LEXICAL COHESIVE DEVICES IN ARAB STUDENTS'

ACADEMIC WRITING: IMPLICATIONS FOR TEACHING VOCABULARY

A THESIS IN TEACHING ENGLISH TO SPEAKERS OF OTHER LANGUAGES

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ABSTRACT

This study investigated the use of English lexical cohesive devices by 40 undergraduate Arab students enrolled in advanced academic writing classes at the American University of Sharjah. The data were quantitatively analyzed to examine the correct and incorrect usage of different lexical connectors in expository texts. Further examination of the lexical errors revealed the difficulties encountered and the strategies L2 learners used to deal with their lexical problems. An understanding of such strategies would illuminate appropriate approaches for teaching L2 writing and vocabulary.

Based on relevant research on discourse analysis research, the researcher constructed a cohesive scale to assess the use of lexical items in L2 English academic essays. The scale contained eight areas of evaluation, repetition, reference, synonymy, hyponymy, antonymy, inclusion, derivations/inflections, and collocations.

The findings supported the hypothesis and revealed that the students' writing demonstrated weak lexical cohesion due to lack of connector variety, inappropriate use of connectors, long distance between cohesive ties in a chain, and uncertain inference that led to several interpretations. The results indicated that exact repetition was strongly favored as it was the most frequently used lexical connector in the writing samples. It was suggested that the subjects had limited vocabulary knowledge that did not enable them to express their ideas clearly, precisely, and made them prone

to produce lexical and grammatical errors. Such inadequate lexical knowledge did not enable them to produce well-structured texts. Therefore, it seems that second language instruction needs to focus on expanding the vocabulary knowledge of non-native speakers as well as familiarizing them with academic rhetorical features to help them to succeed in English academic settings. In addition, writing teachers need to engage their students in conscious learning tasks that are designed to make them aware of the gaps in their lexical knowledge and provide them with more opportunities to encounter new words in different semantic and formal contexts.

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CHAPTER ONE

OVERVIEW OF THE STUDY

Purpose of the Study

The chapter is mainly concerned with identifying the research problem and pointing out the focus of the research, which is the use of English lexical devices in L2 academic essays. The literature on writing, cohesion, and coherence is touched on briefly, and some of the major views of different researchers pertaining to lexical cohesion, in particular, are addressed. The hypothesis and research question will be addressed to guide and focus the discussion. Finally, the outline of the study will be indicated.

The ability to write well is not a naturally acquired skill. It is usually learned and culturally transferred as a set of practices in formal instructional contexts. Skill in writing is an acquired art, which is learned from practice and experience. Writing involves composing, which entails the ability to either tell or retell information in the form of a narrative or a description, or conversely, to transform information into new texts as in expository or argumentative writing (Carson, 2001). Myles (2001) views writing as a continuum of activities that range from the more mechanical aspects of writing on the one end to the more complex act of production on the other. However, it is the process of composing which can create problems for students, especially for those writing in second language (L2) academic settings. Certainly, academic writing requires conscious effort and practice in composing, developing, and analyzing ideas, and such tasks are particularly difficult for L2 learners because they are faced with cognitive challenges related to second language acquisition.

Essay writing is one of the major skills required for academic success. Although many L2 learners can communicate their ideas orally, they may often fail to meet the standards of lexical appropriateness and grammatical accuracy demanded by their teachers in academic writing. McDevitt (1989) argues that L2 writers often produce "spaghetti writing" (p. 19), which is characterized by long incoherent sentences, overuse of subordinate clauses in "search of a main one" (p. 20) a relatively narrow range of referents, excessive repetition of lexical items, and

inappropriate use of synonyms. More seriously, they often fail to recognize that their words imply relationships, which may be opposite to what they intend to express.

Lack of cohesion in writing is a problem that plagues ESL/EFL students. How to help students overcome the problem has been a challenge to ESL/EFL teachers. Yet in dealing with such a complex task, many teachers continue to focus mainly on teaching the use of functional connectives such as conjunctions, overlooking another important element responsible for text cohesion, which is vocabulary or content lexical ties. Many studies have shown that these ties, which involve repetition, synonymy, antonymy, inclusion, derivations, and most importantly, collocations, are essential to establish cohesion in L2 writing (Ferris, 1994).

ESL/EFL students often have problems at the discourse level because of the wrong or inadequate choice of cohesive ties even at advanced levels of writing. Lack of cohesion in L2 writing results from many factors, such as incoherent ideas and misuse or insufficient use of lexical and grammatical connectives. Liu (2000) asserts that lack of cohesion does not result from an absence of connective words, but mainly from inappropriate knowledge and use of lexical ties. He further accentuates that ESL educators, in general, tend to overlook deficient use of content lexical ties as a cause of lack of cohesion in students' writing and focus on teaching grammatical structures instead. Such deficient knowledge of lexical devices, together with other problems that cause incoherence, often lead to confusion and misunderstanding.

