheets for learning the usage of lexical phrases. (87.6%) of respondents also believed that the DDL worksheets helped them learn the usage of lexical phrases, while a much smaller percentage (53.3%) believed the same for the dictionary worksheets.

More than half of the respondents thought that using the DDL worksheets was easy (63.8%), and more importantly perhaps a smaller figure (50.4%) of respondents thought the same about the dictionary worksheets. Nearly half of the respondents (46.7%) believed it was difficult to adapt to concordance examples and a very similar percentage (47.6%) believed the same about the dictionary entries.

When respondents were asked if it was difficult to understand the concordance examples due to their cut off nature, (38.1%) agreed it was difficult, (25.7%) of respondents remained undecided, and (36.2%) disagreed. Respondents were asked if it was difficult working on DDL worksheets within the stipulated time limit and (29.6%) felt it was difficult and (37.1%) disagreed, while (42.8%) agreed it was difficult with respect to the dictionary worksheets. With respect to the effort needed to work on both types of worksheets, (39%) of respondents thought the DDL worksheets required a lot of effort, while a slightly higher percentage (41.9%) thought that the dictionary worksheets required a lot of effort. Respondents were asked if it was difficult to work on the DDL worksheets due to unfamiliar vocabulary. (46.7%) of respondents agreed, and (48.5%) agreed regarding the dictionary worksheets. Participants' slightly more negative responses on the dictionary worksheets in comparison to the DDL worksheets with respect to the time limit, unfamiliar vocabulary and required effort might be due to the difficulty students had in decoding

dictionary information, a point that was made by students in the interviews.

When students were asked whether they would like to do other activities on lexical phrases using DDL worksheets, (76.2%) agreed they would like to, while (68.3%) agreed they would like to use dictionary worksheets. (81.9%) felt using the DDL worksheets to learn lexical phrases was interesting, and (67.6%) felt using dictionary worksheets was interesting. When asked whether they would recommend the DDL worksheets for learning lexical phrases to other learners, (78.1%) agreed, and a slightly smaller percentage of respondents (69.5%) agreed they would recommend the dictionary worksheets. When asked whether they liked the worksheets more the more they worked on them, (67.7%) agreed with respect to the DDL worksheets, and (49.5%) regarding the dictionary worksheets.

Students' evaluation of the DDL worksheets in comparison to their dictionary counterparts was very encouraging. (57%) believed the DDL worksheets are more useful than the dictionary ones for learning lexical phrases, while (14%) believed them both to be equally useful. Moreover, (55%) stated that they preferred to learn lexical phrases using DDL worksheets, and (18%) stated that they liked both the DDL and the dictionary worksheets. Respondents identified many strengths of the DDL worksheets. (16%) of students' responses on DDL pros stated that the many examples in the DDL worksheets help clarify the accurate meaning and the appropriate usage contexts. (12%) believed they could learn more about meaning and usage when using the DDL worksheets. (11%) thought that the worksheets delivered the meaning and the usage of the lexical phrase better than the dictionary worksheets. (11%) respondents explained that the many assorted examples taught them how to use the lexical phrase in different contexts and fields. (9%) described them as clearer at describing the meaning and usage than the dictionary worksheets. (7%) stated that they were easy to understand, and similarly (7%) thought this was an interesting and exciting method. (7%) of responses found the approach thought provoking and stimulating, and (5%) believed that the DDL worksheets were better able to clarify the exact meaning of the lexical phrase than the dictionary worksheets. This is understandable since students in the interviews pointed out that they found it difficult to figure out the lexical phrases' meaning from dictionary definitions, even confusing.

By the same token, learners identified a number of disadvantages. (13%) of their responses claimed that incomplete sentences were problematic, while (11%) thought that the DDL worksheets needed

an additional time allowance because of the many examples. (10%) of learners' responses stated that they featured not so clear sentences or sentence structures. (8%) of responses complained about the font size, and (6%) thought these worksheets required effort. Only (5%) criticized the fact that the worksheets don't provide the meaning explicitly of the target items. However, some of the weaknesses mentioned by respondents are considered strengths by others, and this can only underscore the fact that the DDL approach, as any learning approach for that matter, is perceived differently by different learners and their varied learning styles.

6.3.2.3 Results of the interviews with students and teachers

The findings of the semi-structured interviews with students and teachers on the impact of DDL worksheets on learning lexical phrases are promising and indicate its potential. Teachers' responses supported those of learners on many fronts.

With respect to the DDL approach pros for learning lexical phrases, students thought that providing many concordance examples was advantageous since if the meaning of the lexical phrase was not clear from the first concordance example, they could move to the next one and so on. They also appreciated the discovery approach and the learner-centred approach associated with the DDL task. They asserted that once you search and find the information yourself, it is beneficial for your own learning as you ultimately learn better than being spoon-fed the information. Students felt a sense of accomplishment when working with the DDL worksheets from figuring out the meaning of the lexical phrase given the many provided concordance examples. However, with the dictionary worksheets they are provided a definition and two examples and if they failed to work out the meaning, there were no further options. Furthermore, the DDL worksheets were considered more effective than the dictionary worksheets since they teach the lexical phrases in context, and one student mentioned that she learned better every time she guessed the meaning in a context. Interviewees also spoke of how their success at guessing the lexical phrase meaning made them excited and eager to learn more. Learners also noted that since the concordance lines are taken from native speaker data, the language is rich and more efficient for conveying meaning. Respondents also saw the efficacy of learning lexical phrases contextually since they were described by learners as abstract and so are more suited to be learned by examples rather than definitions. Learners also noted another fundamental feature of the DDL worksheets, which is that

they present the lexical phrase in many varied contexts and this clarifies meaning, usage and 'common contexts of usage'.

Learners did not provide many cons of the DDL worksheets in the interviews. They pointed out that there were few unclear sentences in the worksheets. The reason was mainly because of the cut off format. Two of the interviewees also saw other formatting aspects of the concordance lines as disadvantageous and they suggested enlarging the font size and adding more space between concordance lines.

Teachers supported their students' arguments. They also thought that repetition was an advantageous feature in corpus data. Teachers stressed that the DDL worksheets were interesting, exciting and actively engaging for learners; this is essential given that once students are not interested, learning will markedly decrease. It is fundamental that the teaching materials are not excessively difficult or boring.

Furthermore, teachers felt the inductive approach utilized in the DDL approach is often fruitful and successful. Neither teacher reported any weaknesses of the DDL worksheets for learning lexical phrases; they said they could not find any.

6.4 Implications of the studies

The present study has demonstrated the potential of CEA as an error analysis approach in ELT. It can be used to pinpoint the problems a certain group of students have and the difficulties they face when they speak or write in English. CEA can also generate comprehensive lists of specific error types which can then be counted, viewed in context alongside non-erroneous instances and sorted in many ways for different purposes. Thus, the findings of the current study provide ample contemporary data about Saudi EFL learners' interlanguage. Furthermore, CEA can provide results that are highly credible; it can describe a wide array of errors efficiently and accurately, especially when the error tagging system is expansive enough to accommodate many types of errors. Even when the CEA is limited to a few categories or a certain type of error, because of the purposes of a certain research project, for instance, it can still provide a detailed account of students' output in a way that is better than relying on intuition or introspection alone.

Studies such as the present one will hopefully help ELT materials designers and language practitioners in developing more 'learner aware' and finely-tuned ELT materials that target learners' needs and take them into account. The current CEA has shown, for instance, a high proportion of lexical errors: 14,01% of all the errors in the SLC. This alerts teaching professionals to the importance of addressing errors of this type, especially since lexical errors are often given little attention in comparison with syntactic errors (A. Y. W. Chan, 2010).

In addition, the error-tagged SLC is a very rich source of data for identifying and investigating the nature, sources, and prevalence of learners' errors. This SLC and similar learner corpora from Saudi EFL students can be made into a pedagogical database that would be very useful for ELT teachers. It can help them tackle the errors that are quite frequent in their students' writing. Furthermore, it can be used not only as a remedial source but also to raise students' awareness of the items they are likely to have problems with through learner-corpus-informed teaching tools. A number of researchers argue that explicit remedial teaching is effective in L2 learning (Carroll, Swain, & Roberge, 1992; A. Y. W. Chan, 2006, 2010; Lightbown & Spada, 1990).

A. Y. W. Chan (2010, p. 314) reports the findings of a series of studies that implemented ELT materials that were designed based on the findings of CEA of written errors. The ELT materials, which included different examples of the same error type, were implemented with over 450 secondary and university ESL students and were found to be "appropriate" and "beneficial". The SLC was the source of the target collocations and lexical phrases in the current study and the remedial teaching materials designed to tackle them proved to be efficient.

Furthermore, materials such as the coded essays can be used for self-access purposes for students and teachers using simple computer tools that do not require a high level of computer literacy, given that what the codes refer to would be also available for self-access. Admittedly, because of teachers' limited time, the idea of examining the results of an EA, such as the present CEA and then designing materials on their basis might not be welcomed. Hence, the fact that remedial materials derived from the findings of the present study and similar studies can be used with many classes over the years should be emphasized to convince teachers that it is a rewarding process. Collaboration and sharing among teachers should also be encouraged.

There are a number of implications arising from the quantitative and qualitative evaluation of the

DDL worksheets. These implications will be discussed in light of the distinctive features of the DDL approach and the results reported in the study. Corpus data in the DDL worksheets is presented in the form of concordance lines, which are extracted from an English native speaker corpus. The positive attitudes of both students and teachers suggest that working with cut off concordance examples is a feasible task, even for novice users who only received one session of training (and in a context where more traditional teacher-centred approaches are the norm). The training session was an essential stage, nevertheless, and no teaching using corpus data should commence without it. The training session familiarized learners with the concordance examples and helped them develop their own techniques for reading and interpreting concordance examples. Learning from authentic concordance examples was highly praised by many students, describing such examples as being 'rich', 'expressive', 'real', 'colourful', and 'vivid'.

The DDL approach promoted both a discovery and learner-centred approach to learning. When learners were working on the DDL worksheets, they worked on the corpus data to deduce multiword units meaning and usage by themselves. The DDL worksheets required learners to play an active role and be active language researchers rather than merely being passive recipients. Though there are researchers who questioned whether such an approach that does not entail consulting the corpus data directly constitutes DDL (Bernardini, 2001; Cobb, 1997a; Watson Todd, 2001), the father of the approach himself has advocated the use of paper-based DDL materials (Johns, 1991a, 2002). Besides, learners were able to pinpoint among the strengths of the DDL worksheets, its discovery learning and learner-centredness. Thus, it is reassuring that the spirit of DDL was there and its characteristics were identified by students and teachers. Therefore, we can conclude that paper-based DDL materials are a reasonable choice especially in the first stages of introducing DDL to learners. They are also more suited to teacher-centred contexts like the Saudi EFL context in the present study. Using paper-based materials cater for students' different abilities and inductive learning strategies. A gradual introduction to corpus data enables learners to progress at their own pace, so this can eventually lead to their own independent corpus consultations.

Another argument in the current study is that DDL can stimulate noticing and support form focused instruction. DDL tasks can also reinforce the validity of the involvement load hypothesis. The DDL materials in this study were designed to draw students' attention to collocations and lexical phrases in short authentic corpus contexts, and to develop their understanding of and proficiency in the meaning and usage of target collocations and lexical phrases. We can conclude from the test results

that the DDL worksheets led to better learning than the dictionary worksheets and that was sometimes significantly better.

Another implication worthy of comment here is the DDL principle that entails learners being the centre of the classroom while the teacher performs the role of a facilitator or coordinator of student-centred research rather than authoritative knowledge transmitter. Since the DDL materials in the current study followed the soft DDL version and were printouts prepared by me in advance, my teacher role was not entirely 'director and co-ordinator of student initiated research' (Johns, 1991b), as in when a stronger, independent version of DDL is implemented. Nevertheless, the soft DDL approach is still more learner-centred than the typical Saudi EFL context. Furthermore, most of the students and teachers saw that the approach is learner-centred, promoting independent and autonomous learning and they thought it beneficial.

Learners' success at exploiting concordances in the collocations and lexical phrases studies could be attributed to the fact that the concordances were carefully selected by me to be accessible and meaningful. A possible easier method would be building a corpus of graded readers of a level appropriate to the target learners and then extracting concordances from it. Subsequently, it might be possible for learners to access the corpus themselves because its texts would be manageable for them and would not contain a lot of unknown vocabulary.

One of the excellent features of corpora is that language teaching practitioners can build corpora to suit their learners' needs. Corpus texts could be chosen based on their content and what target features they can provide extensive exposure to. Current corpus-analytical tools such as Cobb's Lextutor web-based tool (http://www.lextutor.ca) can compare the lexical difficulty of any text inputted by the user against large corpora such as BNC or COCA. Alternatively, measures such as type-token ratios for texts can be used to provide useful guidelines when selecting reading texts for a corpus. Controlling text types results in a much greater potential for minimizing the difficulties often associated with handling crude corpus data, and maximizing the potential effectiveness of the teaching texts (Walsh, 2010). The beta version of *Sketch Engine* has an option to sort concordances 'best first' from a learner point of view (Kilgarriff et al., 2004).

6.5 Limitations and directions for future research

There are, inevitably, some limitations of the current CEA. The error analysis in the present study has been carried out based on a frequency count of the total frequency of errors. Adding another dimension to the error analysis, that is, of counting and examining the correct instances of a given item alongside incorrect instances of the same item, would provide deeper insights into learners' problematic areas. Moreover, not counting errors in respect to the frequency of the various linguistic items in the corpus is also a limitation in the current CEA, though this is understandable, given this approach is currently "a very recent 'and in progress' advancement" (Granger, personal communication). However, mainly because of time and space constraints and the focus of the current thesis, it has not been possible to carry out such analyses. In addition, conducting further qualitative analysis of the error-tagged SLC is also important to identify the sources of the students' problems, and thus facilitate the process of developing ELT materials that target learners' needs.

Furthermore, as is the case with all corpus studies, the findings of the present study are evidence of learners' performance rather than their competence. Thus, if an item is absent in a learner's output, this is not evidence that s/he has no knowledge of that item (Harwood, 2006; Kaltenböck & Mehlmauer-Larcher, 2005). By the same token, if the learner succeeded in producing a certain linguistic item based on the corpus evidence, this is not necessarily a guarantee that s/he will produce the same item correctly the next time or every time. The final limitation concerns generalizability. The findings of the present study are specific to the students whose data have been included in the SLC and those who are at the same or nearly the same language proficiency level. However, the findings of the current study may not be equally insightful for teachers of students at different language proficiency levels, or to teachers of learners with different L1s.

In spite of the generally positive effect of the DDL worksheets on learning collocations and lexical phrases, and the favourable attitudes of students and teachers toward the DDL approach, there are a number of limitations related to aspects of the research design employed. Some elements may be modified in future research in order to explore other alternative methodological options when investigating the areas of focus in the present thesis. In what follows, limitations are discussed with suggestions for future research.

Firstly, due to time limitations, it was not possible to design DDL materials to cover all the most common errors in the SLC. It is hoped that the existing materials, which cover collocational and lexical phrases errors would be useful pedagogical basis for teaching Saudi EFL learners. It is possible to extend the teaching materials used in this thesis and amend them where needed. In any event, materials need to be adopted and adapted to the specific needs of the target context.

The soft version of DDL was implemented in the current thesis because this was felt most appropriate given that the target population had never encountered the DDL approach, and because of the short time allocated to the experiment by the hosting university. The soft version was chosen because it reduces "some of the cognitive burden in initial stages by allowing learners to focus on a single new element" (Boulton, 2010a, p. 539), which is that of concordances and inductive reasoning. However, future studies should try to investigate the effectiveness of the hard version of DDL and learners' and teachers' attitudes towards it. It would be particularly interesting in future research to compare both soft and hard versions of DDL (Aston, 2000; Boulton, 2010a; Chambers, 2005) with the same group of participants once they become competent in both versions to evaluate the efficacy of the two versions and learners' perception and attitude toward them.

The collocations and the lexical phrases materials were exploited during regular university classes on their reading and vocabulary module. It was not possible given the aim of the current thesis to design materials based on items featuring in the learners' curriculum. However, future studies of DDL could be linked with learners' textbooks more closely. Efforts could be made to incorporate the DDL materials into the curriculum.

In the present thesis, there was only one training session in both the collocations study and the lexical phrases study. There was also only one experimental teaching session in both studies. While it seems that the present arrangement for training and teaching did not prevent learners from accomplishing significant gains, it would be interesting to investigate what possible learning outcomes may result from more substantial training or repeated use of DDL materials. In addition, learners' attitudes toward the DDL materials represent a certain level of disparity among them, which leads to the question of how affective and likable DDL might be for students with different learning styles.

It might be useful to replicate the collocation and lexical phrases studies using collocations and lexical phrases made up of nonsense words. In the present thesis, authentic collocations and lexical

phrases were the focus because they were based on the SLC results and nonsense words were not going to provide learning benefits for the participants. Using real collocations and lexical phrases has more ecological validity, but it causes design problems. The results of the receptive tests of knowledge of form and meaning in both collocation and lexical phrases studies should be interpreted with caution because no pretests were used. Using real collocations and lexical phrases made it methodologically problematic to administer pretests for both productive and receptive tests because they could have directed participants' attention to the study's purpose and they might also have contributed to learning. However, the results of the receptive tests were consistent with the results of the productive tests and this supports their validity.

Another area that should be noted for future research is the fact that when L2 learners know the lexical components of the collocations and lexical phrases, this may have an effect on the amount of the knowledge that could be learned. In this thesis, the collocations and lexical phrases were composed of words that are highly likely known words. Other possibilities are having multiword units consisting of unknown words or a known word/unknown word combination. This can affect learning because "focusing on deriving the meaning of unknown words that make up collocations [or lexical phrases] may reduce the potential to learn the form of [the multiword unit]". Another possibility is learning less about the meaning and the form of the multiword unit to when it consists of unknown lexical items. By the same token, when the multiword consists of known lexical items, learners' "attention may be focused on learning the composition to a greater degree because their attention is not diverted to learning other aspects of … [multiword] knowledge" (Webb et al., 2013, p. 113). Boers and Lindstromberg (2009) presented a counterargument in stating that learners learn multiword units better if they are composed of unknown words since they are more likely to focus on unknown words. These contradictory arguments suggest that the issue of L2 learners' knowledge of the composing items of a multiword unit is a useful direction for future research.

Finally, as other researchers have suggested (e.g. Webb et al., 2013), it would also be useful from a pedagogical perspective to examine the effect of semantic transparency of multiword units on learning them. Grant and Bauer (2004) argue that for language learners, semantically opaque multiword units are likely to be the most difficult, followed by items that have a figurative meaning, then items with a literal meaning and finally semantically transparent ones. The issue of the effect of multiword transparency on their learning remains a valid quest for further research.

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Appendix 2A: Personal information questionnaire

UNIVERSITY OF ESSEX

<u>Study of Saudi students' writing in English</u>

Please answer the following questions:

1. Your name:

2. Your native language(s):

3. Your date of birth:

5. Age at which you first started learning English:

6. Number of years you have attended English classes:

7. Have you ever lived in an English-speaking community, if yes for how long:

8. Is one or both of your parents a native speaker of English:

Thank you ,,,

The investigator is: Hailah Alhujaylan
New Route PhD student at the University of Essex
Supervised by Dr. Nigel Harwood (nharwood@essex.ac.uk)

Appendix 2B: Essay topic and instructions

Name:.. Group:.......................

I would like you to write an essay on the topic specified below. This is not part of any exam or part of any course. You will not be marked on this essay and it is only for the purposes of my research. You will have **45** minutes to write the essay.

Write an essay on the following topic: **My high school experience**. You can write about one or many aspects of your experience in high school.

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Appendix 2C: Error categories of the CEA

1. FORM : (F)
This category groups together all words that are **NON-EXISTING** in English
and other errors which are obviously of a formal nature.
1.1. Morphology : (FM)
(FM) is used for morphological errors (inflectional and derivational). Inflectional
errors result from the misuse of grammatical morphemes (plural, genitive, verb morphology,
degree of adjectives, etc.) while derivational errors are due to the addition of an erroneous affix to
an existing word.
1.2. Spelling : (FS)
(FS) includes
1. all spelling errors, e.g. (FS) defendent $defendant$
2. the misuse or omission of capital letters, e.g. (FS) european $European$
3. word coinages: It is important to distinguish between word coinages which result from the
erroneous use of morphological processes and those are created from scratch, independently of
morphological processes. The former will be tagged FM and the latter FS. Compare for instance:
(FM) short-minds $shortcomings$ (derivational problem which results in the creation of a non-
existent compound) as opposed to *He has been (FS) aparted $disavowed$ from his father's riches
(creation of the non-existing verb "to apart")*.
4. borrowings, e.g. (FS) individu $individual$
5. homophones, e.g. it's/its, their/there, your/ you're…
6. the misuse/omission of hyphens/blanks in compound words, e.g. (FS) air-polltion $air
pollution$, (FS) mindblowing $mind-blowing$.

1.2.1. Regional spelling: (FSR)
In version 1.1 of the manual, cases of American spelling were also tagged FS. Version 1.2.
introduces the new FSR (form, spelling, *regional*) tag to deal with these cases as they cannot
exactly be referred to as erroneous. Instances of American spelling in an overall British text (or of
British spelling in an overall American text) should thus be tagged FSR. If American or British
spelling is used consistently throughout the essay, it should not be tagged.

2. GRAMMAR : (G)
This major category groups together errors that break general rules of English
grammar. The following sub-categories should be distinguished.
2.1. Determiners: (GD)
This is a new category. In the previous version of the tagging manual, errors affecting
determiners were tagged as GP. The new version distinguishes between pronoun and determiner
errors. All errors affecting determiners are tagged GD*. This new category
includes all determiners (demonstrative, possessive, indefinite, and others), except articles (cf.2.2.

(GA)) which stand apart.

2.1.1. Demonstrative determiners (GDD)
This category involves all errors affecting demonstrative determiners.

2.1.2. Possessive determiners (GDO)
This category includes all errors pertaining to possessive determiners.

2.1.3. Indefinite determiners (GDI)
This category involves all errors affecting indefinite determiners (*every, some, any, no, much,little, few,…*).

2.1.4. Determiner other: (GDT)
This category includes all errors affecting other types of determiners than those found in the first three categories (relative, interrogative determiners,…).

2.2. Articles: (GA)
Although, articles are a type of determiner (central determiners), article errors will retain their initial GA tag and be tagged separately for retrieval purposes. This category involves all problems of definite, indefinite or zero article.

2.3. Nouns : (GN)

2.3.1. Noun case : (GNC)
(**GNC)** includes*:*
• uses of the saxon genitive where it should not be used
• uses of phrases which should be a saxon genitive
• omission of the genitive marker

2.3.2. Noun number : (GNN)
(GNN) consists of errors due to the addition / omission of the plural morpheme.

2.4. Pronouns : (GP)
(GP) includes errors involving all pronoun categories: demonstrative, interrogative, personal, possessive, reciprocal, reflexive, relative, indefinite. Version1.2. of the tagging manual distinguishes clearly between each of these subcategories.

2.4.1. Demonstrative pronouns: (GPD)
All errors affecting demonstrative pronouns.

2.4.2. Personal pronouns: (GPP)

All errors affecting personal pronouns (the generic pronoun 'one', meaning 'people in general', is included in this category).

2.4.3. Possessive pronouns: (GPO)

All errors affecting possessive pronouns.

2.4.4. Indefinite pronouns: (GPI)

All errors affecting indefinite pronouns *(some, any, everyone, no-one, everything, nothing,…)*. This category also includes the pronouns *one/ones* (= substitute 'one') and the proform *so*.

2.4.5. Reflexive and reciprocal pronouns: (GPF)

All errors affecting reflexive AND reciprocal pronouns.

2.4.6. Relative and interrogative pronouns: (GPR)

All errors affecting relative AND interrogative pronouns .

2.4.7. Unclear pronominal reference: (GPU)

All pronominal reference problems are tagged GPU.

2.5. Adjectives : (GADJ)

2.5.1. Adjective order : (GADJO)

(GADJO) is used for all problems of adjective position. It typically involves placing the adjective after the noun it describes.

2.5.2. Adjective number : (GADJN)

(GADJN) consists of all uses of plural morphemes with adjectives.

2.5.3. Comparative / Superlative : (GADJCS)

(GADJCS) consists of errors involving wrong formation and / or misuse of comparatives and superlatives.

2.6. Adverbs : (GADV)

Adverb order : (GADVO)

(GADVO) deals with the place of adverbs (e.g. verb and object separated by an adverb).

2.7. Verbs : (GV)

2.7.1. Verb number : (GVN)

(GVN) includes all errors of concord between a subject and its verb.

2.7.2. Verb Morphology : (GVM)

This category deals with erroneous uses **of existing verb forms** (e.g. a simple past form instead of a past participle form, an infinitive instead of a past participle, etc.).

2.7.3. Non-Finite/Finite verb forms : (GVNF)

(GVNF) consists of the following errors involving non-finite/finite verb forms.

2.7.4. Verb voice : (GVV)

(GVV) includes all errors where there is confusion of the passive and active voice.

2.7.5. Verb tense : (GVT)

(GVT) consists of any misuse of tense or aspect.

2.7.6. Auxiliaries: (GVAUX)

(GVAUX) consists of all misuses of modals and semi-auxiliaries.

2.8. Word class : (GWC)

(GWC) consists of the inappropriate use of a word class: an adjective used instead of a noun, an adverb instead of an adjective, etc.

3. LEXICO-GRAMMAR : (X)

This category consists of errors where the morpho-syntactic properties of a word have been violated. Correction of such errors often necessitates reference to general rules of grammar as well as knowledge of the morpho-syntactic properties of the specific lexical item involved. The most important areas of error are countable/uncountable nouns, non-finite/finite complementation of nouns, verbs, adjectives and adverbs, and dependent prepositions.

3.1. Complementation : (X...CO)

This category is for complementation errors. Note that, for retrieval purposes (cf. introduction), the tag is inserted in front of the problematic word and not in front of the erroneous word .

The sub-categories are the following :

(XADJCO) : erroneous complementation of adjectives.
(XCONJCO) : erroneous complementation of conjunctions.
(XNCO) : erroneous complementation of nouns.
(XPRCO) : erroneous complementation of prepositions.
(XVCO) : erroneous complementation of verbs.

3.2. Dependent prepositions: (X...PR)

This category includes all errors involving dependent prepositions. The largest groups involve incorrect prepositions with nouns and verbs. As in the case of complementation errors, the tag is placed in front of the problematic word.

The sub-categories are the following :

(XADJPR) : adjectives used with the wrong dependent preposition.
(XNPR) : nouns used with the wrong dependent preposition.
(XVPR) : verbs used with the wrong dependent preposition.

3.3. Nouns: uncountable/ countable : (XNUC)

(XNUC) includes all errors involving the specific characteristics pertaining to countable and uncountable nouns.
The tag (XNUC) should be placed in front of the incorrect article rather than in front of the noun.

4. LEXIS : (L)

This general category deals with errors involving the semantic (conceptual, collocational, or connotative) properties of words or phrases. It is divided into three subcategories: Lexical Single, Lexical Phrase and Connectors. We decided to put all the errors involving connectors together under one sub-category because non-native speakers of English often have difficulty using connectors.

4.1. Lexical single : (LS)

(LS) is used for conceptual, collocational or connotative lexical errors in single words only. Included in this sub-category are solid and hyphenated compounds.
Conceptual
Collocational
Connotative

4.1.1. False Friends : (LSF)

(LSF) Some of the lexical single errors result from the influence of a formally similar word in the learner's mother tongue ('faux amis'). Such errors are tagged as (LSF).

4.2. Lexical phrase : (LP)

LP is used to tag three types of errors :
1. LP includes errors in (semi-)fixed multi-word expressions and idioms:
2. LP should also be used when the learner uses **a paraphrase** instead of the corresponding English LP. Compound words separated by a blank are included in the sub-category (LP).
3. Also included in the LP category are **phrasal verbs** :

4.2.1. Lexical Phrase, False friends: (LPF)
This category includes all erroneous lexical phrases that result from the influence of the learner's mother tongue

4.3. Lexis, Connectors: (LC)
This sub-category consists of errors involving connectors: coordinating
conjunctions (LCC), subordinating conjunctions (LCS) or logical connectors (LCL). The problems may be of different kinds: misuse, unnecessary use or wrong choice. Note that the tag should also be used to indicate the absence of a connective where a native speaker would insert one.

4.3.1. Logical connectors : (LCL)
(LCL) includes all errors involving logical connectors and is further subdivided in
(LCLS) for single connectors and (LCLC) for complex connectors.

4.3.1.1. Single Logical Connectors (LCLS)
4.3.1.2. Complex Logical Connectors: (LCLC)

4.3.2. Coordinating conjunctions : (LCC)
(LCC) consists of all errors involving coordinating conjunctions.

4.3.3. Subordinating conjunctions : (LCS)
(LCS) includes all errors involving subordinating conjunctions.

5. WORD REDUNDANT, WORD MISSING,WORD ORDER : (W)
5.1. Word redundant: (WRS/WRM)
(WR) involves unnecessary repetitions of words.

5.2. Word missing: (WM)
This sub-category is for errors involving the omission of words.

5.3. Word order : (WO)
(WO) is for problems of word order that do not fall into the categories of Adverb
Order (GADVO) (cf. 2.6.) or Adjective Order (GADJO) (cf. 2.5.1.).

6. PUNCTUATION: (Q)
QM = missing punctuation (e.g. missing comma)
QR = redundant punctuation (e.g. redundant comma)
QC = confusion of punctuation marks (comma instead of full stop, etc.)
QL = punctuation mark instead of lexical item (usually a conjunction of coordination) or lexical item instead of punctuation mark.

7. STYLE: (S)
This category is exclusively restricted to incomplete sentences (SI) and unclear sentences (SU).
7.1. Sentence Incomplete (SI)
This sub-category includes sentence fragments such as verbless sentences. It is
sometimes possible to provide a potential correction. When no correction can be provided, we use
the $?$ symbol for correction.

7.2. Sentence Unclear (SU)
SU is used when the analyst is confronted with an unclear phrase/ sentence. Such
phrases/ sentences are tagged SU and followed by the $?$ symbol.

8. Infelicities: (Z)
1. **Register problems**
2. Questions of **political correctness**
3. The category of **stylistic problems**

Appendix 3A: An exercise for deducing the meaning of the keyword

```
8   ntary benefit, maternity grant and speg and vitamin tokens.(This has recent
*   relatively cheap, on tides of free speg and orange juice, but good cloth in
*  nimals give 1J5 painlessly, such as speg and eggs. The proposition that meat
*    consisting in large part of eggs, speg, cheese or other speg products is hi
*   ee a bus stopped, or near a parked speg float or mobile shop. Watch out for
     diner, alone, sipping a strawberry speg shake. She didn't look up when I
```

An exercise for deducing the meaning of the keyword (Tribble & Jones, 1997, p. 39)

Appendix 3B: An Example of a lexical inference exercise

In the following examples the same word is missing in each case.

- Work out the meaning of the missing word.
- Decide if the word has exactly the same meaning in all the sentences.
- If there are different meanings, check whether, and how, they are related.
- If there are different meanings, check whether there are specific words or expressions that are associated with each meaning.

1. The winners of Black & Decker 9032 cordless **????????** action drills which were the prizes in a competition which appeared in the May issue of DIY are as follows:
2. It was a "maniacal" beating around the head with a claw **????????**.
3. Endill watched Tock make a hole in the wall, holding his **????????** with both hands to stop it banging in the wrong place.
4. He had a **????????** and banged it against the walls to restore order but nobody took any notice of him.
5. It was taken out of the context of the early punks and placed alongside the **????????** and sickle, the IRA and PLO slogans and any other symbols which could be guaranteed to raise the hackles and the eyebrows of the BOF's (remember them?).
6. The problem could just be confined to this guitar and removing the strings and lightly tapping the frets down with a block of wood and a small **????????** could well fix it.
7. Author Ian Fleming's original unpublished notes on his most famous creation are to go under the **????????** at London auctioneers Sotheby's on December 15.
8. There are several ways in which you can do this--I use a professional glazier's staple gun which is both quick and efficient, but if you find this too expensive an investment when you first begin pressed flower work you can use a **????????** and nails instead.
9. These mechanisms enable a stressed metal to be rapidly filled with dislocations (something like 10 per square centimetre) and thus to flow under a steady load or the blow of a **????????** quite easily.
10. Next Monday, Rod's prize goes under the **????????** through ADT, the world's biggest car-auction firm at Blackbushe, Hants.
11. Family's **????????** revenge on love cheat soccer ace
12. Chief union negotiator John Allen said it was another "**????????** blow" for the industry.
13. But I must have felt the need for some support, because I found I'd grabbed hold of one of my **????????** s--a geologist is always armed with a **????????**--and when I got through to the back of the house he was there already, at the kitchen window."
14. Its plastic jacket bore a gold **????????** and sickle.
15. Jaq rifled through the pack to find the card he used to signify himself; the black-robed High Priest, enthroned, gesturing with a **????????**.
16. The appellant, having discovered that the man had a number of previous convictions for similar offences, equipped himself with a **????????** and a quantity of weak sulphuric acid and sought out the man at his place of work on two occasions.
17. Using a small **????????** the needles were then tapped through these holes and then cut off flush with the exterior of the pipe.
18. "Distractedly, he began to change **????????**, pouch, pipe and matches from hand to hand, dropping them and picking them up, before finally deciding to put the **????????** down and stuff the rest into his pockets.
19. She had laid the **????????** there, after she had tried to break the tower window.
20. The fist techniques of taekwondo involve lunge punches, reverse punches, back fists and **????????** fists--all of them similar to the basic karate punches described in the previous chapter.

An Example of a lexical inference exercise (Gabrielatos, 2005)

Appendix 3C: A DDL exercise for teaching grammatical collocations

A. What preposition is used after *interested*? Do these examples tell you anything else about the way in which we use this word? (Look at number 1).
B. What preposition is used after *depend*? What sort of word often comes after the preposition?

```
1      of use; and, far from being interested in studying the possibilities of

2    e-cream van—children are more interested in ice-cream than in traffic. 60

3      , when did you first become interested in politics? <Diane Abbott:> I'm

4  Diane Abbott — I've always been interested in politics, as urn, far back as I

5  mbridge, and umm I'm still very interested. I'm just doing a series of progr

6fewer - One . . . one thing which interested me was. urn, polite violence, like
```

```
ixteen to sixteen-year-old group, depending on whether her birthday falls be

d patterns of living which do not depend on fossil fuels at all or depend on

 depend on fossil fuels at all or depend on them only to a very slight exten

begin to get cross or amused. It  depends upon their temperament. (Intervie

    to  pay this by direct debit. Depending on when you use it, your Chargec

 First applications of fertilizer depend on when the turf was laid. If in Sp
```

A DDL exercise for teaching grammatical collocations (Tribble & Jones, 1997, p. 40)

Appendix 3D: A DDL activity for teaching '*any*'

A Closer Look at "Any"
Part 1

Read through the following lines taken from a concordance of the word any.

- This is going to be a test like **any** other test, like, for example
- working with you.. If there are **any** questions about how we're going to
- and I didn't receive **any** materials for the November meeting
- and it probably won't make **any** difference. I mean, that's the next
- You can do it **any** way you want.
- Do you want to ask **any** questions? make any comments?
- I don't have **any** problem with that. I'm just saying
- if they make **any** changes, they would be minor changes.
- I think we ought to use **any** kind of calculator. I think that way
- I see it and it doesn't make **any** sense to me, but I can take that

Source: Corpus of Spoken Professional American English

What conclusions can you draw about the use of any?

Part 2

What are the three main uses of any in order of frequency?

Any 1:

Any 2:

Any 3:

A DDL activity for teaching '*any*' (Krieger, 2003, pp. 6-7)

Appendix 3E: Exercise on reported speech

1. Start by explaining what is meant by reported speech, provide some example and if the class is monolingual ask for examples from the L1.

2. Students then should be asked to work individually through the questions until question number 4; after that students will discuss their findings in groups.

3. Groups should present their findings to the class, and the basis for their conclusions.

4. The same procedure should be followed for the remaining questions, so that students can become acquainted with at least some of the rules of verb tenses in reported speech.

In the following concordances the verbs said and told are always used to introduce Reported Speech. Read the examples and answer the questions below.

```
1   age of eight when she'd done she said she'd worked in an office, done c
2  offered me a race, you see, and we said that ... cos he was having a bit
3  t. I answered my own question, and said that I thought we must be middle
4  shiny instrument". Brother Justice said that that was why he had no mirror
5   his reading of the Bible. The boy said the old man had taken to spending
6  t through I". Brother Justice also told him that he would be safe from
7  o Bro. Justice. Besides, something told him that if he once deserted, then
8   elephant carved in ivory. The man told him to always turn the elephant to
9   ad with newspapers. She must have told me once that I was lucky to have a
10 visited my primary school)she was told that I'd be going into the eleven-
```

1. What sort of word nearly always comes immediately after *told*?

2. Compare the examples of *said* (numbers 1—5). Can you write a rule to determine when you use *said* and when you use *told* to introduce Reported Speech?

3. Number 10 seems to be an exception. Can you explain why?

4. Now make a note of the main verb which follows *said* or *told* in the left-hand column in the table below. The first three have been entered for you.

Verb 1	Original words
1. had worked	"I've worked in an office ."
2. ??	??
3. thought	"1 think we must be ..."
4.	
5.	
6.	
7.	
8.	

5. Look at the examples again and try to work out what each speaker actually said (in Direct Speech). Write down what you think the speaker's exact words were in the right-hand column in the table above. The first three have been entered for you. Number 2 shows that you cannot always guess what the speaker said as the concordance does not give you enough information.

6. In the places where you have written something in the right-hand column, look at the main verb. What tense is it in? Compare it with the verb in Reported Speech (in the left-hand column). You should find that the tense of the verb has changed in every case. Can you write any rules about how verb tenses change in Reported Speech?

Exercise on reported speech (Tribble & Jones, 1997, pp. 41-42)

Appendix 3F: Exercise on different uses of *like*

```
1 00'. If we are now using something like  7,000 million tons of coal equivale

2 away from their homes, and treated like outcasts. So don't break up a fr

3 noble to make it. I wanted to walk like that, a short skirt, high heels,

4 n you are younger than usual. So I like to think I'm helping somebody else.


5    than you think—50 mph may feel  like 30 mph—so be sure to use your spee

6 e desk. It was a damp mouldy smell like a dirty wet dog or a saddlecloth ca

7 ther, the boy imagined that he was like a space traveller in baggy clothes

8 enly placed into another which was like a suit many times too large and to


9   iTs xylophone, marimba—which is  like a xylophone except lower in pitch

10 d or visit as often as they would like because they work or have other

11 tical principles into practice, I like meeting people, and I'm pleased to

12 There are increasing numbers who, like myself) are for one reason or

13 now about Stravinsky or something like that then they're quite lost.

14 erything. I don't think of myself like that.I'm lucky it's worked out qui

15  lodger's room already occupied.I like the idea of being the daughter of a

16  et for another reason he did not like the old man. In fact he feared and

17  my case I can sleep as long as I like the rest of the time. File Seven

18 book. Testing hundreds (it seemed like thousands) of recipes in my own kite

19 oung people are often curious and like to experiment with the latest craze

20 cial offer for everyone. If you'd like to find out more about Holidays in

21  lies in the people we employ. We like to make our branches friendly and

22  what others have gone through. I like to think I've been helpful to
```

In which of the contexts above is *like* a verb (as in *I like chocolate*), and in which contexts is it a preposition (as in *My brother eats like a horse*)?

VERB:_____PREPOSITION:_____

Exercise on different uses of *like* (Tribble & Jones, 1997, p. 45)

Appendix 3G: Exercise on over and above

```
01 ow men but also with nature and, above all, with those Higher Powers which

02ays, his dirty merino collar rose above his shirt, and he smelled the same

03oad accidents have alcohol levels above the legal limit for driving. Driv

04lights as well. If the red lights above your lone flash' you must not go be

05es, for I saw her once as if from above, moving through a kind of square,

06tate agency business. We now have over 160 offices under the Cornerstone n

07ly injured are either under 15 or over 60. The young and the elderly may no

08n unlikely proposition. I did it, over a period of time, by having at least


09  This process should be repeated over a two week period. If there are any

10rveys divide teenagers into those over and those under sixteen, which I th


11  late 1950s—went on being handed over every Friday until his death, even

12on of paying for larger purchases over several months. The minimum amount


13  child may do the same. Don't be over-suspicious and try not to over react

14 response. I got letters from all over the country, from young mothers of

15eaf for pedestrians. Do not climb over the guard rails or walk outside them

16se of the children we played with over the road was given to the youngest

<more examples follow>
```

1. In which of the contexts of above (1-5) could you substitute over?

2. Make a list of the contexts in which over means

   a) at a higher level or covering

   b) more than

   c) during (from beginning to end of a period of time)

   d) finished

3. What does over mean when used as a prefix, as in numbers 13 and 25?

4. What do these phrasal verbs mean?

   Hand over (11 and 23)

   Get over (18)

   Talk over (24)

5. What does all over mean in numbers 14 and 20?

6. What does over the top mean in number 19?

Exercise on *over* and *above* (Tribble & Jones, 1997, pp. 46-47)

Appendix 3H: Simple exercise on *over*

```
1    state agency business. We now have over 160 offices under the Cornerstone n
2     ly injured are either under IS or over 60. The young ond the elderly may
3     , as it were, throw their rubbish over the fence into the neighbours garde
4    deaf for pedestrians. Do not climb over the guard rails or walk outside the
5      to many parts of Britain and met over thirty girls, mainly in their home
```

1. In which of these examples does over mean from one side to the other?
2. What does over mean in the other examples?

Simple exercise on *over* (Tribble & Jones, 1997, p. 48)

Appendix 3I: Exercise on *look*, *see* and *watch*

1. The class should be divided into groups and each group is given a certain worksheet which includes a set of concordances and the same task, which consists of two stages, A and B. The activities' content is reproduced in Figures 4.10, 4.11, and 4.12. Groups attempt their worksheet and can consult dictionaries. However, they should be informed that each student should keep a note of the answers.

2. In this stage, the groups should be rearranged keeping the same number of participants in each group as they were in stage one. Then, after the new groups are formed, they work on comparing their findings from stage A. After that, they move on to stage B of the task where they first write a list of the phrasal verbs and compare the meanings of these verbs with each other and how they differ in meaning. They should compare their results with the dictionary/ dictionaries they consulted at the beginning to decide which of their conclusions corresponds more with the definitions and examples they found in the dictionary/dictionaries.

3. All groups present their findings to the class.

Group (1)

```
1   actical and emotional problems and watched as she struggled to bring up a ba
2  rs, especially girls, preferring to see them as innocent children, so conse
3   hem and would not be without them. looking back, they would have done a few
4  ers so other people con read it and see what others hays gone through. I lik
5  e were excluded because he couldn't see them stiff and proper quite fitting
6  ot dimmer and dimmer and finally he saw them only as through the one winking
7    many papers tied with string that looked official and held no interest. And
8   himself. He also did not appear to see too well and this the boy liked, for
9   s shook so much that the boy would watch in fascination as more often than n
10 his presence. Then after a while he saw that the man noticed him in a sly ki
11 tably the uncle's age though now he looked twice as old. He would spend endle
12 is: it was the way the man used to watch him. Even in those days before he
13  instinctively that for one man to look at another man like that was sinful
14   e yard—feeding the young calves, looking after the chickens, helping the a
15 h his chores he could feel the man watching him, would turn suddenly and the
16  would be. He knew the man was not watching the chickens or what he was coin
17 ckens or what he was doing. He was watching him. And watching him the way he
```

Exercise on *look*, *see* and *watch*, group (1) worksheet (Tribble & Jones, 1997, p. 50)

Group (2)

```
19  watching him the way he should be watching a woman. Bro. Justice went out o
20 t herself to plead with her please look after the little boy. But the aunt,
21 ing at all but was surreptitiously watching him beneath half—closed eyes. At
22   e room again. So he continued to watch the man and to visit the room while
23  But now he knew that the man  was watching him, he grew more conscious of h
24  would go and stand by the bed and look down on the unshaven face and try to
25  ing so close to him was no longer looking coy or foolish. His hair was stan
26 ing the eye of the spirit lever he saw the man advance towards him. He ste
27  have shifted several times, for I saw her once as if from above, moving th
28 d point of the dream where I stood watching her, left forefront. She wore t
29 and started to go round and round, looking out at me as she turned. I wish I
30emed right. I understood what I had seen in the dream when I learned the wor
31   baby the puzzlement of the child watching from the pavement, wondering
32 ng on the platform with her family seeing her off, for the through train to
33   t the Somme, she managed that to looking after the three-year old my mothe
34  right for him; he doesn't have to look after you,), and I wish I could tell
35 ack suede shoes, her lipstick. She looked so much better than the fat, spree
36 ked amazement of one who had never seen what she knew written down before.
37 t her and her mother long before I looked them both in the face, or heard ab
38 d to have achieved viability if he saw that it was rapidly consuming its ca
39 nderstand the problem and begin to see the possibility of evolving a new li
40   rmanence. Productivity will then look after itself. In industry, we can in
41 following chapter is an attempt to look at the whole situation again, from
42 d be universal prosperity. One may look in vain for historical evidence that
```

Exercise on *look*, *see* and *watch*, group (2) worksheet (Tribble & Jones, 1997, p. 50)

Stage A:
1. (Pre-reading task) Before you look at your printout, try to answer this question in your group:
What are the differences between *look*, *see* and *watch*? Make a note of these, with examples if you like.
2. Now look at your printout. Do the examples support what you said in 1? Put a cross by any examples that are not covered by your note
3. Make a note of any phrasal verbs formed with *look*, *see* or *watch* that you find.
   Stage B
   Now get together with the other groups and compare notes.
1. Write a list of phrasal verbs formed with *look*, *see* and *watch*.
2. Write a short note about each verb to explain how it differs from the other two. Choose one or two good examples from the printouts to illustrate your explanations.
3. Compare your explanations with the definitions and examples in your dictionary.
While you have your dictionary open, look up the meaning of any phrasal verbs that you are not sure about.

Instructions for the exercise on *look*, *see* and *watch* (Tribble & Jones, 1997, pp. 59-51)

Appendix 3J: A Gap-fill exercise based on *rich* and *poor*

```
1  daily life. It is more often the……….. conditions that many young mothers
2  he had nothing else, he was still……….. because he had this space which
3  in the 1950s. We believed we were……….. , because we children were expensiv
4  of 'education for leisure' in the……… countries, and of 'the transfer of
5  the transfer of technology' to the………. countries. The liquidation of these
6  powerful or powerless…………. , or……….. , influential or uninfluential. To
7  has nothing to gain. Are not the…………. , the exploited, the oppressed most
8  our own flesh. The message to the…………… and discontented is that they must
9  ough from time to time to help the…………… . , because this i5 the way by which
10 at far off when everybody would be……….. We shall then, he said, 'once more
11 substitute for anything. It is a………… and various cuisine, full of many
12 is phenomenal' Nearly all nuts are………. in protein, as are many seeds. In
13 The palate should find variety in………… and light, sharp and mild But also
14 from serving two or three courses………… with cream and eggs, or a sweet tr
15 drivers to see you at night or in……….. light, so when visibility is
16 light, so when visibility is………….. , wear something light-coloured or
17 sors) at night or in conditions of…………… visibility. 33 Tinted glass does
18 ions, or where the rood surface is………….. . Do not overtake motorcycles, peda
```

1. In the above concordance output the keywords *rich* and *poor* have been removed. Can you put them back in the right contexts?
2. Make a note of all the contexts where rich or poor are used metaphorically (that is, where they do not mean "having a lot of money" and "having very little money"). What do the two words mean in their metaphorical senses?

RICH: …………………………………………………………………………………………

POOR: ………………………………………………………………………………………..

A Gap-fill exercise based on *rich* and *poor* (Tribble & Jones, 1997, p. 56)

Appendix 3K: Parallel native and learner concordances

Consider the two examples from native and non-native speaker writing given below.
1. *What grammatical structures appear to follow "accept"?*
2. *Do any grammatical forms only appear in the non native-speaker examples? If this is the case, check if the students are using an acceptable form.*
3. *Carry out the same investigation of "possibility" — again, do the non-native speaking writers use a form which is not found in the native speaker data set? If yes, is it an appropriate use of the word?*
(The Longman Activator provides useful advice on the appropriate use of "accept" and "possibility")

Native Speaker writing

not being able to accept	> that fulfilment of life is possible
be overcome? Why not accept	> the differences as an intentional
the act. Hugo cannot accept	> that the party line has changed
mothers and learn to accept	> their traditions.
with their emotions and try to accept	> that diversity
If the peer group doesn't accept	> what the friend is wearing
of a woman, why not accept	> it and consider ways to use

Non-native Speaker writing

families, the parents accept	> that new visions of things
think that women must accept	> that some differences exist
nor the children accept	> to recognize that
the parents accept	> that new visions of things may
don't always accept	> that their children also
women have to accept	> the other side of the coin
young. He could never accept	> to be inferior
guinea-pig and accept	> to receive some viruses, some
Feminists have to accept	> to be treated as men
Johnny will not accept	> the Company's decision

Native Speaker Writing

from the two-fold possibility	> for joining the party: was
earth. There is no possibility	> of his dominant position in
and sensible possibility	> for solving international
There seems every possibility	> that the present Queen will
you die, there is no possibility	> of benefiting from that
deduces the possibility	> of a relatively increasing
mention the possibility	>that one of the motives for
47 that, there is no possibility	> of conversion from one
but there is a possibility	> of entry for those
popular because of the possibility	> for abuse. The second

Non-native Speaker Writing

January 1993 on, the possibility	>for workers of all kind to,
is, however, a strong possibility	> that our society is still
European level, the possibility	> for students to move from
Students have the possibility	> to leave for another
of employees, the possibility	> for professional people to
self-confidence and possibility	> of identification. To follow
culture and have the possibility	> to practise their
to young people the possibility	> to enrich their
already explored the possibility	> of forming other such
argument against the possibility	> of an identity
there maybe a possibility	> of reducing the
because we have the possibility	> to travel more freely all
of life, i.e. the possibility	> to be in harmony with

Parallel native and learner concordances (Granger & Tribble, 1998, pp. 202-203)

Appendix 3L: Exercise on relative pronouns

Working with a partner, show how you would rewrite each sentence using a participle connector. If you think the sentence does not need rewriting simply put a tick (check) under it.

1. Based on the information that we get from current studies of health implications of computing, we would like to make a conclusion whether there is a potential hazard of computers or not. "...information obtained from..."

2. But in the case of carbon certain compounds which have the same molecular structure exist in different forms because they have either different arrangements in space or their atoms are linked together in a different way.

3. Further studies in this field led to a new branch of science that we called "ergonomics" or "human factors".

4. There is no higher body which can rule over a sovereign state without its consent.

5. Indeed there are over two million known organic compounds which contain carbon and hydrogen but also oxygen, nitrogen, sulphur and many other elements.

6. Over the past decade computer users have reported a variety of health complaints that have been associated with computers including visual and musculoskeletal discomfort, pain, and psychological distress.

7. The third chapter provides a survey of racemill modification which is a mixture of equal parts of enantiomers, followed by a detailed discussion of the resolution of racemill modification.

8. These requirements achieve a critical importance in devices which utilise heterostructure with very thin layers (10-150A) and abrupt compositional interface like, for instance, the quantum well lasers.

9. This means that network planning is not formulated as a single objective problem, but as a problem that concerns the inclusion of multiple objectives into the process.

10. Today there are millions of people world-wide who use computers in their daily work.

Exercise on relative pronouns (Tribble & Jones, 1997, pp. 59-60)

Appendix 3M: An exercise based on learners' English

In the first paragraph below, a learner of English has written about a trip to the cinema, and the second is about a TV programme she had seen. The numbers indicate mistakes and especially interesting instances of how she uses articles. In each case identify correct alternatives and speculate about her use of articles.

The (1) last week I decided to go to a (2) cinema. It was difficult to choose an interesting film which I could understand without a (3) problem. I looked in a (4) newspaper and found a film. It was "Cinema Paradiso' The actors played in (5) Italian Language. I don't understand the Italian language but fortunately the subtitles were written in English. It is a wonderful film about many interesting aspects of the world cinema and the (6) life.

I watched on a (7) TV about the (8) tuberculosis. It was (9) very interesting film. Many years ago they had to go in the (10) hospital. It was like a (11) jail. At this time many people were treated among the (12) family.

An exercise based on learners' English (Parrott (2000, p. 53))

Appendix 4A: Target collocations and errors observed in the SLC

Target collocations	Production error observed in the SLC
Break a habit	Cut a habit*
Set a goal	Specify a goal*
Grant a wish	Achieve a wish*
Draw a conclusion	Extract conclusion*
Raise questions	Excite questions*
Get the impression	Take the impression*
Meet expectations	Answer expectations*
Place order	Put order*
Make room	Open/widen room*
Settle an argument	Judge an argument*

Appendix 4B: Training session worksheets

VERB COLLOCATIONS OF THE NOUN *THREAT*

1. **Translate the following sentences into English.**

   a. تحارب الحكومات المخدرات لأنها تشكل تهديداً للشباب في مجتمعاتنا

   Governments fight drugs because they pose a threat to the youth in our societies.

   b. تعمل المستشفيات جاهدة لمقاومة تهديد هذا المرض

   Hospitals are working hard to counter the threat of this disease.

   c. يواجه رجال الشرطة تهديدات لحياتهم كل يوم في عملهم

   Policemen face threats to their lives every day in their work

2. **Look at the following concordances and note the verbs before *threat* that express the meaning intended in the three sentences in question no.1. Write these verbs in the table below.**

1	they are strongest. We choose to meet that **threat** now where it arises, before it can appear
2	Force will spend $23 million to counter the **threat** from chemical, biological and nuclear weapons
3	April 29. So, does India still face any **threat** from chemical weapons? India's potential
4	interconnected world where we face many **threats** , many challenges -- threats that no one
5	Cooperation between us to counter this **threat** and protect our people is very useful.
6	trouble with modern life is that it poses **threats** to our health and well-being which can
7	able to act at all times to meet any sudden **threat** to the nation's security. A wise President
8	strong. He didn't feel ready to face such **threats** ; he was too afraid. Almost a month passed
9	his team are now in a position to meet the **threat** from Ferrari. Having registered his second
10	reduced. Jordan is not seen to pose a serious **threat** , Egypt has signed a peace treaty and Lebanon
11	about them to suggest that they could pose a **threat** to the safety of the young person". It
12	will fund whatever it takes to meet the **threat** and protect the people of Ontario. "While
13	the use of force is necessary to counter **threats** to peace and security. TEXT: With anti-war
14	warns that China, India and Russia face "big **threats** " by 2025, and are at risk of seeing HIV

| 15 | | are much better prepared to counter the **threat** from these players because they know their |
| 16 | | within a few months. It only poses a health **threat** if the body is unable to kill it, when |

verbs	Sentence no.	meaning
…………. threat		
…………. threat		
…………. threat		

3. **Look at question no. 1. How would you translate the three sentences now?**

VERB COLLOCATIONS OF THE NOUN *ATTENTION*

1. **Translate the following sentences into English.**

   a. رفعت ذراعي لأجذب انتباههم

   I raised my arm to attract their attention.

   b. عندما يتحث أستاذك ركز إنتباهك على النقاط الرئيسية بدلاً من محاولة كتابة كل شيء

   When your teacher talks, focus your attention on key points, instead of trying to write everything down.

   c. نحن ننتبه كثيراً لجودة منتجاتنا

   We pay a lot of attention to the quality of our products.