Researchers have given different reasons for writing problems. For example, Fahnestock (1983) argues that "helping students understand coherence in terms of lexical ties and semantic relations possible between clauses and sentences gives some structure to an area of composition instruction that has been somewhat haphazard before" (p. 78). Similarly, Bamberg (1984) explains that a better understanding of English linguistic features and rhetorical structures that create coherence as well as greater insight into the problems students experience in trying to use them will serve as a systematic approach to teaching academic writing.

Having pointed out the writing problems that often face L2 learners, and lexical problems, particularly, that hinder students from developing meaningful and coherent texts, it is necessary to define coherence. Coherence is described as the relationships that link ideas in a text to create meaning for readers. Lee (2002) suggests that since coherence is crucial to effective writing, it has to be properly

described, taught, and learnt in the classroom. Unfortunately, it is often given a marginal role in composition classes. Research has found that L2 writing focuses in general on word and sentence levels rather than discourse level. Therefore, it is necessary that students be taught alternative strategies to improve their writing. Lee stresses that helping students to develop coherent essays should be a major goal for L2 writing teachers and suggests that a pedagogical focus on coherence can shift students' attention from sentence-level grammar to discourse features such as unity and textual coherence to create meaningful texts.

Witte and Faigley (1981), in their essay "Coherence, Cohesion, and Writing Quality," suggest that "if students do not have in their working vocabularies the lexical items required to extend, explore, or elaborate the concepts they introduce, practice in invention can have only a limited effect on overall writing quality" (p. 191). The authors suggest that students should acquire a wide range of vocabulary items so that they have the opportunity to build creative and cohesive sentences and paragraphs, which will produce creative and coherent prose.

In addition, students should be taught cohesion and coherence in writing from the perspective of the reader (bottom-up processing) and the writer (top-down processing). Only through these perspectives will they be able to see the reciprocity between cohesion in reading and writing, and develop an understanding of how cohesion and coherence interact construct meaningful texts (Brostoff, 1981).

Many researchers have carried out studies on the importance of vocabulary in L2 writing. Chaudron (1988) states that lexical errors are considered the most serious in professors' evaluations of L2 texts, and then come organization, and syntactic problems. Vaughan (1991) demonstrates that the proportion of higher-level core academic vocabulary in L2 writers' texts correlated positively with higher ratings of their essays on standardized tests. Norment (2002) assumes that an increase in the amount of academic vocabulary in L2 writing contributes significantly to higher evaluations of L2 academic writing. He also points out that the process of acquiring academic vocabulary is painstaking, and requires explicit vocabulary instruction because academic words and formal grammatical structures cannot be learned through daily conversations and casual talk.

The importance of such studies lies in the fact that the boundaries between grammar and lexis are now seen to be less clear-cut than they were assumed

previously. Some mistakes, for example, which used to be treated as part of grammar, can be viewed as part of morphology, such as the derivational morphology of bright and brightness. Second, learners themselves believe that vocabulary is very important in language learning, to the extent that sometimes they equate a language with its vocabulary. Although James (1998) argues against this view, he asserts that it has to be taken into consideration because learners' beliefs influence learning. Third, for some learners, lexical errors are the most frequent category of errors. Celce-Murcia and Olshtain (2000) suggest that lexical errors outnumber other types by three or four to one. Fourth, vocabulary is significant in communication because a message can be inferred mainly from the lexical terms. Finally, native speakers consider lexical errors to be the most disruptive and irritating of all errors (Martin, 1989). In brief, many researchers emphasize the importance of lexical knowledge, such as Lewis (1997), who states that, "More meaning is carried by lexis than grammatical structures…. Focus on communication necessarily implies increased emphasis on lexis and decreased emphasis on structure" (p.33).

The emphasis on lexis nowadays does not mean that it has to occur at the expense of grammar. Hinkel (1999) clarifies that the integration of grammar and lexis is crucial, especially to intermediate and advanced level students, because they need to deal with authentic materials in order to succeed in academic settings.

Given the fact that lexical cohesive ties are of prime importance in academic discourse, the aim of the present study is to conduct a comprehensive investigation of their occurrence in Arab students' writing. The study embraces a twofold aim: to find and describe the types of cohesive ties used and errors made in the compositions of intermediate/advanced Arab students at AUS. The analysis of such errors would reveal the strategies Arab students employ to deal with their lexical problems. Consequently, it is expected that an understanding of the strategies employed to deal with lexical cohesion would shed more light on appropriate approaches for teaching L2 writing and vocabulary.