2. **Look at the following concordances and note the verbs before *attention* that express the meaning intended in the three sentences in question no.1. Write these verbs in the table below.**

   1. relaxed.. you find it easy to focus your **attention** , and imagine things very clearly.. and
   2. a success, I decided it was time to pay **attention** to my social life. And for me that meant
   3. a close, two new issues attracted world **attention** to South America. One <p/> was the dangers
   4. the girl had gone the kids turned their **attention** back to me. They seemed mildly curious
   5. wind. <p/> Even the grass does not escape his **attention** . "Look at this, it's perfect," he said,
   6. (WHO) is just beginning to bring to our **attention** the fact that toxic chemicals are being
   7. . He said: "We are bringing this to your **attention** to alert you to the situation now and the
   8. Jack added that `one does want to keep the **attention** of students focused on the great writers '
   9. ancestor. What had always attracted the **attention** of the European writers on China were the
   10. home safety. They also have to pay more **attention** to the health and safety of their children
   11. something good or something that will attract **attention** , my parents will get back together"; then
   12. However, it is important that we pay some **attention** to what we eat. Eating too little can result
   13. of the teacher not being able to keep the **attention** of the child. The child gets bored and then
   14. in London and Dorothy had given all her **attention** to her brother. `I was a country girl,"
   15. , especially when he suddenly turned his **attention** to Anna and said with a laugh, `Who are
   16. everything as he had found it. He turned his **attention** to the laptop. She didn't even have it
   17. comfortably and close your eyes. Focus your **attention** on your feet - ignore the rest of your
   18. Clear your mind of other thoughts and focus **attention** on your chest and breathing. Let your breathing
   19. only now doesn't mean it has escaped the **attentions** of Washington or the CIA: ``During the

20.   moved the family to New York to escape **attention** and tried to give her children a normal

21.   the previous night. He gave me his full **attention** . He even stopped eating for a second. `

22.   shows that are familiar enough to keep the **attention** of very small children, as well as new enough

23.   decided that he was trying to attract our **attention** . We talked about this for a few minutes

24.   when he talked to her. She gave him all her **attention** , though. And tried hard to remember all

25.   expect that he would have given his full **attention** to the problem, cancelling everything that

26.   not easy. Just imagine trying to keep the **attention** of 80 teenagers who've been sitting for three

27.   , sir."'Good," the Chief said. `Now pay **attention** to me, because if you don't, you'll be

28.   for many years. This was brought to his **attention** after his first heart attack. He was told

29.   difference. Nothing is too small to escape his **attention** difference. Nothing is too small to escape his

30.   with the other children, she turned her **attention** to books, numbers and watching Miss Ann

31.   committed. <p/> I will simply bring to your **attention** the fact that one of us had to take the

32.   took a few moments for him to focus his **attention** upon the question." No," he said, finally

verbs	Sentence no.	meaning
…………. attention		
…………. attention		
…………. attention		

3. **Look at question no. 1. How would you translate the three sentences now?**

VERB COLLOCATIONS OF THE NOUN *RISK*

1. **Translate the following sentences into English.**

   a. إذا أبقيت أسعارك مرتفعة هكذا فإنك تجازف بخسارة عملائك

   If you will keep your prices high like this, you are running the risk of losing your customers.

   b. الخطة ستكلف مالاً، سوف تتضمن مخاطرة وسوف تستغرق وقتاً

   The plan will cost money. It will involve risk, and it will take time.

   c. الخوف يجعلنا نتجنب المخاطرة ونهرب من التحديات

   Fear makes us avoid risk and run away from challenges.

2. **Look at the following dictionary entry and note the verbs before *risk* that express the meaning intended in the three sentences in question no.1. Write these verbs in the table below.**

risk /rɪsk/ *noun*

the possibility that something bad, unpleasant, or dangerous may happen

VERBS

involve a risk (=might be dangerous) *Most medical operations involve some risk.*

face a risk *Miners face great risks.*

have a risk of sth *Older men have a higher risk of developing this disease.*

increase a risk *Smoking increases the risk of heart disease.*

avoid a risk *They are anxious to avoid any risk of criticism.*

present a risk (to sb/sth) (=might be dangerous) *Climate change presents serious risks to the environment.*

reduce a risk *This diet could reduce your risk of certain cancers.*

run a risk (=be in a situation where there is a risk of something happening) *Those who tried to escape ran the risk of being shot.*

assess the risk *The company needs to assess the risk before making a decision.*

verbs	Sentence no.	meaning
…………. risk		
…………. risk		
…………. risk		

3. **Look at question no. 1. How would you translate the three sentences now?**

VERB COLLOCATIONS OF THE NOUN *TRUTH*

1. **Translate the following sentences into English.**

   a.   لاتفكر كثيراً، فقط قل الحقيقة

Don't think too much, just tell the truth.

   b.   لاتقلق، الزمن سيكشف الحقيقة

Don't worry, time will reveal the truth.

   c.   بعد عدة أشهر، أدرك أنه يجب أن يقبل الحقيقة

After several months, he realized he should accept the truth.

2. **Look at the following dictionary entry and note the verbs before *truth* that express the meaning intended in the three sentences in question no.1. Write these verbs in the table below.**

truth /truːθ/ *noun*

the true facts about something, rather than something untrue, imagined, or guessed

VERBS

know the truth *At last I knew the truth about my parents.*
tell (sb) the truth (=to let (sb) know the truth) *How do we know you're telling us the truth? | If you tell the truth, you will not be punished.*
get to the truth *informal* (=discover the truth) *The police will eventually get to the truth of the matter.*
stretch the truth (=say or write something that is not completely true) *He has been known to stretch the truth when it*
suits him.
hide the truth *They tried to hide the truth from their children.*
find out the truth *She was determined to find out the truth, whatever it took.*
learn the truth *When she learns the truth, she may decide to help us.*
accept the truth *Our pride stopped us from accepting the truth.*
search for the truth *Claire's father spent years searching for the truth about her death.*
reveal the truth *She'd promised never to reveal the truth to anyone.*

verbs	Sentence no.	meaning
…………. truth		
…………. truth		
…………. truth		

3. **Look at question no. 1. How would you translate the three sentences now?**

Appendix 4C: Experimental teaching materials

VERB COLLOCATIONS OF THE NOUN *ARGUMENT*

1. **Translate the following sentences into English.**

   a.   ساعدت سارة في حسم الجدال بيني وبين هنا

   Sarah helped settle the argument between me and Hana.

   b.   المواضيع السياسية غالباً ما تسبب العديد من الجدالات

   Political topics often cause many arguments.

   c.   إيملي كانت تعلم إنها لاتستطيع الفوز بالمناظرة/الجدال

   Emily knew she couldn't win the argument.

2. **Look at the following concordances and note the verbs before *argument* that express the meaning intended in the three sentences in question no.1. Write these verbs in the table below.**

1	pretty disgusting. I'm not getting into an **argument** which is the nicest way to kill somebody
2	communication skills, it is possible to avoid **arguments** without suppressing negative feelings and
3	, as his father had never let him win an **argument** , Bill could only grow up with the belief
4	along the way James and a friend got into an **argument** about me, which turned into a fight. Each
5	expert Dr Malcolm MacLeod always loses **arguments** with his wife. Badly. The reason, as he
6	therefore, should never have any kind of **argument** with their husband before the men go flying
7	company would be stopped. He must settle his **argument** with Annawa by talking not by shooting.
8	centre. Oh, I'm sure she'd won her share of **arguments** when they were alone, in the kitchen, in
9	* Respect all points of view and avoid **arguments** . * Have a plan prepared for the worst case
10	The ancient Martians learned to avoid many **arguments** through correct understanding. Whenever
11	"Hope asked. "I didn't want to start an **argument** with a 96-year-old man so I tried to think
12	overweight. Is he right? It is causing **arguments** between us and I don't want us to split
13	hoped not, because Mum usually won their **arguments** , and if he went, I'd have to go along,

14	civil war -- but Neil Sullivan ended any **arguments** about who is the best for the Scotland
15	and technology experts ended three days of **arguments** Friday about whether Microsoft has been
16	cinema. That morning he and Eleanor had an **argument** and she locked herself in her bedroom.
17	want to tell us something, was losing an **argument** or wanted to change the subject?' Anna
18	millionth time. `I'm not trying to start an **argument** , but you should have done English.' <p/>
19	" <p/> Charlie turned to me. `We have this **argument** all the time." <p/> `I always win," grinned
20	make someone else look small, or win an **argument** , they are making themselves look more important
21	``the only man I know who could start an **argument** with himself ", but while there were difficult
22	husband, which makes it a lot harder to avoid **arguments** . `Increased drinking makes the situation
23	this question and others have caused much **argument** . At first even the identity of the two
24	But anyway I'm not going to get into that **argument** tonight anyway. <M03/> <tc text="laughs"/>
25	getting more upset and then we got into a big **argument** ." Although Bill was listening to Mary,
26	people have looked to dictionaries to settle **arguments** about the correct way to use a word. But
27	that person shows that she has lost the **argument** . It must be very frightening to be shown
28	<F01/> but she didn't. So it caused a lot of **arguments** in the family because they said I made
29	Spencer was his opponent. <p/> PLEASE settle an **argument** between my wife and me -in which sport
30	was such a strain that he would lose his **argument** , and find himself starting to cry. He imagined
31	once in a while. He knows how to start an **argument** , your dad. He gave me one of his books
32	loved that. We're not trying to end the **argument** , we're just trying to start people [talking
33	He believes both sides want to settle the **argument** over just which team is the strongest.
34	anything. I was in the room when they had an **argument** . She told him that she was simply going
34	track. Finally von Rossbach ended the man's **argument** by turning him around and pushing him through
36	unacceptable clothes or make-up, cause heated **arguments** . Try to talk about them when you are both

verbs	Sentence no.	meaning
…………. argument		
…………. argument		
…………. argument		

3. **Look at question no. 1. How would you translate the three sentences now?**

VERB COLLOCATIONS OF THE NOUN *CONCLUSION*

1. **Translate the following sentences into English.**

   a. ‏ماهو الدليل الذي لدينا لدعم هذا الاستنتاج؟

   What is the evidence we have to support this conclusion?

   b. ‏أنا أظهرت لك الأدلة و أنت كنت ذكياً بما يكفي لإستنباط الاستنتاج االصحيح

   I showed you the evidence and you were smart enough to draw the right conclusion.

   c. ‏دعونا لانقفز إلى استنتاجات عن أشياء لانعرفها

   Let's not jump to conclusions about things we don't know.

2. **Look at the following concordances and note the verbs before *conclusion* that express the meaning intended in the three sentences in question no.1. Write these verbs in the table below.**

1.	which hopefully will lead to a satisfactory **conclusion** . When we get it right, everyone is happy
2.	all. I think Ms Hodge must be basing her **conclusions** on her own time as a student and her standards
3.	Eventually, she said, `Because I came to the **conclusion** that it made no difference. Left-wing,
4.	<p/> `There is no evidence to support that **conclusion** . There is something very strange about
5.	believe them; all indications lead to the **conclusion** that Kingsley purposely ended his life
6.	and a half later, when I had come to the **conclusions** that we were going to continue straight
7.	there was no cause to lie. He was jumping to **conclusions** which could easily be false. He could be
8.	I can understand why the police drew the **conclusions** they did.' `But you still think they have
9.	sleeping with - and, before you jump to any **conclusions** , it wasn't me. I know who killed him and
10.	them. This is because they will often draw **conclusions** for you, without explaining the logic that
11.	reaching for her hand. <p/> `I have come to the **conclusion** that he was wrong. He should not have looked
12.	research it is difficult to draw general **conclusions** because it is not detailed, and some of
13.	physician can only watch, study and draw **conclusions** . Look at the evidence. A man's eyes, the
14.	the health status of children supports the **conclusion** that children are not becoming fatter as
15.	effective," he said. "You don't base your **conclusions** on the experiences of one person, no matter
16.	the First World War in no way supports the **conclusion** that the Germans did not respect human
17.	caused the changes. Many will jump to the **conclusion** that they have done something wrong and
18.	café was still open. We didn't come to any **conclusion** , of course. Not about anything. But I felt

19.　　　　　with our breasts many of us jump to the **conclusion** that it must be cancer. However 75 per

20.　　　conclusion that his evidence does not support his **conclusions** and that it is, put quite simply, a bad

21.　　　　　our discussions will eventually lead to a **conclusion** that everyone accepts and recognises is

22.　　　　　in six weeks time. The report bases this **conclusion** on expected changes in the weather; the

23.　　　situation. REP: Professor Viessberg bases his **conclusions** on a series of experiments which he conducted

24.　　　　measure of performance usually leads to the **conclusion** that he or she is a good manager. However

verbs	Sentence no.	meaning
…………conclusion		
…………conclusion		
…………conclusion		

3. **Look at question no. 1. How would you translate the three sentences now?**

VERB COLLOCATIONS OF THE NOUN *EXPECTATIONS*

1. **Translate the following sentences into English.**

   a. إذا كنت تريد أن تنجح ككاتب، يجب عليك تلبية توقعات القراء

   If you want to succeed as a writer, you should meet your readers' expectations.

   b. كنا حريصين جداً أن لانخلق توقعات غير واقعية

   We've been very careful not to create unrealistic expectations.

   c. يمكن للمعلمين خفض توقعاتهم على أساس المستوى الأكاديمي الحالي لطلابهم

   Teachers can lower their expectations based on the current academic level of their students.

2. **Look at the following concordances and note the verbs before *expectations* that express the meaning intended in the three sentences in question no.1. Write these verbs in the table below.**

1.	holds true on the course too; raise your **expectations** and you may raise your standard of play
2.	Maybe they think they can lower people's **expectations** . I'm not so sure they can do that." The
3.	that our service does not meet your **expectations** , our store manager is always available
4.	need everybody to be like her Has realistic **expectations** of her friends and does not expect them
5.	these discounts are creating unrealistic **expectations** ."The latest industry figures also show
6.	federal officials have tried to dampen **expectations** , suggesting the process will take time
7.	their ability to raise patients ' hopes and **expectations** . If the new study turns out to be correct
8.	varieties we want to meet our customers ' **expectations** as much as two years before the plants
9.	behave, but they will still fail to meet our **expectations** . We can try to see ourselves and our world
10.	that officials have been trying to dampen **expectations** that the meeting would result in a peace
11.	totally different lives and have different **expectations** of themselves and others than did their
12.	he can from his past experience create **expectations** . When these expectations are met
13.	private solutions. Some lowered their work **expectations** . They took part-time jobs; they accepted
14.	officer Rick George tried to dampen any **expectations** that the company will be able to keep up
15.	an opportunity for us to create our own **expectations** ." In the last 10 years the Huskies have
16.	said McClellan. But Bush aides dampened **expectations** for any new agreement, with one senior

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17.   inappropriate behaviors leads you to lower your **expectations** of normal behavior. If you can't reach

18.   behaviour in schools, and we should lower our **expectations** of pupils in order to satisfy that achievable

19.   positioning of customer service is not to create **expectations** greater than the service your company can

20.   this is that we tend to grow up having **expectations** of other people and are then disappointed

21.   communications. We will never meet everyone's **expectations** , but the skill and effort that we put into

22.   funding," he said. "I don't want to raise **expectations** too high at this stage. There are lots

23.   election results had dramatically raised the **expectations** of workers in both town and countryside

24.   ask yourself whether you have unrealistic **expectations** of yourself. Are you trying to be perfect

verbs	Sentence no.	meaning
…………expectations		
…………expectations		
…………expectations		

3. **Look at question no. 1. How would you translate the three sentences now?**

VERB COLLOCATIONS OF THE NOUN *GOAL*

1. **Translate the following sentences into English.**

   a. أرحب بكل الأفكار حول كيفية تحقيق هذا الهدف

   I welcome all ideas about how to achieve this goal.

   b. إذا كنا جميعاً نعمل معاً من أجل هدف واحد، فسوف نفوز في نهاية المطاف

   If we all work together towards one goal, we will win in the end.

   c. إذا وضعنا هدفاً وركزنا تماماً على هذا الهدف، يمكننا أن ننجح

   If we set a goal and we're totally focused on that goal, we can succeed.

2. **Look at the following concordances and note the verbs before *goal* that express the meaning intended in the three sentences in question no.1. Write these verbs in the table below.**

1	\<p/\> Basically you should have a long-term	**goal**	list, covering six months or more, which
2	what you want to do, you need to have a	**goal**	or vision. `I want to be happy "is not
3	Here's what it takes to achieve some basic	**goals**	(assuming your diet stays the same): To
4	setting. It is easier to set longer term	**goals**	than short-term ones, so begin by setting
5	obstacles in your path, and you can achieve your	**goals**	in life if you are just willing to reach
6	confident that they would achieve their	**goal**	of a top five place across the line. The
7	.' I asked, `Why is it important to set	**goals**	and achieve them?' He replied, `I don't
8	not high on my list of goals.' `You ***have***	**goals**	?' `No, it was just something to say.' `
9	important. It is better to set positive	**goals**	than negative ones. Say `I want to feel
10	he said,'is a good man? We work towards a	**goal**	, all of us. Are we good when we pursue
11	specific about it and then work towards that	**goal**	. If you are in a situation that is not
12	future development, so they will have clear	**goals**	. It's necessary for Snakes to check out
13	Three Personal Goals When you set the right	**goals**	for yourself, you will feel excited, a
14	and is prepared to work towards a certain	**goal**	rather than be distracted by something
15	believe they are working towards common	**goals**	. This will not be easy, they say, but it
16	You'll find it difficult to achieve your	**goals**	unless you're managing your time effectively

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verbs	Sentence no.	meaning
…………. goal		
…………. goal		
…………. goal		

3. **Look at question no. 1. How would you translate the three sentences now?**

VERB COLLOCATIONS OF THE NOUN *HABIT*

1. **Translate the following sentences into English.**

a. يجب أن تناقشي مع زوجك طرقاً لقطع عادة الكذب عنده، عليه أن يفعل ذلك لتستعيدي ثقتك به

You should discuss ways for your husband to break his lying habit, which he must do in order for you to trust him again.

b. تقول سارة أنها سعيدة بأن زوجها ساعدها في تطوير عادة توفير المال لمستقبل عائلتها

Sarah says she is happy that her husband helped her develop the habit of saving money for her family's future.

c. كنت أملك محلاً، والآن بعد أربعين سنة مازلت أستيقظ في الساعة الرابعة صباحاً، لا أستطيع تغيير عادة قديمة

I used to own a store, and now after forty years, I still keep getting up at four in the morning. I can't change an old habit.

2. **Look at the following concordances and note the verbs before *habit* that express the meaning intended in the three sentences in question no.1. Write these verbs in the table below.**

1	experience, helping children to develop good **habits** and teaching parents how to deal with the
2	ideas. If you really want to change your **habits** , you can. Keep your changes in mind and
3	that's no good. You have to develop eating **habits** which will last you all of your life. <p/>
4	feel truly confident, we must break the **habit** of trying to please all people, all of
5	find how to help your child to develop good **habits** and how to deal with the bad ones that
6	think we would like to be. We first make our **habits** and then our habits make us. John Dryden
7	child. * Other family members have the same **habit** , so it is copied. * The habit is familiar
8	habits. If you can just change a few of these **habits** from bad to good for at least part of the
9	diet you will need to change the eating **habits** of the people who live with you. To succeed
10	for the day of departure. I must make a **habit** of taking a bathe in the early morning
11	<p/> It will also help if you can make new **habits** to break the old one of smoking. So plan
12	if done every day, will easily become a **habit** and the time spent on it can then be increased
13	man, he's an able man, but he does have a **habit** of taking dangerous risks when he's under
14	succeed. How come some people can break their **habits** while others can't? It is because they
15	says that people are unlikely to make a **habit** of sharing movies online as they do music

16	possible to train children to have good **habits** and this book tells you how you can do
17	too late! Smoking, once begun, becomes a **habit** which can be hard to break. If you want
18	with Luke's mother. Luke's mother had a **habit** of reminding her to have a bath before
19	reminder that any behaviour that has become a **habit** is going to be difficult to stop - just
20	After that the two families got into the **habit** of meeting at weekends, sometimes at the
21	and can easily avoid. Try to get into the **habit** of eating at least three small meals a
22	this fact. If a person cannot break the **habit** of drinking alcohol, then it may be that
23	change is. Reprogramming In order to change a **habit** , we need to reprogramme our brains. Are
24	and as many weeks as it takes to break the **habit** of incorrect breathing. You are trying
25	Insomnia } If for any reason, baby gets into a **habit** of waking up, or if he is not a good sleeper
26	own area). \<p/\> Perhaps if you get into the **habit** of attending cookery or dressmaking classes
27	Children have to develop their own safety **habits** for each of these dangers. This means that
28	it several times it can easily become a **habit** . Of course, children have no understanding

verbs	Sentence no.	meaning
…………. habit		
…………. habit		
…………. habit		

3. **Look at question no. 1. How would you translate the three sentences now?**

VERB COLLOCATIONS OF THE NOUN *IMPRESSION*

1. **Translate the following sentences into English.**

a. بعد نصف ساعة في المدينة، يمكنك بسرعة أخذ الإنطباع أنها مدينة غير صحية

After half an hour in the city, you can quickly get the impression that the city is not healthy.

b. لم تتحدث كثيراً وأعطت إنطباعاً أنها غير مهتمة

She didn't talk much, and gave the impression she was not interested.

c. أود أن أصحح الإنطباع الذي لديك بأنني لا أحب منى

I'd like to correct the impression you have that I don't like Mona.

2. **Look at the following concordances and note the verbs before *impression* that express the meaning intended in the three sentences in question no.1. Write these verbs in the table below.**

1	Obviously this whole event made a significant **impression** on you,' Morris said. `Are you saying that
2	sorry if I've been giving you the wrong **impression** . I <p/> only came here to warn you about
3	Michael remembers her. She left a lasting **impression** on him; years later he would recall with
4	was so young, the street party left a big **impression** . He said: "I remember all the kids being
5	some extent, yes. I wanted to correct the **impression** given by the media.' While recognising
6	in the city, the faces confirmed my first **impression** . The shops were full of bad-tempered shoppers
7	is." You need to know if the hosts left a good **impression** , they'll tell their friends and family
8	noise.' <p/> I don't want to create the wrong **impression** here, I was happy about moving to the countryside
9	reaction to his new instructions confirms the **impression** given by his decision of a few weeks earlier
10	It was the children who made the biggest **impression** on you,' says Nancy, `and I would always
11	less, Rabbi, I think it would make a nice **impression** on our students if you seemed to be interested
12	`I was only 14 and the trip left a huge **impression** on me. Brazil is an incredibly colourful
13	the moon. I wouldn't want to create the **impression** that all this came easily, that everything
14	down to confront him. I haven't got the **impression** that she was a shy, frightened woman. I
15	or even heard about. You mustn't get that **impression** . I'm sure she never repeated things she
16	Even so, if you feel you do not create the **impression** you want, you need a few skills to help
17	irregular basis. The entries confirmed her **impression** that he was the most interesting kid she
18	She felt it important to correct the wrong **impression** he had given `out of justice to the contractors

19	with Brendthase, all confirmed the same **impression** . It was, he thought, good enough to go
20	terribly difficult to say why, but I got the **impression** they were doing business together that
21	owned an expensive car. He didn't give the **impression** that he was a poor man, Miss Hurley. I
22	say goodbye.' `You must have made a strong **impression** on her, considering you'd never met till
23	that it's important to try and correct that **impression** ," Straw said. The foreign minister said
24	here. I think we had somehow given him the **impression** he'd be able to ski, but otherwise - ` <p/>
25	but I would hate for you to get the wrong **impression** . I'm quite alone here. " <p/> She was becoming
26	money. So when she wanted to create a fresh **impression** she'd move the furniture around from room
27	households", we would like to correct some false **impressions** created by reports (The Advertiser, 10/
28	"he went on, "but she always gave me the **impression** that she was up to something bad, something

verbs	Sentence no.	meaning
…………. impression		
…………. impression		
…………. impression		

3. **Look at question no. 1. How would you translate the three sentences now?**

VERB COLLOCATIONS OF THE NOUN *ORDER*

1. **Translate the following sentences into English.**

   a. عندما تضع طلبية شراء على شبكة الإنترنت قبل ١٠:٠٠ صباحاً، يتم شحنها/إرسالها لك في اليوم نفسه

   When you place an order online before 10:00 a.m., it is shipped/sent the same day to you.

   b. قمت أمس بإلغاء طلبية الشراء لأن والدتي لم يعجبها الطقم

   I cancelled the order yesterday because my mother didn't like the set.

   c. تلقت الشركة الليلة الماضية أكثر من ١٠٠ طلبية

   Last night the company received more than 100 orders.

2. **Look at the following concordances and note the verbs before *order* that express the meaning intended in the three sentences in question no.1. Write these verbs in the table below.**

1.	instance, you have the right to cancel an **order** within seven working days of receiving
2.	// Mr. Bardin says companies are losing **orders** because they cannot deliver products on
3.	terms of trading, make contracts and place **orders** and finally receive the goods and services
4.	BREL Carriageworks in York has won a major **order** for a hundred and eighty-eight new computer
5.	change your mind and try to cancel your **order** before that time is up. <p/> If you receive
6.	Britain, France, Germany and Spain, won the **order** against competition from United States
7.	CE Stevenson & Son. We're now receiving **orders** from all over Ireland and plan to expand
8.	individual orders. The company filled its first **order** in November 1997 and now has about 15,000
9.	uncertainty is causing manufacturers to lose **orders** , and Africans to lose jobs." If (African
10.	north of the country received an urgent **order** from Moscow for a quarter of a million
11.	equally motivated: Last week he received three **orders** , all from customers who had been holding
12.	Look, Liz ... "'Are you going to take my **order** or am I going to call the manager?" The
13.	Journal story said the company is losing **orders** from dealerships. The S&P/ TSX companies
14.	31st March. <p/> We will be able to take your **order** by telephone, fax or post as usual. <p/>
15.	unless they send an email to cancel the **order** . The cancellation email address is "billing@spamhaus
16.	offices so that the company could fill **orders** overnight. This caused many problems
17.	in 1976, the Carriage Works has filled **orders** from all over the world. Their most satisfied

18.	European banks. It continues to win new **orders** , including one from the Republic's government
19.	not delivered on time you can cancel the **order** and get your money back. Even if you have
20.	Late delivery and returns `When we place an **order** with a supplier we give them an expected
21.	operate in the red. Each has lost on the **order** of $1 million to $8 million a year during
22.	spot price. Alternatively, you can place an **order** for later delivery; in this case you buy
23.	with a smile that matched. She took our **order** , took away our menus and added that if
24.	plump He said he's already received firm **orders** of more than 300 dozen, which he expects
25.	subsidises British companies trying to win **orders** in the Third World, with the development
26.	head. She did not smile. Laura placed her **order** , `Coffee, please, and two ham and cheese
27.	that Hong Kong Chinese businessmen fill **orders** for American clothing companies by hiring
28.	world. " <p/> She was glad the waiter took her **order** then because she was angry at being so

verbs	Sentence no.	meaning
…………. order		
…………. order		
…………. order		

3. **Look at question no. 1. How would you translate the three sentences now?**

VERB COLLOCATIONS OF THE NOUN *QUESTION*

1. **Translate the following sentences into English.**

   a. القصص التي قالها أثارت تساؤلات عن والديه

   The stories he told raised questions about his parents.

   b. تحتاج إلى النظر في هذه المسائل من وجهة نظر الشخص الذي عاش التجربة

   You need to consider these questions from the point of view of the person who lived the experience.

   c. سوف نناقش هذه المسائل بمزيد من التفصيل في اجتماعنا

   We will discuss these questions in more detail in our meeting.