It is hypothesized that problems facing ESL learners regarding lexical cohesion involve lack of connector variety, inappropriate use of connectors, long distance between cohesive ties in a chain, and uncertain inference ties that could lead to several interpretations. To test this hypothesis, the study investigates Arab learners' knowledge and use of lexical ties to create coherent texts. To answer the main

research question, two sub-questions will be considered: a) Do Arab students' essays exhibit any central tendencies or common features in terms of using lexical devices? b) What kinds of difficulties do Arab learners encounter in dealing with lexical cohesion?

The findings of the present study support that hypothesis and demonstrate that lexical repetition and reference were the most common means of establishing lexical cohesion in academic texts. In addition, the results show that Arab L2 learners have insufficient knowledge of English collocations, synonymy, inclusion, and opposites. Consequently, it is suggested that second language learners with shared cultural and language backgrounds use similar linguistic and textual resources in meaning construction.

<div align="center">The Research Problem</div>

Writing ability is one of the most important elements that determines students' success in an academic setting, but L2 learners usually have difficulty in writing due to insufficient amount of vocabulary, lack of grammatical knowledge, an unfamiliarity with appropriate rhetorical styles in English, and sometimes lack of experiences to write about.

Writing compositions for an English academic audience requires writing well at the sentence level, the paragraph level, and at the organizational level. At the sentence level, students should be able to identify and write simple, compound, and complex sentences. At the paragraph level, students should be able to identify and write paragraphs including topic sentences and supporting details. At the organizational level, students should learn how to write essays of the following genres: giving instructions, cause and effect, comparison and contrast, and persuasion (Hyland, 2002).

Organization of ideas within essays is often the greatest weakness of many L2 students because different cultural backgrounds require different organizational patterns. Although adapting to the cultural expectations of an English speaking academic audience is not an easy task, it is a necessary one, especially if one wants to be heard and valued.

It is difficult for L2 learners to internalize and acquire the native speaker's awareness of degrees of polysemy and figurative dimensions of a language and at the

same time be sensitive to the formal, collocational, and idiomatic restrictions of lexical items. L2 learners, therefore, tend to produce inappropriate "nuances" in their choice of lexical items because they are unaware of the extra sense of these words and the conditions and relations that govern their correct usage (Hoey, 1993). Ferris and Hedgcok (1998), also accentuate that due to lexical insufficiency, many L2 learners avoid using collocations and idiomatic expressions in their writing and tend to use larger, rarer words, which make their writing sound odd and incoherent.

The importance of the study of L2 vocabulary is evident from several research findings cited by Ried (1993). She states that lexical errors constitute most L2 errors, and that both learners and native speakers view lexical errors as the most serious and disruptive obstacles to communication. Reid stresses that native speakers are better able to understand ungrammatical utterances with accurate vocabulary than those with correct grammar and inaccurate vocabulary. Obviously, lack of appropriate knowledge of other senses of words and their collocability with other words affects vocabulary acquisition and consequently results in lexical and collocational errors.

Knowledge of the lexicon is problematic to L2 learners because it involves knowing how to combine elements to create novel lexical items, maintaining standard combinations, and at the same time avoiding translating directly from the mother tongue. Meara (1984) stresses that lexical knowledge is the most important component of a language, and lexical errors are believed to be the most serious. They often outnumber grammatical errors and are found to be the most disruptive to communication.

Objectives of the Study

This study has four primary goals:

- Investigate the use of different lexical connectors in expository essays by determining the frequency of occurrences,
- Examine lexical errors in L2 expository essays,
- Identify the strategies employed and the difficulties faced by Arab students,
- Propose methods and techniques for L2 writing teachers so they can help students produce lexical and grammatical coherent essays.

Thesis Outline

The thesis is organized into six parts. Chapter 1 introduces the research area in its context, the characteristics and lexical needs of Arab learners at AUS, the problem, and the objectives of the study, as well as organization of the thesis. Chapter 2 is concerned with the notion of lexical cohesion as a property of text. A detailed overview of contemporary approaches to lexical cohesion is discussed. Furthermore, the strong correlation between lexical cohesion and other language skills such as reading, writing, and vocabulary acquisition is highlighted. Chapter 3 identifies the research methodology and the proposed framework for data analysis. Chapter 4 provides samples of data analysis and discusses the result findings. Chapter 5 highlights the pedagogical implications drawn from the study. The conclusion of the research findings, the summary, limitations of the study, and suggestions for further research are discussed in chapter 6. Detailed figures pertaining to the findings are given in the appendix.

CHAPTER TWO

THE USE OF LEXICAL CONNECTORES IN L2 ACADEMIC TEXTS

This chapter focuses first, on the theoretical background on textuality, cohesion, and coherence. Second, a number of major studies on the importance of lexical cohesion are discussed. Third, research which demonstrates lexical errors of connectors and collocations, in particular in L2 texts, and the difficulties L2 learners encounter when using lexical connectors are discussed. Finally, the interconnected relationships between vocabulary and writing on one hand and writing and reading on the other hand are reviewed

Interest in coherence and cohesion in written texts has been aroused recently owing to the renewed emphasis on writing instruction and the recognition that there are many problems in writing which require attention at the discourse level rather than at the sentence level. When reading any text, it is obvious that it is not merely made up of a set of isolated sentences, but that these sentences are related to each other by two linguistic phenomena, cohesion and coherence (Haberlandt, 1982). Text comprehension entails a process whereby the reader succeeds in constructing a cognitive representation of the content conveyed by the text. Comprehension occurs when readers' expectations of content conforms to the text's local sentence level coherence as well as global discourse coherence that convey ideas throughout the text (Nunan, 1999). Nunan, therefore, asserts that the ability to construct coherence constitutes an underlying and essential component of text comprehension.

Researchers focus on several dimensions of text processing that contribute to the construction of coherence relations. The theory of cohesion, first proposed by Halliday and Hasan in *Cohesion in English* in 1976, explains the relationship between cohesion and coherence. It accounts for the relationship between the different elements of a text in allowing the reader or listener to derive meaning from the text. Although the work of Halliday and Hasan dates back to (1976), it is constantly referred to because it is considered the fullest introduction to how sentences or clauses are connected together.

Text and Texture

The critical importance of formal vocabulary for composing or comprehending academic texts has received much attention in recent years. Reid (1998) points out that in academic writing cohesion represents an important feature of text and discourse flow, and that L2 learners require focused instruction and additional attention at the discourse level to help them produce coherent texts. By text, Halliday and Hasan (1976) mean any sample of discourse whose meaning and function is independent of other discourse: "The word *text* is used in linguistics to refer to any passage, spoken or written, of whatever length, that does form a unified whole" (p. 1). When a text forms a unified unit, it is considered to have the property of "texture" (p. 2).

Texture distinguishes a text from a non-text, and functions to unify the text with respect to its environment. Halliday and Hasan (1976) explain that texture "expresses the fact that it relates as a whole to the environment in which it is placed" (p. 293). Beaugrande and Dressler (1981) define text as "a communicative occurrence which meets seven standards of textuality. If any of these standards is not considered to have been satisfied, the text will not be communicative" (p. 3). The first standard is cohesion, which is concerned with the way in which components of the surface text, actual words we see or hear, are mutually connected within a sequence. The second standard is coherence, how components of the textual word are mutually accessible and relevant. Intentionality, the third standard, refers to the writer's attitude to distribute knowledge or to attain a goal specified in a plan. Accessibility, the fourth standard, refers to the receiver's attitude towards a text. The fifth standard, informaticity, refers to the extent to which the information presented in a text is given or new. The sixth, situationality, pertains to the factors that make a text relevant to a situation of occurrence. The final standard, intertextuality, refers to the factors that make the comprehension of one text dependent upon knowledge of previously encountered texts. In this respect, James (1998) agrees with De Beaugrande and Dressler and defines text from a broader perspective to refer to any instance of language that results from applying rules of encoding and of lexico-grammar. In this sense, it is said "text is usage" (p. 143). In smaller texts, texture is maintained by patterns of lexis, morphology, and syntax. Larger texts, in addition to

these devices, rely on cohesive ties. In brief, it is then assumed that the following aspects are essential to the formation of a text: cohesion, coherence, background knowledge, and most important, a relevant degree of expectancy between the writer's intentions and the reader's expectations.

Cohesion and Coherence

Cohesion

Having pointed out the importance of cohesion and coherence in forming a text, it is thus necessary to discuss them in detail with reference to relevant literature. Cohesive devices refer to the lexico-grammatical features of a text that give it texture. Cohesion and coherence are often used interchangeably; however, they do not refer to the same properties of text. Coherence, according to Halliday and Hasan (1976), is a combination of two semantic features: register and cohesion. On the one hand, register refers to the variety of language which is appropriate for a particular situation. Cohesion, on the other hand, refers to the semantic relations found in a text. Halliday and Hasan (1976) define cohesion from a semantic point of view saying that "we can interpret cohesion … as the set of semantic resources for linking a SENTENCE (capitalized in original text) with what has gone before" (p. 10).