2. **Look at the following concordances and note the verbs before *question/s* that express the meaning intended in the three sentences in question no.1. Write these verbs in the table below.**

1. ammunition. The one person who could settle the **questions** cannot do so, at least for now. Lynch might
2. Community leaders who will be discussing the **question** at their meeting beginning in Dublin today
3. and clear advice on how to deal with these **questions** , and most important of all, will give clear
4. and Saudi Arabia prefer to deal with this **question** in the framework of the United Nations
5. A few hours later I was raising the same **questions** with Dr Turabi at a dinner for the Council
6. genetic analysis may finally settle the **question** , and even help when it comes to getting
7. dying). Editor Linda Emanuel raises major **questions** of personal freedom and social care in
8. Although it is not possible to discuss this **question** in detail here one can summarize by saying
9. he hoped today's summit would settle the **question** of who governs the country. He refuses
10. this chapter, I will be dealing with the **question** of how to explain this rapid growth of
11. yesterday. Dr Borooah's research addressed two **questions** . One is how far lack of success is due
12. United Nations" unable to deal with hard **questions** of peace and security and unable, therefore
13. . The results themselves may also raise **questions** about safety. The Committee looks at similar
14. Classics helps you to ask and tackle the big **questions** . It is better to ask some of the questions
15. female journalists could tackle properly the **question** of whether the liberation of Afghanistan
16. particularly in the USA, we can now address the **question** of which of these reactions would be most
17. Shevardnadze, said they would discuss further the **question** of peace in the Middle East. On South Korea
18. separate fact from fiction. She tackles **questions** readers might ask, such as the facts behind
19. saw him?" <p/> The secretary considered the **question** for a second, carefully weighing whether

20.	lather? Before he had time to consider the **question** , his telephone rang. It was the front desk
21.	because the studies that had addressed the **question** provided incomplete information. For example
22.	life. The meeting then discussed the key **questions** of the degree of medical support required
23.	already very common. These studies raise many **questions** about the ways smoking kills in different
24.	because the Americans had not settled the **question** of who would represent the Palestinians
25.	Ahh," the captain said. He considered the **question** for a moment, then: `Okay. "It was, on
26.	the challenge of tackling complex **questions** and helping patients and their relatives
27.	Indeed my dearest Liz I have considered the **question** as much as it is possible to consider one
28.	marketplace. We should address the following **questions** to understand the picture we have built

verbs	Sentence no.	meaning
…………. question/s		
…………. question/s		
…………. question/s		

3. **Look at question no. 1. How would you translate the three sentences now?**

VERB COLLOCATIONS OF THE NOUN *ROOM*

1. **Translate the following sentences into English.**

   a. حاولي أن تفسحي مجال في خزانتك لملابس أختك

   Try to make room in your cabinet for your sister's clothes.

   b. لاتنس أن تترك مجالاً لتعليقات معلمك في أسفل كل صفحة

   Don't forget to leave room for your teacher's comments at the bottom of every page.

   c. أنا متأكد من أنك يمكن أن تجد مكانا لهذه الشجرة الجميلة في حديقتك

   I'm sure you can find room for this beautiful tree in your garden.

2. **Look at the following concordances and note the verbs before *room* that express the meaning intended in the three sentences in question no.1. Write these verbs in the table below.**

1.	with herbed potatoes. And don't forget to leave **room** for the best Belgian waffles, made fresh on
2.	I travel very lightly because I like to leave **room** for local purchases. <p/> "But there are several
3.	major streets have 10 lanes-and they still have **room** for cycle paths and on-street parking. Go for
4.	Tables and chairs were shifted to make **room** for the party which was evidently known
5.	to one lane of traffic in order to make **room** for police vehicles and ambulances. Maggie
6.	But this was a small garden and I had to find **room** for a few trees for the shade indispensable
7.	is no exception. <p/> The Nomad Jukebox 3 has **room** for 5,000 songs as MP3s, or around 8,000 using
8.	to the conclusion that all people can find **room** in their brains for more than one language
9.	playpen because their flat is too small to find **room** for a separate work space. <p/> They move to
10.	first. If you have love there you will not have **room** for hate, since they cannot live together in
11.	said the Atkins diet and Dr. Phil's diet leave **room** for orange juice consumption. But he said lawyers
12.	mid-afternoon, the cafe was only half-filled. We found **room** for us and our bags and settled in to the pleasant
13.	she was happy with the agreements as they left **room** for further research on the issue. She had
14.	all the liquid in his diet that he hardly had **room** for his evening meal. His usual hearty appetite
15.	grateful when his mother slid over, made **room** for him beside her in the window seat.
16.	pushing aside her party dresses to make **room** for my jeans and T-shirts. All that silk

verbs	Sentence no.	meaning
…………. room		
…………. room		
…………. room		

3. **Look at question no. 1. How would you translate the three sentences now?**

VERB COLLOCATIONS OF THE NOUN *WISH*

1. **Translate the following sentences into English.**

   a.   كانت والدته قادرة على تحقيق رغبته وأخذه لزيارة ديزني لاند

   His mother was able to grant his wish and take him to visit Disneyland.

   b.   يصوت الناس لمن يعكس رغبة الشعب

   People vote for whoever reflects the wish of the people.

   c.   أعربت ابنتها عن رغبتها بأن يكون لها شقيقة صغرى

   Her daughter expressed her wish to have a little sister.

2. **Look at the following concordances and note the verbs before *wish* that express the meaning intended in the three sentences in question no.1. Write these verbs in the table below.**

   1.   and Yana were here!" Remember to make a **wish** ," Yana said. She took the seat next to
   2.   , Sara guessed that Stephanie would soon have her **wish** . Daniel had never allowed either of the
   3.   Iraq. This stand reflected exactly the **wishes** of the people (and those of most other
   4.   people. <p/> In fact Mary had expressed her **wish** to be friends, with a sweet reason
   5.   the group, asked the media to respect his **wish** to be alone with his family. "We have not
   6.   , listen Milligan, I'll grant your **wish** . If you ever find yourself in trouble just
   7.   Jansen, the Blackburn Rovers forward, has had his **wish** come true in that his team have avoided
   8.   the future of Yugoslavia can ignore the **wishes** of the Albanian population in the Serbian
   9.   panic attacks, and I could have granted her **wish** and arranged such a meeting -- with some
   10.   create a democratic society reflected the **wishes** of the majority of Germans. The contrast
   11.   planning rules to more closely reflect the **wishes** of those living in the countryside. The
   12.   meantime I'm looking for one who'll grant my **wish** - that you all have a goodnights sleep.
   13.   <p> The South African ambassador says if he had his **wish** , all 191 UN members would at least participate
   14.   town of Dijon. Naturally I respect their **wishes** and, to be perfectly honest, I think it
   15.   morning in the forest. "You wouldn't make a **wish** ." "Because I didn't know what I wanted
   16.   you also ask your family to respect your **wishes** . There are currently 6,000 people in desperate
   17.   understanding. When a child expresses a **wish** to have a daddy or mummy that he doesn't

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18.	remind you that it was you who expressed a **wish** to speak to me, not vice versa. Perhaps
19.	Velzen had sometimes ignored parents ' **wishes** when they said that they did not want a
20.	listen. He enjoyed his visit and expressed a **wish** to return soon. <p> APPOINTMENT OF SECRETARY/
21.	says John, who at 5 ignored his mother's **wish** that he learn to play the piano. There's
22.	four smaller books reflected customers ' **wishes** , as shown by research. But the company
23.	thin body? If God does not grant you your **wish** , please know that He wants to strengthen
24.	people.' Today, in 2001, Hamilton nearly has his **wish** . Scotland finds itself with a separate
25.	gets a wake-up call on the 14th. Make a **wish** on that day and it will happen. Doing some
26.	Kinko. If you see a falling star make a **wish** , it will come true, because I did and I
27.	that doesn't work, because it ignores the **wishes** of the community and they don't want to
28.	hear from your son himself. Respect his **wishes** if he doesn't want to meet you. <p/> He may

verbs	Sentence no.	meaning
…………. wish		
…………. wish		
…………. wish		

3. **Look at question no. 1. How would you translate the three sentences now?**

VERB COLLOCATIONS OF THE NOUN *ARGUMENT*

1. **Translate the following sentences into English.**

   a. ساعدت سارة في حسم الجدال بيني وبين هنا

   Sarah helped settle the argument between me and Hana.

   b. المواضيع السياسية غالباً ما تسبب العديد من الجدالات

   Political topics often cause many arguments.

   c. إيملي كانت تعلم إنها لاتستطيع الفوز بالمناظرة/الجدال

   Emily knew she couldn't win the argument.

2. **Look at the following dictionary entry and note the verbs before *argument* that express the meaning intended in the three sentences in question no.1. Write these verbs in the table below.**

argument /ˈɑːgjəmənt, ˈɑːgjʊmənt $ ˈɑːr-/ *noun*

a situation in which two or more people disagree, often angrily

VERBS

avoid an argument *I was anxious to avoid an argument.*

settle an argument (=stop an argument, especially by showing who is right) *We settled the argument by looking the answer up on the internet.*

end an argument *He tried to end an argument between his brother and a police officer.*

have an argument *I could hear my parents having an argument downstairs.*

get into an argument *She didn't want to get into another argument about money.*

win/lose an argument *The party hopes to win the argument about how to reform the health system. | The first one who resorts to violence is usually the one who's lost the argument.*

start an argument *He was deliberately trying to start an argument.*

cause an argument *Money often causes arguments.*

verbs	Sentence no.	meaning
…………. argument		
…………. argument		
…………. argument		

3. **Look at question no. 1. How would you translate the three sentences now?**

VERB COLLOCATIONS OF THE NOUN *CONCLUSION*

1. **Translate the following sentences into English.**

    a. ‏ماهو الدليل الذي لدينا لدعم هذا الاستنتاج؟

What is the evidence we have to support this conclusion?

    b. ‏أنا أظهرت لك الأدلة و أنت كنت ذكياً بما يكفي لإستنباط الاستنتاج الصحيح

I showed you the evidence and you were smart enough to draw the right conclusion.

    c. ‏دعونا لانقفز إلى استنتاجات عن أشياء لانعرفها

Let's not jump to conclusions about things we don't know.

2. **Look at the following dictionary entry and note the verbs before *conclusion* that express the meaning intended in the three sentences in question no.1. Write these verbs in the table below.**

conclusion /kənˈkluːʒən/ *noun*

something you decide after considering all the information you have

VERBS

support a conclusion *This evidence supports the conclusion that his death was an accident.*
draw a conclusion (=decide something from what you learn or see) *We tried not to draw any conclusions too early in the investigation.*
base a conclusion on sth *Your conclusion is based on a rather small sample.*
come to a conclusion *I came to the conclusion that I would never be a writer.*
lead to a conclusion (=make you decide that something is true) *All the facts lead to only one conclusion.*
jump to a conclusion (=decide without knowing all the facts) *Everyone jumped to the conclusion that we would get married.*

verbs	Sentence no.	meaning
…………conclusion		
…………conclusion		
…………conclusion		

3. **Look at question no. 1. How would you translate the three sentences now?**

VERB COLLOCATIONS OF THE NOUN *EXPECTATIONS*

1. **Translate the following sentences into English.**

<div dir="rtl">

a.   إذا كنت تريد أن تنجح ككاتب، يجب عليك تلبية توقعات القراء

</div>

If you want to succeed as a writer, you should meet your readers' expectations.

<div dir="rtl">

b.   كنا حريصين جداً أن لانخلق توقعات غير واقعية

</div>

We've been very careful not to create unrealistic expectations.

<div dir="rtl">

c.   يمكن للمعلمين خفض توقعاتهم على أساس المستوى الأكاديمي الحالي لطلابهم

</div>

Teachers can lower their expectations based on the current academic level of their students.

2. **Look at the following dictionary entry and note the verbs before *expectations* that express the meaning intended in the three sentences in question no.1. Write these verbs in the table below.**

expectation /ˌekspekˈteɪʃən/ *noun*

what you think or hope will happen

VERBS

meet sb's expectations (=be as good as someone hoped) *The concert failed to meet the fans' expectations.*

lower sb's expectations (=expect that something will not be as good) *If you can't afford your dream home, you may have to lower your expectations.*

create expectations (=make people expect that something will happen) *His remarks created expectations that the couple would soon announce their marriage.*

raise sb's expectations (=make people expect that something good will happen) *The government raised expectations, then failed to keep its promises.*

dampen (sb's) expectations (=make people think that something is less likely to happen) *These events have dampened expectations of a peace agreement.*

have expectations *People often have high expectations when they first arrive in the US.*

verbs	Sentence no.	meaning
…………expectations		
…………expectations		
…………expectations		

3. **Look at question no. 1. How would you translate the three sentences now?**

VERB COLLOCATIONS OF THE NOUN *GOAL*

1. **Translate the following sentences into English.**

   a.   أرحب بكل الأفكار حول كيفية تحقيق هذا الهدف

   I welcome all ideas about how to achieve this goal.

   b.   إذا كنا جميعاً نعمل معاً من أجل هدف واحد، فسوف نفوز في نهاية المطاف

   If we all work together towards one goal, we will win in the end.

   c.   إذا وضعنا هدفاً وركزنا تماماً على هذا الهدف، يمكننا أن ننجح

   If we set a goal and we're totally focused on that goal, we can succeed.

2. **Look at the following dictionary entry and note the verbs before *goal* that express the meaning intended in the three sentences in question no.1. Write these verbs in the table below.**

goal /gəʊl $ goʊl/ *noun*

Something that you hope to achieve in the future

VERBS

have a goal *Henry had one goal in life: to make a lot of money.*
set a goal (=decide what you want to achieve) *It helps if you set yourself clear goals.*
achieve your goal *She worked hard to achieve her goal of becoming a doctor.*
work towards a goal *We are all working towards similar goals.*

verbs	Sentence no.	meaning
…………. goal		
…………. goal		
…………. goal		

3. **Look at question no. 1. How would you translate the three sentences now?**

VERB COLLOCATIONS OF THE NOUN *HABIT*

1. **Translate the following sentences into English.**

<div dir="rtl">

a. يجب أن تناقشي مع زوجك طرقاً لقطع عادة الكذب عنده، عليه أن يفعل ذلك لتستعيدي ثقتك به

</div>

You should discuss ways for your husband to break his lying habit, which he must do in order for you to trust him again.

<div dir="rtl">

b. تقول سارة أنها سعيدة بأن زوجها ساعدها في تطوير عادة توفير المال لمستقبل عائلتها

</div>

Sarah says she is happy that her husband helped her develop the habit of saving money for her family's future.

<div dir="rtl">

c. كنت أملك محلاً، والآن بعد أربعين سنة مازلت أستيقظ في الساعة الرابعة صباحاً، لا أستطيع تغيير عادة قديمة

</div>

I used to own a store, and now after forty years, I still keep getting up at four in the morning. I can't change an old habit

2. **Look at the following dictionary entry and note the verbs before *habit* that express the meaning intended in the three sentences in question no.1. Write these verbs in the table below.**

habit /ˈhæbət, ˈhæbɪt/ *noun*

something you do regularly, often without thinking about it

VERBS

sth becomes a habit *Thinking negatively can become a habit.*

get into a habit (=start doing something regularly or often) *Try to get into the habit of walking for 30 minutes each day.*

break a habit (=stop doing something that is bad for you) *I've smoked for years, but I really want to break the habit.*

have a habit (of doing sth) *He has a habit of being late.*

make a habit of (doing) sth (=start doing something regularly) *You can leave work early today as long as you don't make a habit of it.*

change your habits *It's sometimes difficult for people to change their habits.*

develop a habit *He felt very uncomfortable in social situations and had developed the habit of avoiding them.*

verbs	Sentence no.	meaning
…………. habit		
…………. habit		
…………. habit		

3. **Look at question no. 1. How would you translate the three sentences now?**

VERB COLLOCATIONS OF THE NOUN *IMPRESSION*

1. **Translate the following sentences into English.**

    a. بعد نصف ساعة في المدينة، يمكنك بسرعة أخذ الإنطباع أنها مدينة غير صحية

After half an hour in the city, you can quickly get the impression that the city is not healthy.

    b. لم تتحدث كثيراً وأعطت إنطباعاً أنها غير مهتمة

She didn't talk much, and gave the impression she was not interested.

    c. أود أن أصحح الإنطباع الذي لديك بأنني لا أحب منى

I'd like to correct the impression you have that I don't like Mona.

2. **Look at the following dictionary entry and note the verbs before *impression* that express the meaning intended in the three sentences in question no.1. Write these verbs in the table below.**

impression /ɪmˈpreʃən/ *noun*

the opinion or feeling you have about someone or something because of the way they seem

VERBS

confirm an impression *The report confirmed his initial impression that the business was worth investing in.*

give sb an impression *The company gave the impression that they were interested in publishing her work.*

leave an impression on sb (=make an impression on someone) *The film left a lasting impression on me.*

correct an impression *I'd like to correct a false impression I may have given.*

make an impression on sb *His father made a big impression on him when he was young.*

create an impression *Arriving late won't create a very good impression at an interview.*

get an impression (=receive an idea, a feeling or an opinion that somebody/something gives you) *What sort of impression did you get of the city?*

verbs	Sentence no.	meaning
…………. impression		
…………. impression		
…………. impression		

3. **Look at question no. 1. How would you translate the three sentences now?**

VERB COLLOCATIONS OF THE NOUN *ORDER*

1. **Translate the following sentences into English.**

   a. عندما تضع طلبية شراء على شبكة الإنترنت قبل ١٠:٠٠ صباحاً، يتم شحنها/إرسالها لك في اليوم نفسه

   When you place an order online before 10:00 a.m., it is shipped/sent the same day to you.

   b. قمت أمس بإلغاء طلبية الشراء لأن والدتي لم يعجبها الطقم

   I cancelled the order yesterday because my mother didn't like the set.

   c. تلقت الشركة الليلة الماضية أكثر من ١٠٠ طلبية

   Last night the company received more than 100 orders.

2. **Look at the following dictionary entry and note the verbs before *order* that express the meaning intended in the three sentences in question no.1. Write these verbs in the table below.**

order /ˈɔːdə $ ˈɔːrdər/ *noun*

a request by a customer for something to be supplied

VERBS

place an order (=make an order) *They placed an order for over a thousand tiles.*

receive sb's order *Your DVDs will be mailed to you on the day we receive your order.*

lose sb's order *I hope they haven't lost our order.*

take sb's order (=write down what a customer in a restaurant wants) *The waiter came to take our order.*

win an order *The company has just won a large order.*

fill an order (=supply what someone wants) *The company does not have enough stock to fill the order.*

cancel your order *The airline has cancelled its order for the plane.*

verbs	Sentence no.	meaning
…………. order		
…………. order		
…………. order		

3. **Look at question no. 1. How would you translate the three sentences now?**

VERB COLLOCATIONS OF THE NOUN *QUESTION*

1. **Translate the following sentences into English.**

   a. القصص التي قالها أثارت تساؤلات عن والديه

   The stories he told raised questions about his parents.

   b. تحتاج إلى النظر في هذه المسائل من وجهة نظر الشخص الذي عاش التجربة

   You need to consider these questions from the point of view of the person who lived the experience.

   c. سوف نناقش هذه المسائل بمزيد من التفصيل في اجتماعنا

   We will discuss these questions in more detail in our meeting.

2. **Look at the following dictionary entry and note the verbs before question/s that express the meaning intended in the three sentences in question no.1. Write these verbs in the table below.**

question /ˈkwestʃən/ *noun*

an issue

VERBS

settle a question (=deal with it in a satisfactory way) *We will proceed just as soon as we can settle the question of the fee.*

tackle a question (=try to deal with a difficult question) *Who has the ability to tackle the tough questions facing the nation?*

address a question (=start trying to deal with it) *Two questions need to be addressed.*

discuss a question *They discussed the question of who should replace her.*

consider a question *We must also consider the question of what the price should be.*

deal with a question *This question will be dealt with in Chapter 4.*

raise a question (=bring it to people's attention) *This study raises several important questions.*

verbs	Sentence no.	meaning
…………. question		
…………. question		
…………. question		

3. **Look at question no. 1. How would you translate the three sentences now?**

VERB COLLOCATIONS OF THE NOUN *ROOM*

1. **Translate the following sentences into English.**

   a.   حاولي أن تفسحي مجال في خزانتك لملابس أختك

   Try to make room in your cabinet for your sister's clothes.

   b.   لاتنس أن تترك مجالاً لتعليقات معلمك في أسفل كل صفحة

   Don't forget to leave room for your teacher's comments at the bottom of every page.

   c.   أنا متأكد من أنك يمكن أن تجد مكانا لهذه الشجرة الجميلة في حديقتك

   I'm sure you can find room for this beautiful tree in your garden.

2. **Look at the following dictionary entry and note the verbs before *room* that express the meaning intended in the three sentences in question no.1. Write these verbs in the table below.**

room /ruːm, rʊm/ *noun*

space or enough space

VERBS

have room *Do you have room in your car for me?*

find room *I'm sure we can find room for this table.*

leave room *Make sure you leave room for dessert.*

make room (=create space by moving other things) *He moved to make room for Ann on the sofa.*

verbs	Sentence no.	meaning
…………. room		
…………. room		
…………. room		

3. **Look at question no. 1. How would you translate the three sentences now?**

VERB COLLOCATIONS OF THE NOUN *WISH*

1. **Translate the following sentences into English.**

   a.   كانت والدته قادرة على تحقيق رغبته وأخذه لزيارة ديزني لاند

   His mother was able to grant his wish and take him to visit Disneyland.

   b.   يصوت الناس لمن يعكس رغبة الشعب

   People vote for whoever reflects the wish of the people.

   c.   أعربت ابنتها عن رغبتها بأن يكون لها شقيقة صغرى

   Her daughter expressed her wish to have a little sister.

2. **Look at the following dictionary entry and note the verbs before *wish* that express the meaning intended in the three sentences in question no.1. Write these verbs in the table below.**

wish /wɪʃ/ *noun*

a desire to do or have something

VERBS

express a wish (=say that you want to do something) *He expressed a wish to go to the United States.*

have your wish (=get what you want) *She wanted him to leave, and she had her wish.*

ignore sb's wishes *It is important not to ignore the wishes of the patient.*

grant sb's wish (=give them what they want) *His parents would now be able to grant his wish.*

reflect sb's wishes (=show what their wishes are) *The council is the voice of the people so it must reflect their wishes.*

respect sb's wishes (=do what they want) *We have to respect his wishes.*

make a wish (=silently ask for something that you want to happen) *Helen blew out the candles and made a wish.*

verbs	Sentence no.	meaning
…………. wish		
…………. wish		
…………. wish		

3. **Look at question no. 1. How would you translate the three sentences now?**

Appendix 4D: Collocations study productive test

NAME _____

_____

Vocabulary Translation

Below there are a number of vocabulary **phrases**. Look at the provided Arabic translation and fill in the blanks with the missing words. In each phrase the missing words are **only a verb followed by a noun** (You can add an article before the noun if you wish to).
For example:

_____   يوفر الوقت

<u>Save</u> <u>time</u>   يوفر الوقت

_____   يحفظ وعد

<u>keep</u> a <u>promise</u>   يحفظ وعد

1. _____	يحكم بلداً
2. _____	يحسم جدل/جدال
3. _____	يضع الأساس
4. _____	يضبط الساعة
5. _____	يُصحح الإختبار
6. _____	يعادل مجموع النقاط
7. _____	يُفسح المجال
8. _____	يضع طلبية شراء
9. _____	يرتكب ذنبا
10. _____	يحقق أمنية
11. _____	يقول نكتة

12. _____	يقطع وعدا
13. _____	يفتح صنبور الماء
14. _____	يسقي الحديقة
15. _____	يقيم حفلة
16. _____	يحدد هدف
17. _____	يقطع عادة
18. _____	يُفوت محاضرة
19. _____	يُفسد المظهر
20. _____	يلبي التوقعات
21. _____	يترأس إجتماع
22. _____	يثير تساؤلات
23. _____	يحمل شهادة/درجة علمية
24. _____	يربي طفلاً
25. _____	يستخلص إستنتاج
26. _____	يأخذ إنطباع
27. _____	يدخل الإنترنت
28. _____	يحجز مقعداً
29. _____	يحدد تاريخا
30. _____	يُطبق خطة

Appendix 4E: Collocations study receptive test

NAME _____

_____

Vocabulary Translation

Below there are a number of vocabulary phrases. Translate them into Arabic. Each phrase is a verb followed by a noun.

For example:

Save time   ……………………………………….

Save time   يوفر الوقت

keep a   promise   …………………………………….

keep a   promise   يحفظ وعد

1. access the net/internet	…………………………………………
2. hold a degree	…………………………………………
3. turn on the tap	…………………………………………
4. break a habit	…………………………………………
5. grant a wish	…………………………………………
6. get the impression	…………………………………………
7. tell a joke	…………………………………………
8. rule/govern a country	…………………………………………
9. level/tie the score	…………………………………………
10. miss a lecture	…………………………………………
11. commit a sin	…………………………………………

12. chair a meeting	…………………………………………
13. implement a plan	…………………………………………
14. raise questions	…………………………………………
15. meet expectations	…………………………………………
16. book a seat	…………………………………………
17. make a promise	…………………………………………
18. set a goal	…………………………………………
19. establish the basis	…………………………………………
20. make room	…………………………………………
21. set a date	…………………………………………
22. spoil/ruin the appearance	…………………………………………
23. set the watch	…………………………………………
24. have/hold a party	…………………………………………
25. water the garden	…………………………………………
26. raise a kid/child	…………………………………………
27. draw a conclusion	…………………………………………
28. place an order	…………………………………………
29. settle an argument	…………………………………………
30. mark/grade an exam	…………………………………………

Appendix 4F: Questionnaire on collocations worksheets

Questionnaire on collocations worksheets

إستبيان عن أوراق تدريبات المتلازمات اللفظية

Please answer the following questionnaire as <u>truthfully</u> as possible. All your answers and your identity will remain <u>confidential</u>. The questionnaire has two sections.

الرجاء الإجابة على الإستبيان التالي بمصداقية قدر الإمكان. جميع إجاباتك وهويتك سوف تبقى سرية. يتكون الإستبيان من قسمين.

Name: ....