Cohesion, then, explains how meaning is constructed based on the semantic relations that are established between and among lexical and grammatical items in a text. In addition, to distinguishing a text from a non-text, it enables readers/listeners to establish relevance between what was said, is being said, and will be said, through the appropriate use of necessary lexical and grammatical cohesive devices. Cohesion occurs when a semantic interpretation of some linguistic elements in the discourse depends on other linguistic elements. Baker (1992, p. 180) gives more details to the definition of cohesion by defining its function as

> The network of lexical, grammatical, and other relations which provide links between various parts of a text. These relations or ties organize and, to some extent create a text, for instance by requiring the reader to interpret words and expressions by reference to other words and expressions in the surrounding sentences and paragraphs. Cohesion is a surface relation; it connects together the actual words or expressions that we can see or hear.

Obviously, cohesion is of prime importance in developing a text because it connects related ideas, allows a reader to interpret texts smoothly, and creates a sense of connected discourse. It has to be noted that the appearance of Haliday and Hasan's *Cohesion in English* (1976) has had a major effect on the understanding and teaching of coherence features. Their work created controversy and interest, and spurred more ESL writing research.

Halliday and Hasan (1976) argue that cohesion is displayed in the ties that exist between a presupposed item and a presupposing one. The presupposing and presupposed items define a cohesive relation, referred to as a cohesive tie. Halliday and Hasan explain that a tie's function is to direct the reader/listener to relate present ideas with earlier ones and, thus, create texture.

Halliday and Hasan (1976) go on to say that cohesive ties are established between elements in the text through, endophobic reference as opposed to elements that have their referent outside the text, exophoric reference. In addition, a relationship in a tie can be measured in terms of the distance between its components, immediate, mediated, and remote. An immediate relationship occurs when cohesive element refers to an immediately preceding one whereas a remote relationship occurs when a referent is more than one clause way. Furthermore, a relationship could be mediated, where an ultimate referent is a few clauses earlier in the preceding discourse, but it has been recaptured in some other elements. The concept of mediated ties brings us to the next important concept in cohesion, that of cohesive chains. If two ties are mediated by a third intervening one, then the three of them enter into a cohesive chain.

Cohesive chains and chain interaction are the most interesting relationships in describing cohesion and eventually coherence in a text. Haliday and Hasan (1976) define a chain as a set of items, each of which is related to others by cohesive relations of any type. Taboada (2000) further explains the notion of chains and states that they do not usually occur in isolation, but along with other chains. However, the presence of two or more chains in a text does not guarantee a cohesive effect. Although chains contribute to cohesion in a text, they need to be related to each other by some means. This relationship is called chain interaction. Haliday and Hasan (1976) suggest a minimum requirement for chain interaction, and that is at least two members of one chain should be related to two members of another chain. They state

that coherence is a function of cohesive harmony, which is established by a high degree of chain interaction.

Coherence

The second important feature of establishing a text is coherence. Coherence could be defined from two distinct perspectives: text-based and reader-based. A text-based perspective considers coherence as a feature of text, either in terms of the linking sentences (cohesion) or as the relationships among propositions in the text. In contrast, the reader-based definition of coherence considers the schemata model and points out that a text cannot be considered separately from the reader's knowledge of form and content. Coherence, then, requires successful interaction between the reader and the discourse to be processed (Carrell, 1983).

Accordingly, the degree to which a reader grasps the intended meaning and the basic structure of a text depends on whether the reader's schemata or expectations are consistent with the text (Miller & Kintsch, 1980). Such expectations, as Carrell (1983) points out, are modified as the reader processes the text to establish consistency with the text form and content. Anderson (1991) emphasizes that since reading is an interactive and interpretive process (bottom-up and top-down processing), the writer must keep the intended audience in mind to be able to meet the reader's expectations and provide guidance throughout the text. It is necessary to point out that the notion of coherence is discussed briefly here because it is not the focus of this study. This study mainly addresses the importance of cohesion, in general, and lexical cohesion, in particular, as a valuable way to establish text unity.

Critique of Halliday and Hasan's Theory of Cohesion

Although Halliday and Hasan's (1976) study on these two features, cohesion and coherence, has given a new perspective to these terminologies and this has had major implications for the way coherence is taught, their work has stirred a lot of controversies in the field. The strongest criticism was from Morgan and Sellner (1980) who based their view on the schema theory of text processing. In keeping with this theory, understanding and processing a text is an interactive process. Thus, a text should be written in relation to a reader. Speaking about coherence specifically, Morgan and Sellner state that a text is coherent if the intended meaning and the

underlying structures match the background knowledge of the readers and not because of the readers' knowledge of language properties as Halliday and Hasan suggest.