Section 1

القسم الأول

The following questions ask for your opinions on the concordance worksheets and the dictionary worksheets you have used for learning collocations. To remind you what the worksheets are like, you can find an example of a CONCORDANCE worksheet in Appendix A, and an example of a DICTIONARY worksheet in Appendix B. There are also brief examples from both worksheets below. Please tick (√) the response to each question below that most closely represents your opinion.

الأسئلة التالية تطلب أرائك عن أوراق تدريبات المفهرس الأبجدي و أوراق تدريبات القاموس التي استخدمتيها لتعلم المتلازمات اللفظية . لتذكيرك بما كان عليه شكل أوراق التدريبات بإمكانك أن تجدي مثال ورقة تدريبات المفهرس الأبجدي في الملحق (أ)، ومثال لورقة تدريبات القاموس في الملحق (ب). يوجد أيضا أمثلة وجيزة من كلا نوعي أوراق التريبات أدناه. الرجاء وضع علامة أمام الإجابة الأكثر تطابقا مع مايمثل رأيك لكل سؤال من الأسئلة أدناه.

Strongly disagree غيرموافق بشدة	Disagree غير موافق	Neither agree nor disagree محايد	Agree موافق	Strongly agree موافق بشدة
1	2	3	4	5

(Example) If you <u>strongly agree</u> with the following statement, circle the number like this:

(مثال) إذا كنت <u>موافق بشدة</u> على الجملة التالية. ضعي دائرة حول الرقم هكذا:

I like playing games very much.أنا أحب الألعاب بشدة.   1   2   3   4   ⑤

- **Your opinions about learning by using the <u>concordance</u> worksheets**
- أرائك عن التعلم بإستخدام أوراق تدريبات المفهرس الأبجدي

Example from a concordance worksheet:

- **Look at the following concordances and note the verbs before *risk* that express the meaning intended in the three sentences in question no.1. Write these verbs in the table below.**

1. over-concerned with doing things right. He runs the **risk** of losing sight of long-term objectives

2.   If you smoke </p><p/> Smoking increases the **risks** to your health and increases some of

---

Strongly disagree غيرموافق بشدة	Disagree غير موافق	Neither agree nor disagree محايد	Agree موافق	Strongly agree موافق بشدة
1	2	3	4	5

1.	Using the concordance worksheets to learn collocations was easy. استخدام أوراق تدريبات المفهرس الأبجدي لتعلم المتلازمات اللفظية كان سهلاً	1 2 3 4 5
2.	Using the concordance worksheets to learn collocations was useful. استخدام أوراق تدريبات المفهرس الأبجدي لتعلم المتلازمات اللفظية كان مفيدا	1 2 3 4 5
3.	After learning using these concordance worksheets, I think I will avoid making collocation errors in the future. بعد التعلم بإستخدام أوراق تدريبات المفهرس الأبجدي، أعتقد إني سوف أتجنب ارتكاب أخطاء عند استخدام المتلازمات اللفظية في المستقبل	1 2 3 4 5
4.	I would like to do other activities on collocations using concordance worksheets. أود أن أؤدي المزيد من التمارين على المتلازمات اللفظية باستخدام أوراق تدريبات المفهرس الأبجدي	1 2 3 4 5
5.	Using the concordance worksheets to learn collocations was interesting. استخدام أوراق تدريبات المفهرس الأبجدي لتعلم المتلازمات اللفظية كان ممتعاً	1 2 3 4 5
6.	Using the concordance worksheets helps me in learning the meanings of collocations. استخدام أوراق تدريبات المفهرس الأبجدي ساعدني في تعلم معاني المتلازمات اللفظية	1 2 3 4 5
7.	Using the concordance worksheets helps me to learn which verb collocate to use for expressing certain meanings. استخدام أوراق تدريبات المفهرس الأبجدي ساعدني في تعلم أي فعل يجب أن أستخدم للتعبير عن معاني معينة	1 2 3 4 5
8.	I would recommend the concordance worksheets for learning collocations to other students. أنصح باستخدام أوراق تدريبات المفهرس الأبجدي لتعلم التلازمات اللفظية للطلاب آخرين	1 2 3 4 5
9.	As I have worked more on the concordance worksheets, I have come to like them more. كلما عملت أكثر باستخدام أوراق تدريبات المفهرس الأبجدي أصبحت أحبها أكثر	1 2 3 4 5

- **Reactions to the <u>concordance</u> examples**

- ردود الفعل تجاه أمثلة المفهرس الأبجدي

<An example of concordance examples> مثال لأمثلة المفهرس الأبجدي

1.	over-concerned with doing things right. He runs the risk of losing sight of long-term objectives
2.	If you smoke </p><p/> Smoking increases the risks to your health and increases some of

Strongly disagree غيرموافق بشدة	Disagree غير موافق	Neither agree nor disagree محايد	Agree موافق	Strongly agree موافق بشدة
1	2	3	4	5

10.	It was difficult to adapt to reading the concordance examples. كان من الصعب التأقلم على قراءة أمثلة المفهرس الأبجدي	1 2 3 4 5
11.	It was difficult to understand the concordance examples due to cut-off sentences (where I couldn't see the beginning and/or the end of the sentence). كان من الصعب فهم أمثلة المفهرس الأبجدي بسبب الجمل المقطوعة (حيث لأستطيع رؤية بداية و/أو نهاية الجملة)	1 2 3 4 5
12.	It was difficult working on the concordance examples due to the time limit. كان من الصعب العمل على أمثلة المفهرس الأبجدي بسبب الوقت المحدد	1 2 3 4 5
13.	Working on the concordances examples required a lot of effort. العمل على أمثلة المفهرس الأبجدي يتطلب الكثير من الجهد	1 2 3 4 5
14.	It was difficult to understand the concordance examples due to unfamiliar vocabulary. كان من الصعب فهم أمثلة المفهرس الأبجدي بسبب المفردات الغير مألوفة	1 2 3 4 5

- **Your opinions about learning by using the <u>dictionary</u> worksheets**

- آرائك عن التعلم باستخدام أوراق تدريبات القاموس

Example from a dictionary worksheet: مثال من أوراق تدريبات القاموس **Look at the following dictionary entry and note the verbs before *risk* that express the meaning intended in the three sentences in question no.1. Write these verbs in the table below.** **risk** /rɪsk/ *noun* the possibility that something bad, unpleasant, or dangerous may happen **VERBS** **involve a risk** (=might be dangerous) *Most medical operations involve some risk.* **run a risk** (=be in a situation where there is a risk of something happening) *Those who tried to escape ran the risk of being shot.*

Strongly disagree غير موافق بشدة	Disagree غير موافق	Neither agree nor disagree محايد	Agree موافق	Strongly agree موافق بشدة
1	2	3	4	5

15.	Using the dictionary worksheets to learn collocations was easy. استخدام أوراق تدريبات القاموس لتعلم المتلازمات اللفظية كان سهلاً	1 2 3 4 5
16.	Using the dictionary worksheets to learn collocations was useful. استخدام أوراق تدريبات القاموس لتعلم المتلازمات اللفظية كان مفيدا	1 2 3 4 5
17.	After learning with the dictionary worksheets, I think I will avoid collocation errors in the future. بعد التعلم بإستخدام أوراق تدريبات القاموس، أعتقد إني سوف أتجنب ارتكاب أخطاء عند استخدام المتلازمات اللفظية في المستقبل	1 2 3 4 5
18.	I would like to do other activities on collocations using the dictionary worksheets. أود أن أؤدي المزيد من التمارين على المتلازمات اللفظية باستخدام أوراق تدريبات القاموس	1 2 3 4 5
19.	Using the dictionary worksheets to learn collocations was interesting. استخدام أوراق تدريبات القاموس لتعلم المتلازمات اللفظية كان ممتعاً	1 2 3 4 5
20.	Using the dictionary worksheets helps me to learn the meanings of collocations. استخدام أوراق تدريبات القاموس ساعدني في تعلم معاني المتلازمات اللفظية	1 2 3 4 5
21.	Using the dictionary worksheets helps me to learn which verb collocate to use for expressing certain meanings. استخدام أوراق تدريبات القاموس ساعدني في تعلم أي فعل يجب أن أستخدم للتعبير عن معاني معينة	1 2 3 4 5
22.	I would recommend the dictionary worksheets for learning collocations to other students. أنصح باستخدام أوراق تدريبات القاموس لتعلم التلازمات اللفظية للطلاب آخرين	1 2 3 4 5
23.	As I have worked more on the dictionary worksheets, I have come to like them more. كلما عملت أكثر باستخدام أوراق تدريبات القاموس أصبحت أحبها أكثر	1 2 3 4 5

- **Reactions to the <u>dictionary</u> information**

ردود الفعل تجاه معلومات القاموس

مثال من معلومات القاموس <**An Example of dictionary information**>

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risk /rɪsk/ *noun*

the possibility that something bad, unpleasant, or dangerous may happen

VERBS

involve a risk (=might be dangerous) *Most medical operations involve some risk.*

run a risk (=be in a situation where there is a risk of something happening) *Those who tried to escape ran the risk of being shot.*

Strongly disagree غير موافق بشدة	Disagree غير موافق	Neither agree nor disagree محايد	Agree موافق	Strongly agree موافق بشدة
1	2	3	4	5

24.	It was difficult to adapt to reading the dictionary information. كان من الصعب التأقلم على قراءة أمثلة القاموس	1 2 3 4 5
25.	It was difficult working on the dictionary information due to the time limit. كان من الصعب العمل على أمثلة القاموس بسبب الوقت المحدد	1 2 3 4 5
26.	Working on the dictionary information required a lot of effort. العمل على أمثلة القاموس يتطلب الكثير من الجهد	1 2 3 4 5
27.	It was difficult to understand the dictionary information due to unfamiliar vocabulary. كان من الصعب فهم أمثلة القاموس بسبب المفردات الغير مألوفة	1 2 3 4 5

Section 2
القسم الثاني

The following questions seek your opinions on the concordance worksheets and the dictionary worksheets for learning collocations. Please use your own words and write as much as you wish (there is extra space provided on the last page of the questionnaire in case you need it).

الأسئلة التالية تهدف لمعرفة أرائك حول أوراق تدريبات المفهرس الأبجدي وأوراق تدريبات القاموس لتعلم المتلازمات اللفظية. الرجاء التعبير بعباراتك الخاصة وتستطيعين أن تكتبي بالقدر الذي تشائين وهناك مساحة إضافية متوفرة في آخر صفحة من هذا الإستبيان في حال إحتجت لها.

1. Tick ONE of the boxes below then explain your choice.
   For learning collocations.......

   اختاري واحد من المربعات أدناه ثم وضحي سبب إختيارك لتعلم المتلازمات اللفظية
   - The concordance worksheets are more useful than the dictionary ones
     - أوراق تدريبات المفهرس الأبجدي أكثر فائدة من أوراق تدريبات القاموس
   - The dictionary worksheets are more useful than the concordance ones
     - أوراق تدريبات القاموس أكثر فائدة من أوراق تدريبات المفهرس الأبجدي
   - Both are equally useful
     - كلاهما مفيد بنفس القدر
   - Neither are useful
     - كلاهما غير مفيد

   Please give reasons for your choice?

   الرجاء ذكر أسباب إختيارك

   ……………………………………………………………………………………………………
   ……………………………………………………………………………………………………
   ……………………………………………………………………………………………………

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2. Tick ONE of the boxes below then explain your choice.
    For learning collocations…….

اختاري واحد من المربعات أدناه ثم وضحي سبب إختيارك لتعلم المتلازمات اللفظية

*   ▪ I preferred the concordance worksheets to the dictionary ones
    *   ▪ أنا فضلت أوراق تدريبات المفهرس الأبجدي على أوراق تدريبات القاموس
*   ▪ I preferred the dictionary worksheets to the concordance ones
    *   ▪ أنا فضلت أوراق تدريبات القاموس على أوراق تدريبات المفهرس الأبجدي
*   ▪ I liked both

    *   ▪ أحببت كلا النوعين

*   ▪ I didn't like either

    *   ▪ لم أحب أي منها

Please give reasons for your choice?

الرجاء ذكر أسباب إختيارك

....
……………………………………………………………………………………………………
……………………………………………………………………………………………………

3. Please compare the concordance worksheets with the dictionary worksheets, and specify the strengths and weaknesses of each type.
    الرجاء مقارنة أوراق تدريبات المفهرس الأبجدي مع أوراق تدريبات القاموس وتحديد نقاط القوة ونقاط الضعف لكل نوع

	Concordance worksheets أوراق تدريبات المفهرس الأبجدي	Dictionary worksheets أوراق تدريبات القاموس
Strengths نقاط القوة		
Weaknesses نقاط الضعف		

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4. How can the concordance worksheets for teaching collocations be improved in the future? (You can write your suggestions to anyone involved and at any stage: design, use in class…etc.)

كيف يمكن تحسين أوراق تدريبات المفهرس الأبجدي لتعليم المتلازمات اللفظية في المستقبل؟ (يمكنك كتابة مقترحاتك إلى أي شخص و في أي مرحلة: التصميم، الإستخدام في الصف...إلخ)

…………………………………………………………………………………………………
…………………………………………………………………………………………………
…………………………………………………………………………………………………

5. How can the dictionary worksheets for teaching collocations be improved in the future? (You can write your suggestions to anyone involved and at any stage: design, use in class…etc.)

كيف يمكن تحسين أوراق تدريبات القاموس لتعليم المتلازمات اللفظية في المستقبل؟ (يمكنك كتابة مقترحاتك إلى أي شخص و في أي مرحلة: التصميم، الإستخدام في الصف...إلخ)

…………………………………………………………………………………………………
…………………………………………………………………………………………………
…………………………………………………………………………………………………

6. What did you like and dislike about the translation activity, and why?

ماذا أحببت وماذا كرهتي في تمرين الترجمة، ولماذا؟

1.Translate the following sentences into English

الخطة ستكلف مالاً، سوف تتضمن مخاطرة وسوف تستغرق وقتاً

……………………………………………………………………………………

…………………………………………………………………………………………………
…………………………………………………………………………………………………
…………………………………………………………………………………………………

Many thanks once again for your help: it's appreciated.

Appendix 4G: Students' Interview schedule on collocations worksheets

Interview schedule on collocations worksheets:

Section 1: how easy/difficult it was to use these worksheets

1. In your response to statement/s no. 10,11,12,13,14 on page no.3/ 24,25,26,27 on page no.5 you said it was/wasn't difficult to understand the concordance examples/dictionary information (due to/although there were: cut-off sentences, time limit, a lot of effort required to find the information, unfamiliar vocabulary, contexts of concordance examples). Can you say more about this?

Section 2: General preference

2. In your response to question no.2 on page no.6 you said you preferred the concordance/dictionary worksheets for learning collocations, and you said it is because of…. Can you say more about this?

Section 3: Usefulness

3. In your response to question no.1 on page no.5 you said that using the concordance/dictionary worksheets is more useful for learning collocations than using concordance/dictionary worksheets. Can you explain why you think they are more useful?

4. Which type of worksheets (concordance or dictionary worksheets) you think are more useful to learn the meanings of collocations? Can you explain why?

5. Which type of worksheets (concordance or dictionary worksheets) you think are more useful to learn which verb collocate to use for expressing certain meanings? Can you explain why?

6. Do you think that using concordance worksheets to learn collocations where you have to find the information yourself is more useful/less useful than being told the right answer by the teacher? Can you explain why?

7. Do you think that using dictionary worksheets to learn collocations where you have to find the information yourself is more useful/less useful than being told the right answer by the teacher? Can you explain why?

Section 4: strengths and weaknesses

8. In your response to question no.3 on page no.6 you said that…. is/are the main strength/s of the concordance worksheets. Can you say more about that?

9. In your response to question no.3 on page no.6 you said that….is/are the main weakness/es of the concordance worksheets. Can you say more about that?

10. In your response to question no.3 on page no.6 you said that…. is/are the main strength/s of the dictionary worksheets. Can you say more about that?
11. In your response to question no.3 on page no.6 you said that….is/are the main weakness/es of the dictionary worksheets. Can you say more about that?

Section 5: Improvements

12. In your response to question no.4 on page no.7 you said the concordance worksheets can be improved by….. Can you say more about that?
13. In your response to question no.5 on page no.7 you said the dictionary worksheets can be improved by….. Can you say more about that?

Section 6: the translation task

14. In your response to question no.6 on page no. 7 you said you liked …. about the translation activity. Can you say more about that?
15. In your response to question no.6 on page no. 7 you said you disliked ….. about the translation activity. Can you say more about that?

Section 7: final comments

16. Finally, is there anything else you'd like to say about any aspect of the worksheets?

For questions 1,2,3,8,9,10,11,12,13,14,15 (all apart from 1 are from the open-ended section of the questionnaire) prompt cards showing different responses from other learners will also be used when necessary and after eliciting their responses)

Appendix 4H: Teachers' observation instrument for collocations teaching lesson

Section A: the translation activity and the instructions

1. Do you think the highlighted collocations are useful or not for students?
   □USEFUL   □NOT USEFUL

   ……
   ……

2. Do you think the translation activity (activity no.1) is useful or not for learning collocations? Why?
   □USEFUL   □NOT USEFUL

   ……
   ……

3. Do you think students had any difficulty in understanding the instructions for the activities?
   □YES   □NO

   If YES, which one/s?

   ……
   ……

Section B: the concordance worksheets

4. Do you think students had any difficulty in understanding the concordance examples?
   □YES   □NO
   If YES, why ? In what aspect?

   ……
   ……

5. Do you think the concordance examples are well selected or not for the purpose of teaching the target collocations?
   □ WELL SELECTED □ NOT WELL SELECTED

   ……
   ……

6. What do you think of the vocabulary in the concordance examples?
   □ EASY □ MODERATE □DIFFICULT

   ……
   ……

7. What do you think of the length of the concordance worksheets?
□ LONG □ REASONABLE □ SHORT

………
………

8. What do you think of the number of concordance examples?
□ TOO MANY □REASONABLE □NOT ENOUGH

………
………

9. Do you think students can discover the appropriate collocations by themselves through the concordance examples? Why?
□YES   □NO

………
………

10. Do you think the concordance worksheets are interesting or not for students?
□INTERESTING   □NOT INTERESTING

………
………

11. Do you think the teacher needed to intervene in students' activities often in the concordance worksheets?
□YES   □NO

………
………

12. How would you make the concordance worksheets more interesting, less difficult, and more useful for students?
………
………

13. What do you think are the good points of the concordance worksheets?
………
………

14. What do you think are the bad points of the concordance worksheets?

……
……

15. Please write on anything else about the concordance worksheets you want to say.

……
……

Section C: the dictionary worksheets

16. Do you think students had any difficulty in understanding the dictionary information?
□YES □NO
If YES, why ? In what aspect?

……
……

17. What do you think of the vocabulary in the dictionary glosses?
□ EASY □ MODERATE □DIFFICULT

……
……

18. What do you think of the vocabulary in the dictionary examples?
□ EASY □ MODERATE □DIFFICULT

……
……

19. What do you think of the length of the dictionary worksheets ?
□ LONG □ REASONABLE □ SHORT

……
……

20. What do you think of the number of examples in the dictionary entry?
□ TOO MANY □REASONABLE □NOT ENOUGH

……
……

21. Do you think students can discover the appropriate collocations by themselves through the dictionary entry? Why?

☐YES ☐NO

……

……

22. Do you think the dictionary worksheets are interesting or not for students?

☐INTERESTING ☐NOT INTERESTING

……

……

23. Do you think the teacher needed to intervene in students' activities often in the dictionary worksheets?

☐YES ☐NO

……

……

24. How would you make the dictionary worksheets more interesting, less difficult, and more useful for students?

……

……

25. What do you think are the good points of the dictionary worksheets?

……

……

26. What do you think are the bad points of the dictionary worksheets?

……

……

27. Please write on anything else about the dictionary worksheets you want to say.

……

……

Thank you very much

Appendix 4I: Teachers' interview schedule on collocations worksheets

Section 1: how easy/difficult it was for students to use these worksheets

    1. Here are two teachers' views on the concordance worksheets:

Hala:

It is difficult for students to understand the concordance examples in the concordance worksheets.

Razan:

It is easy for students to understand the concordance examples in the concordance worksheets.

Please give your views about both teachers' statements.

(due to: cut-off sentences, time limit, a lot of effort required to find the information, unfamiliar vocabulary, contexts of concordance examples)

    2. Here are two teachers' views on the dictionary worksheets:

Lubna:

It is difficult for students to understand the dictionary information in the dictionary worksheets.

Lana:

It is easy for students to understand the dictionary information in the dictionary worksheets.

Please give your views about both teachers' statements.

(due to: time limit, a lot of effort required to find the information, unfamiliar vocabulary, contexts of dictionary examples)

    3. What do you think of the length of the concordance/dictionary worksheets?

Section 2: General preference

    4. Which type of worksheets: the concordance or the dictionary ones do you prefer for teaching collocations? Can you say more about this?

Section 3: interest

    5. Do you think learning collocations through concordance worksheets is an interesting or a boring way for students? Can you say more about that?

    6. Do you think learning collocations through dictionary worksheets is an interesting or a boring way for students? Can you say more about that?

Section 4: Usefulness

7. Do you think the target collocations are useful or not for students?
8. Which type of worksheets (concordance or dictionary) you think are more useful for learning collocations? Can you explain why?
9. Which type of worksheets (concordance or dictionary worksheets) you think are more useful for students to learn the meanings of collocations? Can you explain why?
10. Which type of worksheets (concordance or dictionary worksheets) you think are more useful for students to learn which verb collocate to use for expressing certain meanings? Can you explain why?
11. Do you think using concordance worksheets to teach collocations where students have to find the information themselves is more useful/less useful than being told the right answer by the teacher? Why?
12. Do you think using dictionary worksheets to teach collocations where students have to find the information themselves is more useful/less useful than being told the right answer by the teacher? Why?
13. Do you think students can use the concordance/dictionary worksheets for learning collocations without the teacher's help?

Section 5: strengths and weaknesses

14. What do you think are the main strengths of the concordance worksheets for teaching collocations?
15. What do you think are the main weaknesses of the concordance worksheets for teaching collocations?
16. What do you think are the main strengths of the dictionary worksheets for teaching collocations?
17. What do you think are the main weaknesses of the dictionary worksheets for teaching collocations?

Section 6: Improvements

18. How do you think the concordance worksheets can be improved for teaching collocations?
19. How do you think the dictionary worksheets can be improved for teaching collocations?

Section 7: the translation task

20. What do you think are the main strengths of the translation activity for teaching collocations?
21. What do you think are the main weaknesses of the translation activity for teaching collocations?

Section 8: Final comments on/about the approach in general

22. Do you think using concordance examples is a useful approach of learning and teaching English? If so, what do you think this approach is most useful for? (Grammar, vocabulary, writing, speaking or something else)?
23. Finally, is there anything else you'd like to say about any aspect of the worksheets?

Appendix 4J: A retrospective questionnaire in the pilot study

A retrospective questionnaire of the concordance and dictionary worksheets for teaching collocations in the pilot study

NAME _____ LEVEL _____

Please answer all the following questions about the worksheets. Use your own words and there is extra space provided in the last page in case you need it.

Section A: General aspects:

1. Were the instructions easy or difficult to follow?
   ………………………………………………………………………………………………
   ………………………………………………………………………………………………

2. Were the target collocations useful or not?
   ………………………………………………………………………………………………
   ………………………………………………………………………………………………

3. Were the target collocations interesting or not to study?
   ………………………………………………………………………………………………
   ………………………………………………………………………………………………

4. Did you find it easy or difficult to translate the sentences in question no.1?
   ………………………………………………………………………………………………
   ………………………………………………………………………………………………

Section B: the concordance worksheets:

5. What do you think about the set of concordance examples in question no.2? What's your feeling about them?
   ………………………………………………………………………………………………
   ………………………………………………………………………………………………

6. Was it easy or difficult to understand the concordance examples in question no.2? Why?

    …………………………………………………………………………………………

    …………………………………………………………………………………………

7. Was vocabulary easy or difficult in the concordance examples in question no.2?

    …………………………………………………………………………………………

    …………………………………………………………………………………………

8. Was it easy or difficult to understand the contexts where the verb collocates of the noun are used in the concordance examples?

    …………………………………………………………………………………………

    …………………………………………………………………………………………

9. Do you think it was interesting or not to use the concordance worksheets?

    …………………………………………………………………………………………

    …………………………………………………………………………………………

10. What do you think of the length of the concordance worksheets?

    …………………………………………………………………………………………

    …………………………………………………………………………………………

11. Do you think the concordance worksheets are useful or not for learning collocations? Why?

    …………………………………………………………………………………………

    …………………………………………………………………………………………

Section C: the dictionary worksheets:

12. What do you think about the dictionary entry in question no.2? What's your feeling about it in general?

    …………………………………………………………………………………………

    …………………………………………………………………………………………

13. Was it easy or difficult to understand the dictionary entry in question no.2? Why?

………………………………………………………………………………………

………………………………………………………………………………………

14. Was vocabulary easy or difficult in the dictionary entry in question no.2?

………………………………………………………………………………………

………………………………………………………………………………………

15. Was it easy or difficult to understand the contexts where the verb collocates of the noun are used in the dictionary examples?

………………………………………………………………………………………

………………………………………………………………………………………

16. Do you think it was interesting or not to use the dictionary worksheets?

………………………………………………………………………………………

………………………………………………………………………………………

17. What do you think of the length of the dictionary worksheets?

………………………………………………………………………………………

………………………………………………………………………………………

18. Do you think the dictionary worksheets are useful or not for learning collocations? Why?

………………………………………………………………………………………

………………………………………………………………………………………

Thank you very much

Appendix 4K: dos and don'ts when reading and interpreting concordance lines

Dos	Don'ts
✓ Be aware that a KWIK concordance line was cut and pasted according to a distance to the left and right of the search word. So it may or may not be a complete sentence.	☒ Don't try to find the beginning and the end of a sentence in a KWIC concordance line.
✓ Be aware that the lines were taken from different texts or different positions of the same text. Each line has its own context.	☒ Don't read the lines continuously as if they were taken from a paragraph of the same text.
✓ Pay no great attention to the overall context, e.g. what topic is being discussed or who did what to whom. Only look at some context clues that would help you guess meaning (and sometimes connotation) of the search word.	☒ Don't try to make complete sense of the lines. Don't think that it is a must to understand the context, e.g. where the lines are taken from, what topic is being discussed, what story is going on.
✓ Focus your attention on the search word and its collocates or patterns.	☒ Don't try to read and understand every single word in a line.
✓ Notice immediate left or right contexts of the search word first. But also look for extended patterns as well.	☒ Don't look only at immediate contexts to the left or right of the search word.
✓ Interpret the lines with caution because the data may be too limited to make strong generalisations.	☒ Don't base conclusions completely on the lines that you are observing (when you are reading concordance lines on a computer).