A number of researchers have also criticized Halliday and Hasan's view of coherence and cohesion from several standpoints. Carrell (1982) argues against Halliday and Hasan's cohesion theory because it works only on the surface structure of a text to establish cohesive ties as if cohesion occurred in a vacuum. Carrell proposes a more insightful approach to examining texts that first analyzes a text's underlying propositional units and then looks for cohesive ties between the propositions, rather than examining the surface structures.

Drawing on schema theory about text processing as an interactive process, Carrell (1982) argues that cohesion is not coherence because the latter involves not only the writer, but also the reader. She asserts that cohesion is achieved by considering the reader's prior knowledge, the ability to reason, the assumption that a particular text is coherent, and the writer's purpose. For example, consider the sentences: "The picnic was ruined. No one remembered to bring a corkscrew" (p. 649). Carrell argues that, although there is not a linguistic lexical tie between picnic and corkscrew, this mini-text coheres because we have access to a familiar schema for interpreting it in which picnics and corkscrews go together. Therefore, prior knowledge is essential to recognize coherence in texts.

Conversely, Liu (2000) argues against Carrell's point of view and claims that if a text does not have cohesion in the first place, coherence of the text would be very hard to achieve, regardless of the readers' schema and linguistic proficiency. In addition, content lexical ties are one of many devices and issues in text cohesion. Therefore, helping students learn to use these ties alone will not solve all cohesion problems in their writing.

Moreover, Faighley and Witte (1981) also argue against Halliday and Hasan's theory of ties because it does not explain sequences that contain many ties but lack cohesion. They suggest that instead of treating cohesion as a purely semantic language aspect, semantic as well as well as syntactical levels need to be analyzed. They further postulate that ties and noun chains establish semantic consistency, and that only the interaction of the shared items with the syntactic information that unifies

them creates textual cohesion. McGinley (1982) further elaborates on this position by pointing out that ties and chains without reference to their syntactic position are considered only as word lists. John (1986) also stresses that when discussing coherence, writers need to consider the reader continuously and constantly guide him/her through the text by providing cohesive devices. Consequently, writers have to consider several text coherence conditions in order to facilitate comprehension. It could be concluded then that, in addition to prior knowledge and the interaction between the writer's intentions and the reader's expectations, syntactic and semantic features of a text have to be considered to establish text cohesion.

Conditions for Text Coherence

The researchers in discourse analysis discussed above consider cohesive ties as part of what makes a text coherent; other researchers, however, suggest that these ties are not by themselves sufficient to create coherent texts. They emphasize that functional sentence perspective has proved to be of vital importance for the study of coherence in writing. Such researchers suggest that the problem is not so much in differentiating between cohesion and coherence but is in finding adequate and comprehensive definition of coherence. Therefore, Phelps (1985) adopts a broader perspective in his definition of coherence. He defines coherence as "the experience of meaningfulness correlated with successful integration during reading, which the reader projects back into the text as a quality of wholeness in it meanings" (p. 21). According to Phelps, the problem arises when one asks for a definition of "successful integration" (p.21). Yet, a number of linguists have attempted with varying degrees of success to define coherence. Conner and Ellis (1994) provide a promising attempt to describe coherence. They suggest that the notion of "successful integration" proposed by Phelps refers to the semantic relationships that exist between topic sentences and the discourse topic. Through topical structure analysis, semantic relations can be studied by looking at the sequences of sentences and investigating how the topics in the sentences work through the text to build meaning gradually.

Dijk (1977) emphasizes that cohesive ties create only local coherence, which are unable by themselves to create global coherence. He illustrates the difference between local and global coherence in the following example: "I bought this typewriter in New York. New York is a large city in the USA. Large cities often have

serious financial problems" (p.36). Dijk explains that although this passage contains lexical cohesive ties, mainly repetition, readers cannot consider the text as a whole to be coherent unless they can identify the overall theme that unifies buying typewriters, large cities, and financial problems. This example shows that a text must be unified around a particular topic.