A summary of dos and don'ts when reading and interpreting concordance lines, adapted from Sripicharn (2010, p. 380)

Appendix 4L: The counterbalanced versions of the collocations

Collocations items in the two counterbalanced versions based on their BNC-COCA off-list score (after adding proper names)

Experimental group 1				Experimental group 2		
Dictionary	1.42	Argument		Dictionary	0.78	Expectations
Dictionary	0.85	Conclusion		Dictionary	1.49	Goal
Dictionary	0.72	Habit		Dictionary	0.71	Impression
Dictionary	1.68	Question		Dictionary	2.63	Order
Dictionary	5.45	Room		Dictionary	1.24	Wish
DDL	0.27	Expectations		DDL	0.33	Argument
DDL	0.74	Goal		DDL	0.50	Conclusion
DDL	0.42	Impression		DDL	0.62	Habit
DDL	0.91	Order		DDL	0.46	Question
DDL	0.86	Wish		DDL	4.83	Room
Total	13.32			**Total**	13.59	
		Difference	0.27			

Appendix 4M: Total Variance Explained in collocation study questionnaire

Factor	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings[a]
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total
1	6.021	22.302	22.302	5.621	20.820	20.820	3.883
2	3.692	13.676	35.978	3.246	12.021	32.841	3.093
3	3.021	11.188	47.165	2.638	9.770	42.611	3.165
4	2.308	8.548	55.713	1.846	6.836	49.447	2.842
5	1.386	5.133	60.846	1.031	3.818	53.266	3.165
6	1.149	4.256	65.103	.801	2.966	56.231	3.439
7	.955	3.536	68.638				
8	.859	3.182	71.821				
9	.798	2.957	74.778				
10	.766	2.838	77.616				
11	.691	2.559	80.175				
12	.613	2.269	82.444				
13	.563	2.087	84.530				
14	.536	1.985	86.516				
15	.477	1.768	88.284				
16	.449	1.664	89.949				
17	.394	1.460	91.408				
18	.340	1.260	92.668				
19	.332	1.230	93.898				
20	.302	1.119	95.017				
21	.274	1.016	96.033				
22	.231	.854	96.887				
23	.208	.769	97.656				
24	.201	.744	98.399				
25	.171	.635	99.034				
26	.155	.575	99.609				
27	.106	.391	100.000				

Extraction Method: Principal Axis Factoring.

Factor	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings[a]
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total
1	6.021	22.302	22.302	5.621	20.820	20.820	3.883
2	3.692	13.676	35.978	3.246	12.021	32.841	3.093
3	3.021	11.188	47.165	2.638	9.770	42.611	3.165
4	2.308	8.548	55.713	1.846	6.836	49.447	2.842
5	1.386	5.133	60.846	1.031	3.818	53.266	3.165
6	1.149	4.256	65.103	.801	2.966	56.231	3.439
7	.955	3.536	68.638				
8	.859	3.182	71.821				
9	.798	2.957	74.778				
10	.766	2.838	77.616				
11	.691	2.559	80.175				
12	.613	2.269	82.444				
13	.563	2.087	84.530				
14	.536	1.985	86.516				
15	.477	1.768	88.284				
16	.449	1.664	89.949				
17	.394	1.460	91.408				
18	.340	1.260	92.668				
19	.332	1.230	93.898				
20	.302	1.119	95.017				
21	.274	1.016	96.033				
22	.231	.854	96.887				
23	.208	.769	97.656				
24	.201	.744	98.399				
25	.171	.635	99.034				
26	.155	.575	99.609				
27	.106	.391	100.000				

Extraction Method: Principal Axis Factoring.

a. When factors are correlated, sums of squared loadings cannot be added to obtain a total variance.

Appendix 4N: Scree Plot of the questionnaire in collocations study

Scree Plot
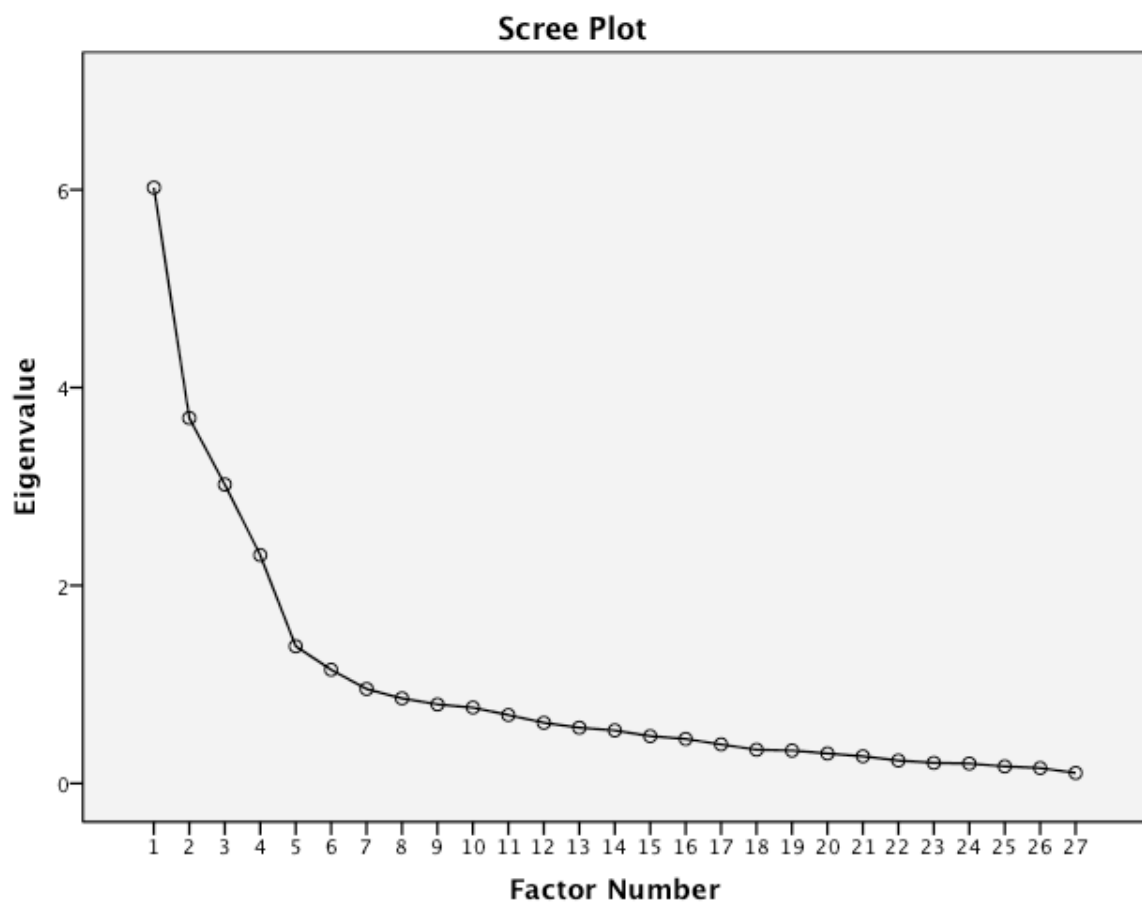
Appendix 4O: Factor Correlation Matrix of collocations study's questionnaire

Factor Correlation Matrix

Factor	1	2	3	4	5	6
1	1.000	.000	.148	.204	.427	-.215
2	.000	1.000	.097	.188	-.059	.093
3	.148	.097	1.000	.016	.126	-.409
4	.204	.188	.016	1.000	.105	-.210
5	.427	-.059	.126	.105	1.000	-.230
6	-.215	.093	-.409	-.210	-.230	1.000

Extraction Method: Principal Axis Factoring.
Rotation Method: Oblimin with Kaiser Normalization.

Appendix 4P: Descriptive statistics of collocations questionnaire items

1. How helpful do learners find concordance worksheets for learning collocations?			
2. How helpful do learners find dictionary worksheets for learning collocations?			
Items	Mean	Mode	Standard Deviation
2.Using the concordance worksheets to learn collocations was useful.	4.4867	5	.90746
16.Using the dictionary worksheets to learn collocations was useful.	4.2389	5	.84805
3.After learning using these concordance worksheets, I think I will avoid making collocation errors in the future	3.8673	4	.93067
17.After learning with the dictionary worksheets, I think I will avoid making collocation errors in the future.	3.7345	4	.85584
6.Using the concordance worksheets helps me in learning the meanings of collocations.	4.4336	5	.80040
20.Using the dictionary worksheets helps me to learn the meanings of collocations.	4.3363	5	.72716
7.Using the concordance worksheets helps me to learn which verb collocate to use for expressing certain meanings	4.2566	5	.85334
21.Using the dictionary worksheets helps me to learn which verb collocate to use for expressing certain meanings	4.0708	4	.82068

Descriptive statistics of how helpful do learners find concordance/dictionary worksheets for learning collocations?

3. How difficult do students find working with concordance examples in collocations worksheets?			
4. How difficult do students find working with dictionary information in collocations worksheets?			

Items	Mean	Mode	Standard Deviations
1.Using the concordance worksheets to learn collocations was easy.	3.5310	4	1.15008
15. Using the dictionary worksheets to learn collocations was easy.	3.9292	5	1.04980
10. It was difficult to adapt to reading the concordance examples.	3.3805	4	1.00284
24. It was difficult to adapt to reading the dictionary information.	3.1770	4	1.10381
11.It was difficult to understand the concordance examples due to cut-off sentences (where I couldn't see the beginning and/or the end of the sentence).	2.8407	2	1.02266
12. It was difficult working on the concordance examples due to the time limit.	3.3186	4	1.07126
25. It was difficult working on the dictionary information due to the time limit.	3.1681	4	1.11726
13. Working on the concordances examples required a lot of effort.	3.3540	4	1.13327
26. Working on the dictionary information required a lot of effort.	3.1150	4	1.02428
14. It was difficult to understand the concordance examples due to unfamiliar vocabulary	3.2743	4	1.01108
27. It was difficult to understand the dictionary information due to unfamiliar vocabulary.	3.0708	3	.91336

Descriptive statistics of how difficult do students find working with concordance examples/ dictionary information in collocations worksheets

	Mean	Mode	Standard Deviation
5. Would they like to use concordance worksheets in the future to learn collocations?			
6. Would they like to use dictionary worksheets in the future to learn collocations?			
Items	Mean	Mode	Standard Deviation
4. I would like to do other activities on collocations using concordance worksheets.	4.1327	5	.94967
18. I would like to do other activities on collocations using the dictionary worksheets.	4.0354	5	1.06845
5. Using the concordance worksheets to learn collocations was interesting.	4.1239	5	.93668
19. Using the dictionary worksheets to learn collocations was interesting.	4.0177	5	1.02628
8. I would recommend the concordance worksheets for learning collocations to other students.	4.3186	5	.83736
22. I would recommend the dictionary worksheets for learning collocations to other students	4.2920	5	.89324
9. As I have worked more on the concordance worksheets, I have come to like them more.	3.9027	4	.98166
23. As I have worked more on the dictionary worksheets, I have come to like them more.	3.7080	4	1.20772

Descriptive statistics of whether students would like to use concordance/dictionary worksheets in the future to learn collocations?

Appendix 4Q: Inferential statistics of collocations questionnaire items

Items	Z score	Asymp. Sig. (2-tailed)
1.Using the concordance worksheets to learn collocations was easy. 15. Using the dictionary worksheets to learn collocations was easy.	-2.778[a]	.005
2.Using the concordance worksheets to learn collocations was useful. 16.Using the dictionary worksheets to learn collocations was useful.	-2.320[b]	.020
3.After learning using these concordance worksheets, I think I will avoid making collocation errors in the future. 17.After learning with the dictionary worksheets, I think I will avoid making collocation errors in the future.	-1.330[b]	.184
4. I would like to do other activities on collocations using concordance worksheets. 18. I would like to do other activities on collocations using the dictionary worksheets.	-.955[b]	.340
5.Using the concordance worksheets to learn collocations was interesting. 19. Using the dictionary worksheets to learn collocations was interesting.	-.997[b]	.319
6.Using the concordance worksheets helps me in learning the meanings of collocations. 20.Using the dictionary worksheets helps me to learn the meanings of collocations.	-.980[b]	.327
7.Using the concordance worksheets helps me to learn which verb collocate to use for expressing certain meanings. 21.Using the dictionary worksheets helps me to learn which verb collocate to use for expressing certain meanings.	-1.871[b]	.061
8. I would recommend the concordance worksheets for learning collocations to other students. 22. I would recommend the dictionary worksheets for learning collocations to other students	-.226[b]	.821
9. As I have worked more on the concordance worksheets, I have come to like them more. 23. As I have worked more on the dictionary worksheets, I have come to like them more.	-1.427[b]	.154
10.It was difficult to adapt to reading the concordance examples. 24. It was difficult to adapt to reading the dictionary information.	-1.487[a]	.137
12. It was difficult working on the concordance examples due to the time limit. 25. It was difficult working on the dictionary information due to the time limit.	-1.306[a]	.192
13. Working on the concordances examples required a lot of effort. 26. Working on the dictionary information required a lot of effort.	-1.783[a]	.075
14. It was difficult to understand the concordance examples due to unfamiliar vocabulary. 27. It was difficult to understand the dictionary information due to unfamiliar vocabulary	1.577[a]	.115

a. Based on negative ranks. b. Based on positive ranks.
Inferential statistics results of parallel questionnaire items

Appendix 5A: Target lexical phrases and errors observed in the SLC

Target lexical phrases	Production error observed in the SLC
In a position to	In a situation*
Take account of	Take of calculation*
In accordance with	In following with*
For the sake of	For the good to*
At the expense of	On account*
To some extent	To some limit*
On the whole	From total of all*
In line with	Are fit with*
On the part of	From the side of*
On behalf of	Substituting of*

Appendix 5B: Training session materials

WHEN IT COMES TO **WORKSHEET**

1. **Translate the following sentence into Arabic.**

When it comes to confidence, they are OK.

   …………………………………………………………………………………..

2. **How did you translate the phrase *when it comes to* in the sentence above?**

   …………………………………………………………………………………..

3. **Look at the following concordance lines for *when it comes to*. Try to understand its meaning, and think how you would translate it into Arabic.**

1.	behaviour to reward is even more difficult	**when it comes to** more general achievements and social relationships
2.	future relationships. This is especially true	**when it comes to** trusting friends or life partners. This
3.	advise me, here, Mr Pascoe. I'm a child	**when it comes to** the Law and you're an expert, aren't you
4.	important as Charley puts you top of his list	**when it comes to** choosing what to do. He's a big man, that
5.	just think he can be a little conservative	**when it comes to** business decisions.' `Unlike you.' I looked
6.	out. `Believe me, three months is nothing	**when it comes to** selling something like this.' And so Todd
7.	. It's not as if there's a lot of choice	**when it comes to** local schools." "I imagine not. Anything
8.	on arrival. And I'll get your tickets -	**when it comes to** this kind of thing I do know all the right
9.	mean he's not lazy. And he's not brilliant	**when it comes to** investments. She often complained about
10.	anyone. Sometimes we do not feel very wise	**when it comes to** making decisions; we simply do not know

4. **Make a sentence of your own using *when it comes to*, e.g. about one of your skills, or about what you usually like to do in your free time.**

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ON THE BASIS OF **WORKSHEE**

1. **Translate the following sentence into Arabic.**

It is on the basis of what you said.

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2. **How did you translate the phrase *on the basis of* in the sentence above?**

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3. **Look at the following concordance lines for *on the basis of*. Try to understand its meaning, and think how you would translate it into Arabic.**

1.	, Tory said."I tried to make my choices **on the basis of** their past experience, their personalities, who
2.	either. Participants were chosen not only **on the basis of** their abilities to play golf, but also
3.	Many of your decisions are going to be made **on the basis of** what you think other people will do when
4.	actions, not on the basis of what we know, but **on the basis of** what we do not know. The role of the unknown
5.	is very important. I judge my colleagues **on the basis of** how I see them treat their staff or members
6.	people would be considered for jobs not **on the basis of** the color of their skin, or their religion
7.	resource forecasting. Experts are chosen **on the basis of** their knowledge of internal factors that
8.	decision to select or reject must be made **on the basis of** a combination of factors and not on the
9.	assess the personality of another person **on the basis of** a brief meeting, like an interview, is
10.	Wolfgang. You'll have to make your own decision **on the basis of** what you find when you get there. Leaving

4. **Make a sentence of your own using *on the basis of*, e.g. about how you normally suggest solutions or give advice; or about how a teacher should assess her teaching.**

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IN TERMS OF WORKSHEET

1. **Translate the following sentence into Arabic.**

They are good in terms of that.

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2. **How did you translate the phrase *in terms of* in the sentence above?**

………………………………………………………………………………..

3. **Look at the following dictionary entry for *in terms of*. Try to understand its meaning, and think how you would translate it into Arabic.**

terms /tɜːmz; *AmE* tɜːrmz/

in terms of

Used to show how sth is explained, described or judged: *In terms of money; it's a great job. In terms of energy, this new power station can produce ten times as much as the old type.*

4. **Make a sentence of your own using *in terms of*, e.g. about the influence of technology on our daily lives, or your opinion about the difference between equality and fairness.**

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TAKE FOR GRANTED WORKSHEET

1. **Translate the following sentence into Arabic.**

   It has been taken for granted.

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2. **How did you translate the phrase *take for granted* in the sentence above?**

   ……………………………………………………………………………..

3. **Look at the following dictionary entry for *take for granted*. Try to understand its meaning, and think how you would translate it into Arabic.**

   granted /grɑːntɪd; *AmE* græn-/
   take sb/sth for granted

   not value sb/sth just because they are/it is always there: *Your problem is that you take your wife for granted. When was the last time you told her how much you appreciated her? We take so many things for granted these days: electricity, running water, cars.*

4. **Make a sentence of your own using *take for granted*, e.g. about blessings you/we rarely stop and think about, or about your loss of someone/ something because of carelessness.**

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Appendix 5C: Experimental teaching materials

AT THE EXPENSE OF WORKSHEET

1. **Translate the following sentence into Arabic.**

They got it at the expense of the other parts.

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2. **How did you translate the phrase *at the expense of* in the sentence above?**

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3. **Look at the following concordance lines for *at the expense of*. Try to understand its meaning, and think how you would translate it into Arabic.**

1. outright anger. "My mother cares for Grandma **at the expense of** everything else in her life," Anita explained
2. business would be brought to the United States **at the expense of** the euromarkets. Rule 144a was not restricted
3. heard worse. You can't ignore a problem **at the expense of** your health. Why should you suffer with
4. accomplish your goals or fulfill your needs **at the expense of** others ' rights, needs, or feelings. Conflict
5. Do you always put your work first, even **at the expense of** your family and friends? Other warning
6. criticised for spending too much time abroad **at the expense of** problems at home. <p/> Such perceptions have
7. : ``You cannot make our companies richer **at the expense of** Australian and Chinese workers." That
8. protect our children. But it must not come **at the expense of** anyone's human rights," she said. Liberal
9. teaching values through geography has come **at the expense of** teaching knowledge of the subject. Sixty-eight
10. been criticised for concentrating on babies **at the expense of** mothers. At the same time, AIDS researchers

4. **Make a sentence of your own using *at the expense of*, e.g. about parents who favour one child over another, or about people who spend a lot of time on their computers.**

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FOR THE SAKE OF WORSHEET

1. **Translate the following sentence into Arabic.**

It is not for the sake of them.

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2. **How did you translate the phrase** *for the sake of* **in the sentence above?**

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3. **Look at the following concordance lines for** *for the sake of.* **Try to understand its meaning, and think how you would translate it into Arabic.**

1. psychiatry. Drug companies do not do research **for the sake of** our health. They do research to make money
2. mind was working. Paul had been murdered **for the sake of** the coins that he had stolen from Nikolo
3. And didn't Pete want to put an end to that **for the sake of** his mother? That's the impression I got
4. students must attend a teacher's course **for the sake of** their careers and that nobody present can
5. insults -- saying I only lived with you **for the sake of** your money. I will not, I will not sleep
6. change my job now.' * `We have to do this **for the sake of** the children.' * `It's too difficult to
7. with emotion and we told her she must rest, **for the sake of** the child. Buster explained to us what
8. suddenly I knew that I didn't marry her just **for the sake of** my son. I married Cyd because I was crazy
9. motivated behavior. When we play, we play **for the sake of** playing, not because we have been rewarded
10. We have to find a way to love ourselves **for the sake of** our health and our integrity. But most

4. **Make a sentence of your own using** *for the sake of***, e.g. about people who travel abroad, or buy things beyond their financial abilities.**

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IN A POSITION TO **WORKSHEET**

1. **Translate the following sentence into Arabic.**

I was finally in a position to lead my own life.

…………………………………………………………………………..

2. **How did you translate the phrase *in a position to* in the sentence above?**

…………………………………………………………………………..

3. **Look at the following concordance lines for *in a position to*. Try to understand its meaning, and think how you would translate it into Arabic.**

1. As a result, the finance company aren't **in a position to** supply any more cash to our customers,
2. respectable organization it probably wouldn't be **in a position to** accept public responsibility. <p/> The employees
3. there was nothing but sea. He wished he was **in a position to** be able to look down on his parents and
4. without being watched." <p/> `You should be **in a position to** know about that." <p/> `I do. And I'm sure
5. positive atmosphere, you're more likely to be **in a position to** operate at your best. Do you like the area
6. other country has its own. You may only be **in a position to** decorate a corner of your living space
7. feel about celebrations whether you are **in a position to** share these with friends or a group of
8. caused it; when you do that you are then **in a position to** solve the problem and improve how you feel
9. what is causing the problem you are not **in a position to** solve it. Use each situation as a lesson
10. size and strategic location, Turkey was **in a position to** <p/> play an active role not only in the

4. **Make a sentence of your own using *in a position to*, e.g. about your most difficult exam experience, or about the person who usually succeeds in influencing your own/other people's opinions.**

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1. **Translate the following sentence into Arabic.**

It is in accordance with your plan

………………………………………………………………………………..

2. **How did you translate the phrase** *in accordance with* **in the sentence above?**

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3. **Look at the following concordance lines for** *in accordance with*. **Try to understand its meaning, and think how you would translate it into Arabic.**

1. redistribution of wealth among Muslims, **in accordance with** the teachings of the Prophet Mohammed,
2. invited to attend. "We still believe that **in accordance with** the rules and regulations, however, that
3. Arts Commission to ensure our designs are **in accordance with** their requirements. Now that this has been
4. that prisoners of war should be treated **in accordance with** international law, why doesn't he introduce
5. to ensure that we make all arrangements **in accordance with** your instructions. When such of those arrangements
6. The price of your holiday is guaranteed **in accordance with** the guidelines published by ABTA, as follows
7. ensure that the work is being carried out **in accordance with** your wishes when the rest of the company
8. Harold had been crowned King of England **in accordance with** all the laws and customs of the land; he
9. Success helps you adjust your everyday actions **in accordance with** the universal law, to make every aspect
10. . `It will be reported." *<p/>* `I am acting **in accordance with** Army orders and recognized legitimate procedure

4. **Make a sentence of your own using** *in accordance with*, **e.g. about the legal system of Saudi Arabia, or about traditions in some regions of Saudi Arabia.**

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ON BEHALF OF **WORKSHEET**

1. **Translate the following sentence into Arabic.**

He came on behalf of them.

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2. **How did you translate the phrase *on behalf of* in the sentence above?**

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3. **Look at the following concordance lines for *on behalf of*. Try to understand its meaning, and think how you would translate it into Arabic.**

1.	before I got a call of apology from John **on behalf of** Dave and himself. <p/> The second incident
2.	help us move nearer that goal. Thank you, **on behalf of** the children. <p/> Wishing you a happy Christmas
3.	with the original idea, accepted the award **on behalf of** her husband, saying "Ozzy, I love you".
4.	said: I'm so proud to accept this award **on behalf of** everyone at Radio 1 and, of course, John
5.	Minister for Defence, Mr Smith, speaking **on behalf of** the Government, said he was "shocked and
6.	protected by the State. I'll also speak **on behalf of** people who have childcare, housing and
7.	companies around, said: "We are currently acting **on behalf of** an investor who has expressed an interest
8.	's younger brother, and I'm here to speak **on behalf of** our mother, Lil, who's 86. My mum just
9.	immediate reply. I have spent many years working **on behalf of** the Japanese government, investigating
10.	somebody wanted to speak to me on the telephone **on behalf of** the Duke of Hamilton ... [and] I asked

4. **Make a sentence of your own using *on behalf of*, e.g. about a favour you did once for your friends; or about the role of student unions/associations in universities.**

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ON THE PART OF WORKSHEET

1. **Translate the following sentence into Arabic.**

It is a mistake on the part of the university.

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2. **How did you translate the phrase *on the part of* in the sentence above?**

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3. **Look at the following concordance lines for *on the part of*. Try to understand its meaning, and think how you would translate it into Arabic.**

   1. kept her troubles to herself, and attempts **on the part of** her friends to `fix her up", to have her
   2. certain active, structuring, creative activity **on the part of** the programme makers is not only necessary
   3. be some feelings of jealousy or sadness **on the part of** the one who has to wait. Anticipating and
   4. The lack of planning and coordination **on the part of** the leaders gave the Arab soldiers little
   5. sufficient numbers of Africans (or a willingness **on the part of** most Europeans) to work in the mines, there
   6. corruption and dishonesty, and a desire **on the part of** ordinary people for a strong community
   7. requires a great deal of effort and good-will **on the part of** both staff and supporters. We know of several
   8. All this needs time and a lot of hard work **on the part of** the governments. It also needs a number
   9. Rica. He said there was a clear willingness **on the part of** both to end the war. The way to do this
   10. her emotions or because she may fear anger **on the part of** her husband, but it may have a detrimental

4. **Make a sentence of your own using *on the part of*, e.g. about the main reason/s why friends fight, or about some students' lack of interest in school.**

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1. **Translate the following sentence into Arabic.**

My ideas are in line with that.

………………………………………………………………………………..

2. **How did you translate the phrase *in line with* in the sentence above?**

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3. **Look at the following concordance lines for *in line with*. Try to understand its meaning, and think how you would translate it into Arabic.**

1. keeping the growth in the amount of money **in line with** the growth in the amount of goods and services
2. your conclusions or recommendations are **in line with** the facts that you have presented. <p/> Consider
3. old. As the rate of multiple births rises **in line with** the success of infertility treatments,
4. have seen, his method was actually more **in line with** the ideas of Lady Mary Wortley Montagu
5. English law should be changed and brought **in line with** Scottish law, which gives women the right
6. tend to go to bed earlier and wake earlier, **in line with** this shift in their temperature rhythm.
7. sales performance and are recommending that, **in line with** other group companies, a Marketing Manager
8. shape the values and behaviour of employees **in line with** the changing directions of the organization
9. tends to keep prices in different countries **in line with** each other. The relative prices of traded
10. 6000. These values are expected to move **in line with** the general price level in Britain. National

4. **Make a sentence of your own using *in line with*, e.g. about the first step to success, or about why some communities refuse new ideas.**

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ON THE WHOLE **WORKSHEET**

1. **Translate the following sentence into Arabic.**

On the whole, you succeeded.

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2. **How did you translate the phrase *on the whole* in the sentence above?**

…………………………………………………………………………………..

3. **Look at the following concordance lines for *on the whole*. Try to understand its meaning, and think how you would translate it into Arabic.**

1.	with the idea that they were fairly good **on the whole**. `I find this Dr Benson very pleasant,"
2.	three or four weeks, and nobody comes." <p/> ` **on the whole**, I suppose, you see more women than men
3.	Truth is truth, and I've noticed that women **on the whole** are less comfortable with mathematical
4.	have a better look around the house. And **on the whole**, up to now, she liked what she saw. There
5.	brand names in these stores. Prices are, **on the whole**, slightly cheaper than in the UK, though
6.	three young men are 18, good-looking and, **on the whole**, successful in their relationships with
7.	should remember what happened to Carmen. Men, **on the whole**, are physically stronger than women, and
8.	thought I had ten thousand pounds. So I think **on the whole** that's probably the best thing to do and
9.	course have been modified. David Wilkins is, **on the whole**, satisfied with the changes. But some say
10.	aged six months. I'm 26 and my wife's 24. **on the whole** our marriage has been quite good but it

4. **Make a sentence of your own using *on the whole*, e.g. about a feeling a lot of people experience, or an idea a lot of girls believe in.**

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TO SOME EXTENT WORKSHEET

1. **Translate the following sentence into Arabic.**

To some extent, it is ok.

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2. **How did you translate the phrase** *to some extent* **in the sentence above?**

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3. **Look at the following concordance lines for** *to some extent*. **Try to understand its meaning, and think how you would translate it into Arabic.**

1.   He probably has a scientific background **to some extent**, or at least a strong interest in science
2.   . Pardon? <M01/> I think parents **to some extent** are responsible for their children's crimes
3.   " When a parent smacks a child, they are **to some extent** losing control," said Lord Lester. "Under
4.   All chemical treatments damage the hair **to some extent** and the best advice is don't do it! Tight
5.   and attractive. Nevertheless, any job is **to some extent** better than no job at all; the penalties
6.   collected While the information to be collected **to some extent** depends on the purpose of the job analysis
7.   Geography How happy you are will depend **to some extent** on where in the world you were brought
8.   consciousness. We can control our bodies **to some extent** and of course with modern medicine we have
9.   of material creation. Personality depends **to some extent** upon the genes we inherit, the families
10.   and that some people - perhaps all of us **to some extent** - possess talents and gifts which can loosely

4. **Make a sentence of your own using** *to some extent*, **e.g. about the effect of having a poor self-image, or about what people say in social networking websites like Facebook and Twitter and whether it represents their real ideas/beliefs/personalities.**

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TAKE ACCOUNT OF **WORKSHEET**

1. Translate the following sentence into Arabic.

She will take account of them.

………………………………………………………………………………………

2. How did you translate the phrase *take account of* in the sentence above?

………………………………………………………………………………………

3. Look at the following concordance lines for *take account of*. Try to understand its meaning, and think how you would translate it into Arabic.

1. company law mean that businesses will need to **take account of** all risks, one of which is the environment
2. with like. As far as possible, we want to **take account of** factors which influence the care provided
3. start we knew that we would also have to **take account of** cultural differences," she says. The company
4. Braun said children felt that parents rarely **took account of** their opinions. `We need constantly to
5. Appropriate and effective models of care that **take account of** the views of patients and carers need to
6. meet our customers. <p/> We will ask for, and **take account of**, customers views of our service. <p/> We
7. mathematics and science, will need revision to **take account of** later developments and thinking.
8. These studies have concluded that, after **taking account of** differences in risk, no group of institutions
9. Software has been developed which increasingly **takes account of** the user's needs and abilities, and systems
10. decision may be more effective, however, if you **take account of** your feelings. If you prefer to think

4. Make a sentence of your own using *take account of*, e.g. about the factors which influence success in/of something, or a certain change you notice in your society, and people's views toward it.

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1. **Translate the following sentence into Arabic.**

    They got it at the expense of the other parts.

    …………………………………………………………………………..

2. **How did you translate the phrase** *at the expense of* **in the sentence above?**

    …………………………………………………………………………..

3. **Look at the following dictionary entry for** *at the expense of.* **Try to understand its meaning, and think how you would translate it into Arabic.**

    expense /ɪkˈspens/

    at the expense of sb/sth

    causing damage or loss to sb/sth else: *We could lower the price, but only at the expense of quality. An education system that*

    benefits bright children at the expense of those who are slower to learn.

4. **Make a sentence of your own using** *at the expense of,* **e.g. about parents who favour one child over another, or about people who spend a lot of time on their computers.**

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FOR THE SAKE OF WORKSHEET

1. **Translate the following sentence into Arabic.**

It is not for the sake of them.

…………………………………………………………………………………..

2. **How did you translate the phrase** *for the sake of* **in the sentence above?**

…………………………………………………………………………………..

3. **Look at the following dictionary entry for** *for the sake of*. **Try to understand its meaning, and think how you would translate it into Arabic.**

sake /seɪk/

for the sake of sb/sth

in order to help sb/sth or because you like sb/sth: *They stayed together for the sake of the children.*
He moved to the seaside for the sake of his health.

4. **Make a sentence of your own using** *for the sake of*, **e.g. about people who travel abroad, or buy things beyond their financial abilities.**

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IN A POSITION TO WORKSHEET

1. **Translate the following sentence into Arabic.**

I was finally in a position to lead my own life.

   …………………………………………………………………………..

2. **How did you translate the phrase *in a position to* in the sentence above?**

   …………………………………………………………………………..

3. **Look at the following dictionary entry for *in a position to*. Try to understand its meaning, and think how you would translate it into Arabic.**

   position /pəˈzɪʃn/

   in a position to do sth

   to be able to do something because you have the ability, money, or power to do it: *When I know all the facts, I'll be in a*

   position to advise you. I'm afraid I am not in a position to help you.

4. **Make a sentence of your own using *in a position to*, e.g. about your most difficult exam experience, or about the person who usually succeeds in influencing your own/other people's opinions.**

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IN ACCORDANCE WITH WORKSHEET

1. **Translate the following sentence into Arabic.**

It is in accordance with your plan.

…………………………………………………………………………..

2. **How did you translate the phrase** *in accordance with* **in the sentence above?**

…………………………………………………………………………..

3. **Look at the following dictionary entry for** *in accordance with*. **Try to understand its meaning, and think how you would translate it into Arabic.**

accordance /əˈkɔːdns; *AmE* əˈkɔːrdns/

in accordance with sth

according to a rule or the way that somebody says that something should be done: *in accordance with legal requirements. We acted*

in accordance with my parents' wishes.

4. **Make a sentence of your own using** *in accordance with*, **e.g. about the legal system of Saudi Arabia, or about traditions in some regions of Saudi Arabia.**

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1. **Translate the following sentence into Arabic.**

He came on behalf of them.

…………………………………………………………………………..

2. **How did you translate the phrase *on behalf of* in the sentence above?**

…………………………………………………………………………..

3. **Look at the following dictionary entry for *on behalf of*. Try to understand its meaning, and think how you would translate it into Arabic.**

behalf /bɪˈhɑːf; *AmE* bɪˈhæf/

on behalf of sb

as the representative of sb or instead of them: *On behalf of the department I would like to thank you all. On behalf of everyone here, may I wish you a very happy retirement.*

4. **Make a sentence of your own using *on behalf of*, e.g. about a favour you did once for your friends; or about the role of student unions/associations in universities.**

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ON THE PART OF WORKSHEET

1. **Translate the following sentence into Arabic.**

It is a mistake on the part of the university.

…………………………………………………………………………..

2. **How did you translate the phrase *on the part of* in the sentence above?**

…………………………………………………………………………..

3. **Look at the following dictionary entry for *on the part of*. Try to understand its meaning, and think how you would translate it into Arabic.**

part /pɑːt; *AmE* pɑːrt/

on the part of sb

(of an action) done, made or performed by sb: *It was probably just a mistake on the part of the doctor.*

There has never been any jealousy on the part of her sisters.

4. **Make a sentence of your own using *on the part of*, e.g. about the main reason/s why friends fight, or about some students' lack of interest in school.**

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1. **Translate the following sentence into Arabic.**

My ideas are in line with that.

…………………………………………………………………………..

2. **How did you translate the phrase *in line with* in the sentence above?**

…………………………………………………………………………..

3. **Look at the following dictionary entry for *in line with*. Try to understand its meaning, and think how you would translate it into Arabic.**

line /laɪn/

(be) in line with sb/sth

be in agreement with sth: *The changes being made are in line with the new policy. The costs were very much in line with what we expected.*

4. **Make a sentence of your own using *in line with*, e.g. about the first step to success, or about why some communities refuse new ideas.**

…………………………………………………………………………..

…………………………………………………………………………..

ON THE WHOLE WORKSHEET

1. **Translate the following sentence into Arabic.**

   On the whole, you succeeded.

   ……………………………………………………………………………..

2. **How did you translate the phrase *on the whole* in the sentence above?**

   ……………………………………………………………………………..

3. **Look at the following dictionary entry for *on the whole*. Try to understand its meaning, and think how you would translate it into Arabic.**

   Whole /həʊl; *AmE* hoʊl/

   on the 'whole

   considering everything; in general: *On the whole her school work is improving, though her spelling is still poor. On the whole, I'm in favour of the idea.*

4. **Make a sentence of your own using *on the whole*, e.g. about a feeling a lot of people experience, or an idea a lot of girls believe in.**

   ……………………………………………………………………………..

   ……………………………………………………………………………..

1. **Translate the following sentence into Arabic.**

To some extent, it is ok.

……………………………………………………………………………………

2. **How did you translate the phrase** *to some extent* **in the sentence above?**

……………………………………………………………………………………

3. **Look at the following dictionary entry for** *to some extent*. **Try to understand its meaning, and think how you would translate it into Arabic.**

extent /ɪkˈstent/

to some extent

used to show how far sth is true or how great an effect it has: *To some extent what she argues is true.*

We all to some extent remember the good times and forget the bad.

4. **Make a sentence of your own using** *to some extent*, **e.g. about the effect of having a poor self-image, or about what people say in social networking websites like Facebook and Twitter and whether it represents their real ideas/beliefs/personalities.**

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TAKE ACCOUNT OF WORKSHEET

1. **Translate the following sentence into Arabic.**

She will take account of them.

…………………………………………………………………………………………

2. **How did you translate the phrase *take account of* in the sentence above?**

…………………………………………………………………………………………

3. **Look at the following dictionary entry for *take account of*. Try to understand its meaning, and think how you would translate it into Arabic.**

account /əˈkaʊnt/

take account of sth

consider sth when making a calculation or decision: *It's clear he didn't take account of his family's wishes when deciding to change jobs. We mustn't forget to take account of price increases when we do the budget for next year.*

4. **Make a sentence of your own using *take account of*, e.g. the factors which influence success in/of something, or a certain changes you notice in your society, and people's views toward it.**

…………………………………………………………………………………………

…………………………………………………………………………………………

Appendix 5D: The entry of the lexical phrase *to some extent* in six different dictionaries

To some extent	
Dictionary	*Entry*
Oxford Idioms Dictionary	**to... extent** used to show how far sth is true or how great an effect it has ♦ *To a **certain extent**, we are all responsible for this tragic situation.* ♦ *He had changed **to such an extent** (= so much) that I no longer recognized him.* ♦ *The pollution of the forest has seriously affected the wildlife.* ♦ ***To some extent** is this true of all schools?*
Oxford Advanced Learner's Dictionary	**to... extent** used to show how far something is true or how great an effect it has ♦ *To a **certain extent**, we are all responsible for this tragic situation.* ♦ *He had changed **to such an extent** (= so much) that I no longer recognized him.* ♦ ***To some extent** what she argues is true.*
Longman Dictionary of Contemporary English	ex·tent **1** **to ... extent** used to say how true something is or how great an effect or change is: **to a certain extent/to some extent/to an extent** (=partly) *We all to some extent remember the good times and forget the bad.* *I do agree with him to an extent.*
Macmillan English Dictionary for Advanced Learners	**to some/a certain/a limited extent** partly, but not completely: *To a certain extent, I was relieved.*
Cambridge advanced Learner's Dictionary	**to some extent** partly: *To some extent, she was responsible for the accident.*
The Cobuild English for Learners Dictionary	You use expressions such as **to a large extent**, **to some extent**, or **to a certain extent** in order to indicate that something is partly true, but not entirely true. (*vagueness*) ⇒ *"It was and, to a large extent, still is a good show."* ⇒ *"To some extent this was the truth."*

Appendix 5E: Productive test of lexical phrases study

NAME _____

_____

Vocabulary Completion

Below there are a number of vocabulary **phrases** in bold. Only the first letter of each word is provided. Look at the provided Arabic translation and fill in the blanks with the missing letters of the words. The **first** letter of each word is provided for you. Sometimes only **one** letter is missing and sometimes **several** letters are missing.

For example:

p_____   **o**_ _____   **v**_____   وجهة نظر

point   of   **v**iew   وجهة نظر

F_____   **o**_____   **a**_____   أولا / قبل كل شيء

First   **o**f   **a**ll   أولا / قبل كل شيء

1. **i**_____ **r**_____ **f**_____				في مقابل/مقابل كذا
2. **i**_____ **t**_____ **r**_____				في هذا الصدد
3. **t**_____ **s**_____ **e**_____				إلى حد ما
4. **i**_____ **l**_____ **w**_____				تماشيا مع
5. **o**_____ **t**_____ **p**_____ **o**_____				من جانب
6. **o**_____ **a** **p**_____ **o**_____				على مدى فترة من
7. **c**_____ **t**_____ **t**_____ **w**_____				يتصالح مع/يتقبل/يتكيف
8. **l**_____ **f**_____ **t**_____				يتطلع ل
9. **t**_____ **a**_____ **o**_____				يأخذ في الإعتبار

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10. **o**_____ t_____ g_____	على أساس
11. **i**_____ t_____ c_____ o_____	في سياق
12. **i**_____ t_____ f_____ p_____	في المقام الأول
13. **t**_____ a_____ o_____	يستغل
14. **i**_____ l_____ t_____ b_____	من المرجح أن يكون
15. **m**_____ u_____ o_____	يستفيد من
16. **i**_____ t_____ m_____	في هذه الأثناء
17. **i**_____ a_____ t_____	بالإضافة إلى
18. **i**_____ t_____ e_____ o_____	في حال
19. **a**_____ t_____ e_____ o_____	على حساب
20. **f**_____ t_____ s_____ o_____	من أجل/ لمصلحة
21. **i**_____ a_____ w_____	وفقا ل/ تبعا ل
22. **i**_____ a p_____ t_____	في وضع يسمح ب
23. **o**_____ b_____ o_____	نيابة عن
24. **o**_____ t_____ c_____	على العكس تماماً
25. **i**_____ t_____ f_____ o_____	في مواجهة
26. **t**_____ p_____ i_____	يشارك في
27. **i**_____ a_____ c_____	على أي حال
28. **w**_____ t_____ e_____ o_____	باستثناء
29. **a**_____ f_____ a_____ I **k**_____	بقدر ماأعرف
30. **o**_____ t_____ w_____	إجمالا/ على العموم

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Appendix 5F: Receptive test of lexical phrases study

NAME _____

_____

Vocabulary translation

Below there are a number of vocabulary phrases. Translate them into Arabic.

For example:

Point of view   …………………………………………………………..

Point of view   وجهة نظر

First of all   …………………………………………………………..

First of all   أولا / قبل كل شيء

1. in accordance with	…………………………………………………………..
2. in the course of	…………………………………………………………..
3. on the part of	…………………………………………………………..
4. in addition to	…………………………………………………………..
5. in the first place	…………………………………………………………..
6. in the event of	…………………………………………………………..
7. look forward to	…………………………………………………………..
8. make use of	…………………………………………………………..
9. in this respect	…………………………………………………………..
10. on the whole	…………………………………………………………..
11. come to terms with	…………………………………………………………..

12. in the face of	…………………………………………………………
13. take account of	…………………………………………………………
14. take advantage of	…………………………………………………………
15. in a position to	…………………………………………………………
16. take part in	…………………………………………………………
17. on the contrary	…………………………………………………………
18. is likely to be	…………………………………………………………
19. for the sake of	…………………………………………………………
20. with the exception of	…………………………………………………………
21. in return for	…………………………………………………………
22. to some extent	…………………………………………………………
23. over a period of	…………………………………………………………
24. in line with	…………………………………………………………
25. in the meantime	…………………………………………………………
26. on behalf of	…………………………………………………………
27. as far as I know	…………………………………………………………
28. in any case	…………………………………………………………
29. at the expense of	…………………………………………………………
30. on the grounds	…………………………………………………………

Appendix 5G: Questionnaire on lexical phrases worksheets

Questionnaire on lexical phrases worksheets

<div dir="rtl">إستبيان عن أوراق تدريبات العبارات المعجمية</div>

Please answer the following questionnaire as <u>truthfully</u> as possible. All your answers and your identity will remain <u>confidential</u>. The questionnaire has two sections.

<div dir="rtl">الرجاء الإجابة على الإستبيان التالي بمصداقية قدر الإمكان. جميع إجاباتك وهويتك سوف تبقى سرية. يتكون الإستبيان من قسمين.</div>

Name: ....

Section 1

<div dir="rtl">القسم الأول</div>

The following questions ask for your opinions on the concordance worksheets and the dictionary worksheets you have used for learning lexical phrases. To remind you what the worksheets are like, you can find an example of a CONCORDANCE worksheet in Appendix A, and an example of a DICTIONARY worksheet in Appendix B. There are also brief examples from both worksheets below. Please tick (√) the response to each question below that most closely represents your opinion.

<div dir="rtl">الأسئلة التالية تطلب أرائك عن أوراق تدريبات المفهرس الأبجدي و أوراق تدريبات القاموس التي استخدمتيها لتعلم العبارات المعجمية. لتذكيرك بما كان عليه شكل أوراق التدريبات بإمكانك أن تجدي مثال ورقة تدريبات المفهرس الأبجدي في الملحق (أ)، ومثال لورقة تدريبات القاموس في الملحق (ب). يوجد أيضا أمثلة وجيزة من كلا نوعي أوراق التريبات أدناه. الرجاء وضع علامة أمام الإجابة الأكثر تطابقا مع مايمثل رأيك لكل سؤال من الأسئلة أدناه</div>

Strongly disagree غيرموافق بشدة	Disagree غير موافق	Neither agree nor disagree محايد	Agree موافق	Strongly agree موافق بشدة
1	2	3	4	5

(Example) If you <u>strongly agree</u> with the following statement, circle the number like this:

<div dir="rtl">(مثال) إذا كنت <u>موافق بشدة</u> على الجملة التالية. ضعي دائرة حول الرقم هكذا:</div>

I like playing games very much. أنا أحب الألعاب بشدة.   1   2   3   ⑤

- **Your opinions about learning by using the <u>concordance</u> worksheets**
- أرائك عن التعلم بإستخدام أوراق تدريبات المفهرس الأبجدي

Example from a concordance worksheet:
Look at the following concordance lines for *on the basis of*. Try to understand its meaning, and think how you would translate it into Arabic.
1. , Tory said."I tried to make my choices **on the basis of** their past experience, their personalities, who
2.either. Participants were chosen not only **on the basis of** their abilities to play golf, but also

Strongly disagree غيرموافق بشدة	Disagree غير موافق	Neither agree nor disagree محايد	Agree موافق	Strongly agree موافق بشدة
1	2	3	4	5

1.	Using the concordance worksheets to learn lexical phrases was easy. استخدام أوراق تدريبات المفهرس الأبجدي لتعلم العبارات المعجمية كان سهلاً	1 2 3 4 5
2.	Using the concordance worksheets to learn lexical phrases was useful. استخدام أوراق تدريبات المفهرس الأبجدي لتعلم العبارات المعجمية كان مفيدا	1 2 3 4 5
3.	After learning using these concordance worksheets, I think I will avoid making lexical phrases errors in the future. بعد التعلم بإستخدام أوراق تدريبات المفهرس الأبجدي، أعتقد إني سوف أتجنب ارتكاب أخطاء عند استخدام العبارات المعجمية في المستقبل	1 2 3 4 5
4.	I would like to do other activities on lexical phrases using concordance worksheets. أود أن أؤدي المزيد من التمارين على العبارات المعجمية باستخدام أوراق تدريبات المفهرس الأبجدي	1 2 3 4 5
5.	Using the concordance worksheets to learn lexical phrases was interesting. استخدام أوراق تدريبات المفهرس الأبجدي لتعلم العبارات المعجمية كان ممتعاً	1 2 3 4 5
6.	Using the concordance worksheets helps me in learning the meanings of lexical phrases. استخدام أوراق تدريبات المفهرس الأبجدي ساعدني في تعلم معاني العبارات المعجمية	1 2 3 4 5
7.	Using the concordance worksheets helps me to learn the usage of lexical phrases. استخدام أوراق تدريبات المفهرس الأبجدي ساعدني في تعلم استخدام العبارات المعجمية	1 2 3 4 5
8.	I would recommend the concordance worksheets for learning lexical phrases to other students. أنصح باستخدام أوراق تدريبات المفهرس الأبجدي لتعلم العبارات المعجمية للطلاب آخرين	1 2 3 4 5
9.	As I have worked more on the concordance worksheets, I have come to like them more. كلما عملت أكثر باستخدام أوراق تدريبات المفهرس الأبجدي أصبحت أحبها أكثر	1 2 3 4 5

- **Reactions to the <u>concordance</u> examples**

- ردود الفعل تجاه أمثلة المفهرس الأبجدي

\<An example of concordance examples> مثال لأمثلة المفهرس الأبجدي

1. , Tory said."I tried to make my choices **on the basis of** their past experience, their personalities, who
2. either. Participants were chosen not only **on the basis of** their abilities to play golf, but also

Strongly disagree غيرموافق بشدة	Disagree غير موافق	Neither agree nor disagree محايد	Agree موافق	Strongly agree موافق بشدة
1	2	3	4	5

10.	It was difficult to adapt to reading the concordance examples. كان من الصعب التأقلم على قراءة أمثلة المفهرس الأبجدي	1 2 3 4 5
11.	It was difficult to understand the concordance examples due to cut-off sentences (where I couldn't see the beginning and/or the end of the sentence). كان من الصعب فهم أمثلة المفهرس الأبجدي بسبب الجمل المقطوعة (حيث لأأستطيع رؤية بداية و/أو نهاية الجملة)	1 2 3 4 5
12.	It was difficult working on the concordance examples due to the time limit. كان من الصعب العمل على أمثلة المفهرس الأبجدي بسبب الوقت المحدد	1 2 3 4 5
13.	Working on the concordances examples required a lot of effort. العمل على أمثلة المفهرس الأبجدي يتطلب الكثير من الجهد	1 2 3 4 5
14.	It was difficult to understand the concordance examples due to unfamiliar vocabulary. كان من الصعب فهم أمثلة المفهرس الأبجدي بسبب المفردات الغير مألوفة	1 2 3 4 5

- **Your opinions about learning by using the <u>dictionary</u> worksheets**

- آرائك عن التعلم باستخدام أوراق تدريبات القاموس

Example from a dictionary worksheet: مثال من أوراق تدريبات القاموس

1.Look at the following dictionary entry for *on the basis of*. Try to understand its meaning, and think how you would translate it into Arabic.

basis /beɪsɪs/

on the basis of sth

the reason why people take a particular action: *She was chosen for the job on the basis of her qualifications. Don't make your decision on the basis of cost alone.*

Strongly disagree غير موافق بشدة	Disagree غير موافق	Neither agree nor disagree محايد	Agree موافق	Strongly agree موافق بشدة
1	2	3	4	5

15.	Using the dictionary worksheets to learn lexical phrases was easy. استخدام أوراق تدريبات القاموس لتعلم العبارات المعجمية كان سهلاً	1 2 3 4 5
16.	Using the dictionary worksheets to learn lexical phrases was useful. استخدام أوراق تدريبات القاموس لتعلم العبارات المعجمية كان مفيدا	1 2 3 4 5
17.	After learning with the dictionary worksheets, I think I will avoid lexical phrases errors in the future. بعد التعلم بإستخدام أوراق تدريبات القاموس، أعتقد إني سوف أتجنب ارتكاب أخطاء عند استخدام العبارات المعجمية في المستقبل	1 2 3 4 5
18.	I would like to do other activities on lexical phrases using the dictionary worksheets. أود أن أؤدي المزيد من التمارين على العبارات المعجمية باستخدام أوراق تدريبات القاموس	1 2 3 4 5
19.	Using the dictionary worksheets to learn lexical phrases was interesting. استخدام أوراق تدريبات القاموس لتعلم العبارات المعجمية كان ممتعاً	1 2 3 4 5
20.	Using the dictionary worksheets helps me to learn the meanings of lexical phrases. استخدام أوراق تدريبات القاموس ساعدني في تعلم معاني العبارات المعجمية	1 2 3 4 5
21.	Using the dictionary worksheets helps me to learn the usage of lexical phrases. استخدام أوراق تدريبات القاموس ساعدني في تعلم استخدام العبارات المعجمية	1 2 3 4 5
22.	I would recommend the dictionary worksheets for learning lexical phrases to other students. أنصح باستخدام أوراق تدريبات القاموس لتعلم العبارات المعجمية للطلاب آخرين	1 2 3 4 5
23.	As I have worked more on the dictionary worksheets, I have come to like them more. كلما عملت أكثر باستخدام أوراق تدريبات القاموس أصبحت أحبها أكثر	1 2 3 4 5

- **Reactions to the <u>dictionary</u> information**

- ردود الفعل تجاه معلومات القاموس

< An Example of dictionary information > مثال من معلومات القاموس

basis /beɪsɪs/

on the basis of sth

the reason why people take a particular action: *She was chosen for the job on the basis of her qualifications. Don't make your decision on the basis of cost alone*

Strongly disagree غير موافق بشدة	Disagree غير موافق	Neither agree nor disagree محايد	Agree موافق	Strongly agree موافق بشدة
1	2	3	4	5

24.	It was difficult to adapt to reading the dictionary information. كان من الصعب التأقلم على قراءة أمثلة القاموس	1 2 3 4 5
25.	It was difficult working on the dictionary information due to the time limit. كان من الصعب العمل على أمثلة القاموس بسبب الوقت المحدد	1 2 3 4 5
26.	Working on the dictionary information required a lot of effort. العمل على أمثلة القاموس يتطلب الكثير من الجهد	1 2 3 4 5
27.	It was difficult to understand the dictionary information due to unfamiliar vocabulary. كان من الصعب فهم أمثلة القاموس بسبب المفردات الغير مألوفة	1 2 3 4 5

Section 2

القسم الثاني

The following questions seek your opinions on the concordance worksheets and the dictionary worksheets for learning lexical phrases. Please use your own words and write as much as you wish (there is extra space provided on the last page of the questionnaire in case you need it).

الأسئلة التالية تهدف لمعرفة أرائك حول أوراق تدريبات المفهرس الأبجدي وأوراق تدريبات القاموس لتعلم العبارات المعجمية. الرجاء التعبير بعباراتك الخاصة وتستطيعين أن تكتبي بالقدر الذي تشائين وهناك مساحة إضافية متوفرة في آخر صفحة من هذا الإستبيان في حال إحتجت لها.

1. Tick ONE of the boxes below then explain your choice.
   For learning lexical phrases …….

   اختاري واحد من المربعات أدناه ثم وضحي سبب إختيارك لتعلم العبارات المعجمية
   - The concordance worksheets are more useful than the dictionary ones
     - أوراق تدريبات المفهرس الأبجدي أكثر فائدة من أوراق تدريبات القاموس
   - The dictionary worksheets are more useful than the concordance ones
     - أوراق تدريبات القاموس أكثر فائدة من أوراق تدريبات المفهرس الأبجدي
   - Both are equally useful
     - كلاهما مفيد بنفس القدر
   - Neither are useful
     - كلاهما غير مفيد

   Please give reasons for your choice?

   الرجاء ذكر أسباب إختيارك

   ………
   ………
   ………

2. Tick ONE of the boxes below then explain your choice.
   For learning lexical phrases ....

اختاري واحد من المربعات أدناه ثم وضحي سبب إختيارك لتعلم العبارات المعجمية

- ▪ I preferred the concordance worksheets to the dictionary ones
  - ▪ أنا فضلت أوراق تدريبات المفهرس الأبجدي على أوراق تدريبات القاموس
- ▪ I preferred the dictionary worksheets to the concordance ones
  - ▪ أنا فضلت أوراق تدريبات القاموس على أوراق تدريبات المفهرس الأبجدي
- ▪ I liked both
  - ▪ أحببت كلا النوعين
- ▪ I didn't like either
  - ▪ لم أحب أي منها

Please give reasons for your choice?