Following the Dijk model that distinguishes between local and global coherence, Reinhart (1980) elaborated on this method and assumed that for a text to be globally coherent, it has to meet the following sets of conditions: coherence, connectedness (cohesion), consistency, and relevance. The first condition requires the sentences of the text be formally connected, for example, each sentence be connected to a previous sentence in the text. The second is a semantic condition requiring that each sentence to be consistent with previous sentences, which is achieved by having a common assumption about the world. Reinhart explains this notion by providing an example of a violation of the consistency condition by a recorded speech of a schizophrenic patient: "I was living at home. But my father is dead now…. That's why you can say he's probably decided to smoke a pipe" (p. 170). Reinhart points out that although this excerpt is connected by repetition of a referent (father) and a semantic connector (that is why), it does not give the readers a common assumption about the world. Thus, this excerpt is considered incoherent. Relevance, the third requisite, is the most complex because it involves both semantic and pragmatic conditions. As Reinhart points out, relevance restricts the relations between the sentences of the text and the underlying discourse topic or theme as well as the relations with the context of utterance. A violation to the relevance condition occurs when an explicit semantic connector is present but the sentence introduced by this connector fails to satisfy the semantic relation specified by the connector.

In addition, Lautamatti (1987) recognizes three progressive relations that could result in a coherent text: parallel, sequential, and extended parallel. In parallel progression, the sentence topics are semantically identical. In sequential progression, the sentences are always different. For example, the note of the previous sentence becomes the topic of the next sentence and so forth. Finally, extended parallel progression is a parallel progression that could be interrupted temporarily by a sequential progression. Many researchers have supported the use of topical structure

analysis as a tool for analyzing coherence in a text because it proved to be a fair predictor of the writing quality of students.

The pedagogical implication for identifying cohesion and coherence, as Lee (2002) suggests, is to help students focus on coherence in writing. Consequently, in order to help students write coherent texts, it is necessary that teachers have a thorough understanding of what makes a text coherent. Lee stresses that teachers have to adopt a broader definition of coherence that includes the following categories: macro-structure, information structure, propositional development, cohesion, and meta-discourse.

The first category is macro-structure, which provides an outline of the main functions of a text. It helps readers or writers to understand how sentences in a text are related to each other and how they add to the overall coherence of a text. Lee (2002) argues that the communicative purpose plays a major role in identifying the macrostructure for writers. For example, when the writer's purpose is to tell a story, it is common to organize the events in chronological order. The second category, information structure, guides the reader in understanding how information is organized and how the topic of the text is developed; for instance, coherent texts often introduce old information before new information. Propositional development, the third category, is achieved through the relations between propositions. Lee (2002) acknowledges that a text is essentially a "progressive sequence of propositions" (para. 36) that communicates ideas.

Lee stresses that if a proposition is not supported or developed, it becomes a mere generalization. Accordingly, in order to develop coherence in writing, it is necessary to justify a proposition. For example, the sentence "Free transportation would be a good thing for the city's shops and business" (para. 3) is not a developed proposition. The writer could develop this sentence by providing supporting details, such as "Free transportation would be a good thing for the city's shops and business because bus and underground users would have more money available to spend on buying necessities and luxuries" (para. 4).

Also, Lee (2002) points out coherent texts have three fundamental features: cohesion, progression, and thematization. These text features were first introduced by Kopple (1985), and Lee has expanded on them. First, cohesion enables the writer to focus on one topic at a time and to move to another topic in a smooth manner in such

a way that ideas and thoughts are coherent and consistent. It refers to the grammatical and lexical links that join clauses, sentences, and paragraphs together. These include the use of referents, substitution, ellipsis, and parallel structures, as well as reiteration and collocation. Such devices allow learners to establish relationships between sentences that provide unity to a text. Second, progression refers to the logical and chronological order of sentences in a text to maintain smooth comprehension. Third, thematization allows the elaboration of an overall theme that the reader should be able to grasp easily. Finally, meta-discourse markers, such as "according to," "therefore," "but," "first," "second," "can," and "may," allow readers to organize, interpret, and evaluate information. Consequently, when students understand how these elements of coherence work in texts, they are more likely to use them appropriately to produce texts that are more coherent.

Linguists regard cohesion, where sentences are joined together through ties and referential links due to cohesive repetitions between sentences, as the most important feature of text organization. A text that lacks repetitioncohesion will be simply an arbitrary sequence of sentences and makes the understanding of text hard for the reader (Hoey, 1991). From the above, it can be said that coherence is a significant but complex concept that is governed by a number of factors either in the text or in relation to other factors outside the text such as the readers and the context. The pedagogical interest in cohesion and coherence has increased recently. Examining the presence or absence of grammatical and lexical cohesive devices in student's writings, does not only give us insights into students' difficulties, but can also suggest ways for teachers to intervene productively in student's writing process to help them write more coherently.