الرجاء ذكر أسباب إختيارك

……………………………………………………………………………………………………
……………………………………………………………………………………………………
……………………………………………………………………………………………………

3. Please compare the concordance worksheets with the dictionary worksheets, and specify the strengths and weaknesses of each type for learning lexical phrases.

الرجاء مقارنة أوراق تدريبات المفهرس الأبجدي مع أوراق تدريبات القاموس وتحديد نقاط القوة ونقاط الضعف لكل نوع لتعلم العبارات المعجمية

	Concordance worksheets أوراق تدريبات المفهرس الأبجدي	Dictionary worksheets أوراق تدريبات القاموس
Strengths نقاط القوة		
Weaknesses نقاط الضعف		

4. How can the concordance worksheets for teaching lexical phrases be improved in the future? (You can write your suggestions to anyone involved and at any stage: design, use in class…etc.)

كيف يمكن تحسين أوراق تدريبات المفهرس الأبجدي لتعليم العبارات المعجمية في المستقبل؟ (يمكنك كتابة مقترحاتك إلى أي شخص و في أي مرحلة: التصميم، الإستخدام في الصف...إلخ)

………………………………………………………………………………………………
………………………………………………………………………………………………
………………………………………………………………………………………………

5. How can the dictionary worksheets for teaching lexical phrases be improved in the future? (You can write your suggestions to anyone involved and at any stage: design, use in class…etc.)

كيف يمكن تحسين أوراق تدريبات القاموس لتعليم العبارات المعجمية في المستقبل؟ (يمكنك كتابة مقترحاتك إلى أي شخص و في أي مرحلة: التصميم، الإستخدام في الصف...إلخ)

………………………………………………………………………………………………
………………………………………………………………………………………………
………………………………………………………………………………………………

6. What did you like and dislike about the sentence making activity, and why?

ماذا أحببت وماذا كرهتي في تمرين تكوين الجمل، ولماذا؟

Make a sentence of your own using *on the basis of*, e.g. about how you normally suggest solutions or give advice; or about how a teacher should assess her teaching.

………………………………………………………………………………………………..

………………………………………………………………………………………………
………………………………………………………………………………………………
………………………………………………………………………………………………

Many thanks once again for your help: it's appreciated.

Appendix 5H: Students' interview schedule on lexical phrases worksheets

Section 1: how easy/difficult it was to use these worksheets

1. In your response to statement/s no. 10,11,12,13,14 on page no.3/ 24,25,26,27 on page no.5 you said it was/wasn't difficult to understand the concordance examples/dictionary information (due to/although there were: cut-off sentences, time limit, a lot of effort required to find the information, unfamiliar vocabulary, contexts of concordance examples). Can you say more about this?

Section 2: General preference

2. In your response to question no.2 on page no.6 you said you preferred the concordance/dictionary worksheets for learning lexical phrases, and you said it is because of…. Can you say more about this?

Section 3: Usefulness

3. In your response to question no.1 on page no.5 you said that using the concordance/dictionary worksheets is more useful for learning lexical phrases than using concordance/dictionary worksheets. Can you explain why you think they are more useful?
4. Which type of worksheets (concordance or dictionary worksheets) you think are more useful to learn the meanings of lexical phrases? Can you explain why?
5. Which type of worksheets (concordance or dictionary worksheets) you think are more useful to learn the usage of lexical phrases? Can you explain why?
6. Do you think that using concordance worksheets to learn lexical phrases where you have to find the information yourself is more useful/less useful than being told the right answer by the teacher? Can you explain why?
7. Do you think that using dictionary worksheets to learn lexical phrases where you have to find the information yourself is more useful/less useful than being told the right answer by the teacher? Can you explain why?

Section 4: strengths and weaknesses

8. In your response to question no.3 on page no.6 you said that…. is/are the main strength/s of the concordance worksheets. Can you say more about that?
9. In your response to question no.3 on page no.6 you said that….is/are the main weakness/es of the concordance worksheets. Can you say more about that?
10. In your response to question no.3 on page no.6 you said that…. is/are the main strength/s of the dictionary worksheets. Can you say more about that?
11. In your response to question no.3 on page no.6 you said that….is/are the main weakness/es of the dictionary worksheets. Can you say more about that?

Section 5: Improvements

12. In your response to question no.4 on page no.7 you said the concordance worksheets can be improved by….. Can you say more about that?
13. In your response to question no.5 on page no.7 you said the dictionary worksheets can be improved by….. Can you say more about that?

Section 6: the sentence making task

14. In your response to question no.6 on page no. 7 you said you liked …. about the sentence making activity. Can you say more about that?
15. In your response to question no.6 on page no. 7 you said you disliked ….. about the sentence making activity. Can you say more about that?

Section 7: final comments

16. Finally, is there anything else you'd like to say about any aspect of the worksheets?

For questions 1,2,3,8,9,10,11,12,13,14,15 (all apart from 1 are from the open-ended section of the questionnaire) prompt cards showing different responses from other learners will also be used when necessary and after eliciting their responses)

Appendix 5I: Teachers' observation instrument for lexical phrases teaching lesson

Section A: the sentence making activity and the instructions

1. Do you think the highlighted lexical phrases are useful or not for students?
□USEFUL   □NOT USEFUL

   ………
   ………

2. Do you think the sentence making activity (activity no.3) is useful or not for learning lexical phrases? Why?
□USEFUL   □NOT USEFUL

   ………
   ………

3. Do you think students had any difficulty in understanding the instructions for the activities?
□YES   □NO

   If YES, which one/s?

   ………
   ………

Section B: the concordance worksheets

4. Do you think students had any difficulty in understanding the concordance examples?
□YES   □NO
If YES, why? In what aspect?

   ………
   ………

5. Do you think the concordance examples are well selected or not for the purpose of teaching the target lexical phrases?
□ WELL SELECTED □ NOT WELL SELECTED

   ………
   ………

6. What do you think of the vocabulary in the concordance examples?
□ EASY □ MODERATE □DIFFICULT

   ………
   ………

7. What do you think of the length of the concordance worksheets?
   □ LONG □ REASONABLE □ SHORT

   ………

   ………

8. What do you think of the number of concordance examples?
   □ TOO MANY □REASONABLE □NOT ENOUGH

   ………

   ………

9. Do you think students can discover the meaning of lexical phrases by themselves through the concordance examples? Why?
   □YES   □NO

   ………

   ………

10. Do you think the concordance worksheets are interesting or not for students?
    □INTERESTING   □NOT INTERESTING

    ………

    ………

11. Do you think the teacher needed to intervene in students' activities often in the concordance worksheets?
    □YES   □NO

    ………

    ………

12. How would you make the concordance worksheets more interesting, less difficult, and more useful for students?
    ………

    ………

13. What do you think are the good points of the concordance worksheets?
    ………

    ………

14. What do you think are the bad points of the concordance worksheets?

……

……

15. Please write on anything else about the concordance worksheets you want to say.

……

……

Section C: the dictionary worksheets

16. Do you think students had any difficulty in understanding the dictionary information?
    □YES   □NO
    If YES, why? In what aspect?

……

……

17. What do you think of the vocabulary in the dictionary glosses?
    □ EASY □ MODERATE □DIFFICULT

……

……

18. What do you think of the vocabulary in the dictionary examples?
    □ EASY □ MODERATE □DIFFICULT

……

……

19. What do you think of the length of the dictionary worksheets?
    □ LONG □ REASONABLE □ SHORT

……

……

20. What do you think of the number of examples in the dictionary entry?
    □ TOO MANY □REASONABLE □NOT ENOUGH

……

……

21. Do you think students can discover the meaning of lexical phrases by themselves through the dictionary entry? Why?
□YES □NO

……

……

22. Do you think the dictionary worksheets are interesting or not for students?
□INTERESTING □NOT INTERESTING

……

……

23. Do you think the teacher needed to intervene in students' activities often in the dictionary worksheets?
□YES □NO

……

……

24. How would you make the dictionary worksheets more interesting, less difficult, and more useful for students?

……

……

25. What do you think are the good points of the dictionary worksheets?

……

……

26. What do you think are the bad points of the dictionary worksheets?

……

………………………………………………………………………………………

27. Please write on anything else about the dictionary worksheets you want to say.

……

……

Thank you very much

Appendix 5J: Teachers' interview schedule on lexical phrases worksheets

Section 1: how easy/difficult it was for students to use these worksheets

1. Here are two teachers' views on the concordance worksheets:

Hala:

It is difficult for students to understand the concordance examples in the concordance worksheets.

Razan:

It is easy for students to understand the concordance examples in the concordance worksheets.

Please give your views about both teachers' statements.

(due to: cut-off sentences, time limit, a lot of effort required to find the information, unfamiliar vocabulary, contexts of concordance examples)

2. Here are two teachers' views on the dictionary worksheets:

Lubna:

It is difficult for students to understand the dictionary information in the dictionary worksheets.

Lana:

It is easy for students to understand the dictionary information in the dictionary worksheets.

Please give your views about both teachers' statements.

(due to: time limit, a lot of effort required to find the information, unfamiliar vocabulary, contexts of dictionary examples)

3. What do you think of the length of the concordance/dictionary worksheets?

Section 2: General preference

4. Which type of worksheets: the concordance or the dictionary ones do you prefer for teaching lexical phrases? Can you say more about this?

Section 3: interest

5. Do you think learning lexical phrases through concordance worksheets is an interesting or a boring way for students? Can you say more about that?

6. Do you think learning lexical phrases through dictionary worksheets is an interesting or a boring way for students? Can you say more about that?

Section 4: Usefulness

7. Do you think the target lexical phrases are useful or not for students?
8. Which type of worksheets (concordance or dictionary) you think are more useful for learning lexical phrases? Can you explain why?
9. Which type of worksheets (concordance or dictionary worksheets) you think are more useful for students to learn the meanings of lexical phrases? Can you explain why?
10. Which type of worksheets (concordance or dictionary worksheets) you think are more useful for students to learn the usage of lexical phrases? Can you explain why?
11. Do you think using concordance worksheets to teach lexical phrases where students have to find the information themselves is more useful/less useful than being told the right answer by the teacher? Why?
12. Do you think using dictionary worksheets to teach lexical phrases where students have to find the information themselves is more useful/less useful than being told the right answer by the teacher? Why?
13. Do you think students can use the concordance/dictionary worksheets for learning lexical phrases without the teacher's help?

Section 5: strengths and weaknesses

14. What do you think are the main strengths of the concordance worksheets for teaching lexical phrases?
15. What do you think are the main weaknesses of the concordance worksheets for teaching lexical phrases?
16. What do you think are the main strengths of the dictionary worksheets for teaching lexical phrases?
17. What do you think are the main weaknesses of the dictionary worksheets for teaching lexical phrases?

Section 6: Improvements

18. How do you think the concordance worksheets can be improved for teaching lexical phrases?
19. How do you think the dictionary worksheets can be improved for teaching lexical phrases?

Section 7: the sentence making task

20. What do you think are the main strengths of the sentence making activity for teaching lexical phrases?
21. What do you think are the main weaknesses of the sentence making activity for teaching lexical phrases?

Section 8: Final comments on/about the approach in general

22. Do you think using concordance examples is a useful approach of learning and teaching English? If so, what do you think this approach is most useful for? (Grammar, vocabulary, writing, speaking or something else)?
23. Finally, is there anything else you'd like to say about any aspect of the worksheets?

Appendix 5K: Students' retrospective questionnaire in the pilot study

A retrospective questionnaire of the concordance and dictionary worksheets for teaching lexical phrases in the pilot study

NAME _____ LEVEL _____

Please answer all the following questions about the worksheets. Use your own words and there is extra space provided in the last page in case you need it.

Section A: General aspects:

1. Were the instructions easy or difficult to follow?
   ………………………………………………………………………………………
   ………………………………………………………………………………………

2. Were the target lexical phrases useful or not?
   ………………………………………………………………………………………
   ………………………………………………………………………………………

3. Were the target lexical phrases interesting or not to study?
   ………………………………………………………………………………………
   ………………………………………………………………………………………

4. Did you find it easy or difficult to translate the sentences in question no.1?
   ………………………………………………………………………………………
   ………………………………………………………………………………………

Section B: the concordance worksheets:

5. What do you think about the set of concordance examples in question no.3? What's your feeling about them?
   ………………………………………………………………………………………
   ………………………………………………………………………………………

6. Was it easy or difficult to understand the concordance examples in question no.3? Why?

   …………………………………………………………………………………………

   …………………………………………………………………………………………

7. Was vocabulary easy or difficult in the concordance examples in question no.3?

   …………………………………………………………………………………………

   …………………………………………………………………………………………

8. Was it easy or difficult to understand the contexts where the lexical phrase is used in the concordance examples?

   …………………………………………………………………………………………

   …………………………………………………………………………………………

9. Do you think it was interesting or not to use the concordance worksheets?

   …………………………………………………………………………………………

   …………………………………………………………………………………………

10. What do you think of the length of the concordance worksheets?

    …………………………………………………………………………………………

    …………………………………………………………………………………………

11. Do you think the concordance worksheets are useful or not for learning lexical phrases? Why?

    …………………………………………………………………………………………

    …………………………………………………………………………………………

Section C: the dictionary worksheets:

12. What do you think about the dictionary entry in question no.3? What's your feeling about it?

    …………………………………………………………………………………………

    …………………………………………………………………………………………

13. Was it easy or difficult to understand the dictionary entry in question no.3? Why?

…………………………………………………………………………………………………

…………………………………………………………………………………………………

14. Was vocabulary easy or difficult in the dictionary entry in question no.3?

…………………………………………………………………………………………………

…………………………………………………………………………………………………

15. Was it easy or difficult to understand the contexts where the lexical phrase is used in the dictionary examples?

…………………………………………………………………………………………………

…………………………………………………………………………………………………

16. Do you think it was interesting or not to use the dictionary worksheets?

…………………………………………………………………………………………………

…………………………………………………………………………………………………

17. What do you think of the length of the dictionary worksheets?

…………………………………………………………………………………………………

…………………………………………………………………………………………………

18. Do you think the dictionary worksheets are useful or not for learning lexical phrases? Why?

…………………………………………………………………………………………………

…………………………………………………………………………………………………

Thank you very much…

Appendix 5L: The counterbalanced versions of the lexical phrases

Lexical phrases items in the two counterbalanced versions based on their BNC-COCA off-list score (after adding proper names)					

Experimental group 1			**Experimental group 2**		
Dictionary	0	at the expense of	Dictionary	0	in a position to
Dictionary	5.98	for the sake of	Dictionary	12.12	in accordance with
Dictionary	10.26	on behalf of	Dictionary	0	in line with
Dictionary	0	take account of	Dictionary	2.56	on the part of
Dictionary	0	to some extent	Dictionary	0	on the whole
DDL	0	in a position to	DDL	1.69	at the expense of
DDL	5.92	in accordance with	DDL	1	for the sake of
DDL	0	in line with	DDL	6.32	on behalf of
DDL	1.57	on the part of	DDL	0	take account of
DDL	0	on the whole	DDL	0.59	to some extent
Total	23.73		**Total**	24.28	
		Difference	0.55		

Appendix 5M: Total Variance Explained of lexical phrases questionnaire

Total Variance Explained

Factor	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings[a]
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total
1	6.223	23.048	23.048	5.864	21.717	21.717	3.557
2	4.726	17.504	40.552	4.322	16.008	37.725	3.414
3	3.037	11.249	51.801	2.655	9.834	47.559	4.191
4	2.423	8.973	60.774	2.079	7.702	55.261	3.146
5	1.302	4.822	65.596	.913	3.382	58.643	3.853
6	1.095	4.056	69.652	.715	2.650	61.292	3.537
7	.889	3.294	72.946				
8	.747	2.768	75.714				
9	.701	2.595	78.310				
10	.644	2.386	80.696				
11	.599	2.220	82.915				
12	.510	1.887	84.803				
13	.478	1.770	86.573				
14	.424	1.571	88.143				
15	.396	1.465	89.609				
16	.378	1.398	91.007				
17	.361	1.337	92.344				
18	.306	1.133	93.477				
19	.289	1.070	94.547				
20	.252	.933	95.480				
21	.236	.873	96.353				
22	.224	.829	97.183				
23	.193	.717	97.899				
24	.172	.635	98.535				
25	.150	.556	99.091				
26	.129	.476	99.567				
27	.117	.433	100.000				

Extraction Method: Principal Axis Factoring.

Total Variance Explained

Factor	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings[a]
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total
1	6.223	23.048	23.048	5.864	21.717	21.717	3.557
2	4.726	17.504	40.552	4.322	16.008	37.725	3.414
3	3.037	11.249	51.801	2.655	9.834	47.559	4.191
4	2.423	8.973	60.774	2.079	7.702	55.261	3.146
5	1.302	4.822	65.596	.913	3.382	58.643	3.853
6	1.095	4.056	69.652	.715	2.650	61.292	3.537
7	.889	3.294	72.946				
8	.747	2.768	75.714				
9	.701	2.595	78.310				
10	.644	2.386	80.696				
11	.599	2.220	82.915				
12	.510	1.887	84.803				
13	.478	1.770	86.573				
14	.424	1.571	88.143				
15	.396	1.465	89.609				
16	.378	1.398	91.007				
17	.361	1.337	92.344				
18	.306	1.133	93.477				
19	.289	1.070	94.547				
20	.252	.933	95.480				
21	.236	.873	96.353				
22	.224	.829	97.183				
23	.193	.717	97.899				
24	.172	.635	98.535				
25	.150	.556	99.091				
26	.129	.476	99.567				
27	.117	.433	100.000				

Extraction Method: Principal Axis Factoring.

a. When factors are correlated, sums of squared loadings cannot be added to obtain a total variance.

Appendix 5N: Scree plot of collocations study questionnaire

Scree Plot
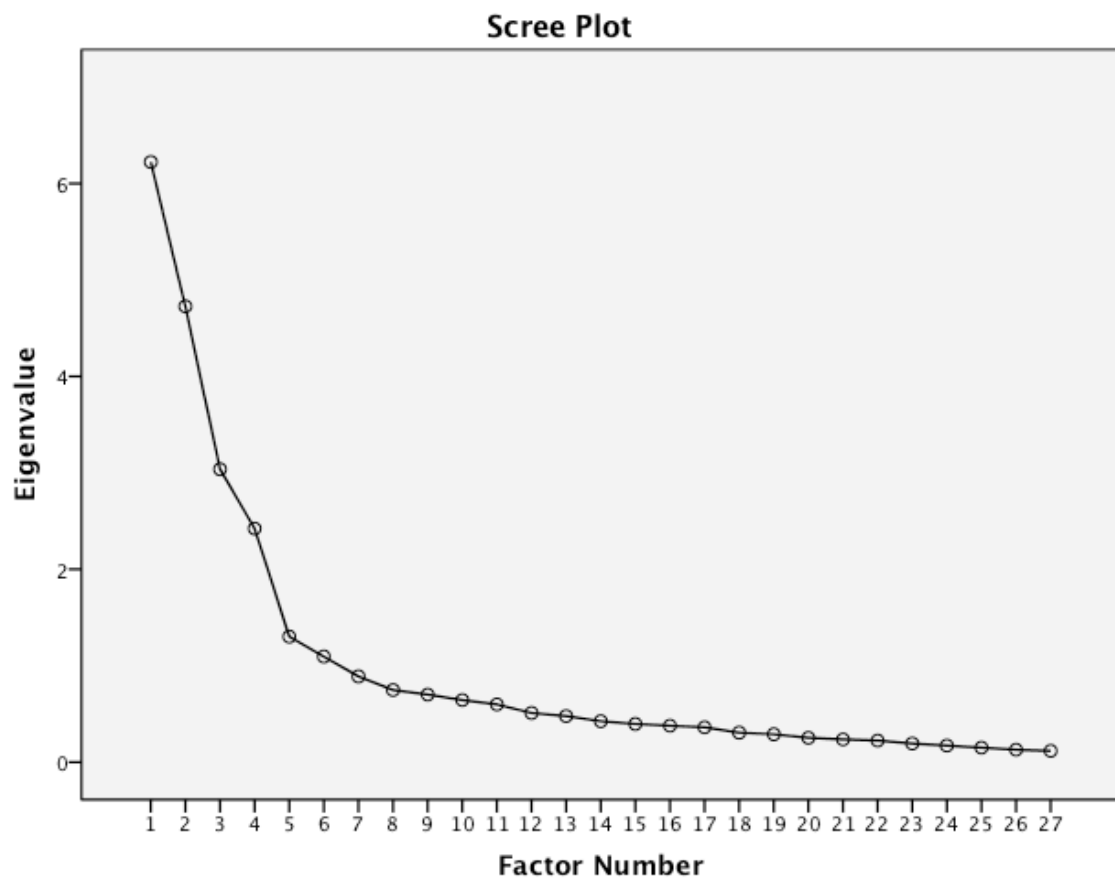
Appendix 5O: Factor Correlation Matrix of lexical phrases study questionnaire

Factor Correlation Matrix

Factor	1	2	3	4	5	6
1	1.000	.034	.281	.099	.427	.010
2	.034	1.000	-.139	.324	.110	-.364
3	.281	-.139	1.000	.101	.306	-.172
4	.099	.324	.101	1.000	.057	-.087
5	.427	.110	.306	.057	1.000	.040
6	.010	-.364	-.172	-.087	.040	1.000

Extraction Method: Principal Axis Factoring.
Rotation Method: Oblimin with Kaiser Normalization.

Appendix 5P: Descriptive statistics of lexical phrases questionnaire items

1. How helpful do learners find concordance worksheets for learning lexical phrases?			
2. How helpful do learners find dictionary worksheets for learning lexical phrases?			
Items	Mean	Mode	Standard Deviation
2. Using the concordance worksheets to learn lexical phrases was useful.	4.3524	5	.73355
16. Using the dictionary worksheets to learn lexical phrases was useful.	4.0571	4,5	.98867
3. After learning using these concordance worksheets, I think I will avoid making lexical phrases errors in the future	4.1429	4	.88174
17. After learning with the dictionary worksheets, I think I will avoid making lexical phrases errors in the future.	3.6190	3	1.02264
6. Using the concordance worksheets helps me in learning the meanings of lexical phrases.	4.2000	4	.77708
20. Using the dictionary worksheets helps me to learn the meanings of lexical phrases.	3.8857	4	.97383
7. Using the concordance worksheets helps me to learn the usage of lexical phrases (i.e. how to use these lexical phrases in English)	4.2381	4	.81481
21. Using the dictionary worksheets helps me to learn the usage of lexical phrases (i.e. how to use these lexical phrases in English)	3.5143	4	.98170

Descriptive statistics of how helpful do learners find concordance/dictionary worksheets for learning lexical phrases

3. How difficult do students find working with concordance examples in lexical phrases worksheets?			
4. How difficult do students find working with dictionary information in lexical phrases worksheets?			

Items	Mean	Mode	Standard Deviations
1. Using the concordance worksheets to learn lexical phrases was easy.	3.6381	4	.86740
15. Using the dictionary worksheets to learn lexical phrases was easy.	3.4857	4	.92106
10. It was difficult to adapt to reading the concordance examples.	3.2476	4	.88558
24. It was difficult to adapt to reading the dictionary information.	3.2857	4	.98756
11. It was difficult to understand the concordance examples due to cut-off sentences (where I couldn't see the beginning and/or the end of the sentence).		4	
12. It was difficult working on the concordance examples due to the time limit.	2.9524	2,3	.99403
25. It was difficult working on the dictionary information due to the time limit.	3.1333	4	1.05672
13. Working on the concordances examples required a lot of effort.	3.0952	2	1.09653
26. Working on the dictionary information required a lot of effort.	3.1429	4	1.03244
14. It was difficult to understand the concordance examples due to unfamiliar vocabulary.	3.2381	4	.97590
27. It was difficult to understand the dictionary information due to unfamiliar vocabulary	3.3143	4	1.01256

Descriptive statistics of how difficult do students find working with concordance examples/ dictionary information in collocations worksheets

5. Would they like to use concordance worksheets in the future to learn lexical phrases?			
6. Would they like to use dictionary worksheets in the future to learn lexical phrases?			
Items	Mean	Mode	Standard Deviation
4. I would like to do other activities on lexical phrases using concordance worksheets.	4.0286	4,5	.99477
18. I would like to do other activities on lexical phrases using the dictionary worksheets.	3.7714	4	.96334
5. Using the concordance worksheets to learn lexical phrases was interesting.	4.0762	4	.86264
19. Using the dictionary worksheets to learn lexical phrases was interesting.	3.8000	4	.91357
8. I would recommend the concordance worksheets for learning lexical phrases to other students.	4.0762	4	.93742
22. I would recommend the dictionary worksheets for learning lexical phrases to other students	3.9143	4	.97186
9. As I have worked more on the concordance worksheets, I have come to like them more.	3.7238	4	.99513
23. As I have worked more on the dictionary worksheets, I have come to like them more.	3.4857	3	.87831

Descriptive statistics of whether students would like to use concordance/dictionary worksheets in the future to learn collocations

Appendix 5Q: Inferential statistics of lexical phrases questionnaire items

Items	Z score	Asymp. Sig. (2-tailed)
1. Using the concordance worksheets to learn lexical phrases was easy. 15. Using the dictionary worksheets to learn lexical phrases was easy.	-1.448[a]	.148
2. Using the concordance worksheets to learn lexical phrases was useful. 16.Using the dictionary worksheets to learn lexical phrases was useful.	-2.515[a]	.012
3. After learning using these concordance worksheets, I think I will avoid making lexical phrases errors in the future. 17. After learning with the dictionary worksheets, I think I will avoid making lexical phrases errors in the future.	-4.070[a]	.000
4. I would like to do other activities on lexical phrases using concordance worksheets. 18. I would like to do other activities on lexical phrases using the dictionary worksheets.	-1.648[a]	.099
5. Using the concordance worksheets to learn lexical phrases was interesting. 19. Using the dictionary worksheets to learn lexical phrases was interesting.	-2.293[a]	.022
6. Using the concordance worksheets helps me in learning the meanings of lexical phrases. 20. Using the dictionary worksheets helps me to learn the meanings of lexical phrases.	-2.531[a]	.011
7. Using the concordance worksheets helps me to learn the usage of lexical phrases (i.e. how to use these lexical phrases in English). 21.Using the dictionary worksheets helps me to learn the usage of lexical phrases (i.e. how to use these lexical phrases in English).	-5.244[a]	.000
8. I would recommend the concordance worksheets for learning lexical phrases to other students. 22. I would recommend the dictionary worksheets for learning lexical phrases to other students	-1.277[a]	.202
9. As I have worked more on the concordance worksheets, I have come to like them more. 23. As I have worked more on the dictionary worksheets, I have come to like them more.	-1.959[a]	.050
10. It was difficult to adapt to reading the concordance examples. 24. It was difficult to adapt to reading the dictionary information.	-.338[b]	.736
12. It was difficult working on the concordance examples due to the time limit. 25. It was difficult working on the dictionary information due to the time limit.	-1.568[b]	.117
13. Working on the concordances examples required a lot of effort. 26. Working on the dictionary information required a lot of effort.	-.308[b]	.758
14. It was difficult to understand the concordance examples due to unfamiliar vocabulary. 27. It was difficult to understand the dictionary information due to unfamiliar vocabulary	-.527[b]	.598

a. Based on negative ranks. b. Based on positive ranks.
Inferential statistics results of parallel questionnaire items