The Nature of L2 Academic Discourse

The rhetorical structure of most L2 students studying in American universities is usually not valued by Western academic communities because they bring with them the norms of their L1 written discourse and text structure. Accordingly, if second language learners are expected to achieve advanced L2 writing proficiency to succeed in their studies, they are obliged to learn to construct their written academic essays according to the norms of L2 discourse patterns (Baker, 1982; Jones, 1997; Kern, 1994; Myres, 1999; Zamel, 1993).

Many researchers have identified the reasons that cause difficulties in learning the appropriate norms of L2 written discourse. One of these major difficulties is lexical errors. James (1998) reveals that there are three main sources for lexical errors with several subcategories: inter-lingual, intra-lingual, and induced factors. Inter-lingual errors, occur when "an item or structure in the second language manifests some degree of difference from and some degree of similarity to the equivalent item or structure in the learner's first language" (p. 101). The second, intra-lingual errors are caused by such factors as false analogy, misanalysis, incomplete rule application, overgeneralization, and ignorance of rule restriction. The third, induced errors result from the classroom environment, teaching methods and materials including material induced errors, teacher talk induced errors, and exercises-based induced errors.

Furthermore, Matsuda (1997) provides a more comprehensive description of L2 writing. He emphasizes that L2 students tend to produce texts that contain varying degrees of lexico-grammatical and rhetorical errors. Depending on the proficiency level, the more content-rich and creative the text, the greater the possibility there is for errors at the morpho-syntactic level. Matsuda concludes that these kinds of errors are common among L2 writers who have many ideas, but do not have enough language proficiency to express their ideas in a clear and a well-structured way.

Castro (2004) further summarizes the reasons that cause lexical errors and eventually lead to awkward discourse. First, learners may translate from L1 or try out what they assume to be appropriate rhetorical structure in the target language, although hindered by insufficient linguistic knowledge. They also tend to over-generalize the rules for stylistic features when acquiring new discourse. In addition, L2 writers lack familiarity with the target language rhetorical structure and organization of ideas, which can lead writing to appear off topic or incoherent to many native English speakers. It can thus be concluded from the above that in order to help L2 learners produce L2 coherent texts, they have to be well acquainted with L2 rhetorical and organizational patterns and have sufficient lexcio-grammatical knowledge that enables them to express their ideas and views clearly.

Lexical Cohesion

Second language students in English-medium universities need to demonstrate an extensive variety of academic skills. To perform effectively in these academic settings, second language learners need a good command of vocabulary to read about research in their own areas, to listen to and comprehend lectures, to write papers integrating the research of others, to present written or oral evaluation of methods and results, and in most cases to present their own research findings (Reid, 2000). However, it is generally recognized that many second language learners have difficulties with academic writing in English. Some of these difficulties are related to discourse organization, and others are the result of sentence-level problems related to grammar, and, particularly, vocabulary (Bloch, 2001).

Many researchers realized the importance of vocabulary in spoken and written discourse for communication. For example, Halliday and Hasan (1976) have investigated the role of vocabulary in connected discourse. They propose a method to analyze how the speaker/writer's use of lexical devices may affect the listener/reader's comprehension of connected discourse. Their work describes different types of semantic relations created by the speaker/writer's choice of vocabulary to produce a sense of text. As discussed before, the meaning of a text and texture is achieved when the understanding of one linguistic element in a text is dependent to some extent on the understanding of other elements in the same text. Such semantic relationships link together sentences, paragraphs, and units of discourse that are dependent on each other. The authors used the term "lexical cohesion" (p. 290) to refer to the semantic relationships created by specific lexical items.

The area of lexical cohesion is broad and puzzling, as Halliday and Hasan (1976) state: "The concept of the lexical item … is not totally clear-cut" (p. 292). This is because of the numerous ways word meanings can be related to one another and can co-occur. Lexical cohesion, as defined by Halliday and Hasan, is the cohesive effect achieved by the selection of vocabulary. This selection of vocabulary is further divided into two main categories: reiteration and collocation. Hallidy and Hasan (1976) examine the semantic relationships in a text from a writer/reader perspective. They point out that the way writers develop semantic relations through lexical choices helps to determine the coherence and readability of a text. In addition, the degree to

which readers are able to recognize and respond to these relationships influences the quality and rate of comprehension.

Reiteration and collocation, according to Haliday and Hasan (1976), rely on interpreting one vocabulary element through the presence of another. Reiteration is a phenomenon in which one lexical item refers back to another to which it is related by having a common referent. They identify four types of reiterated items that commonly occur in text: a) repetition of the same word, such as "newspaper" and "newspaper" b) synonym or near-synonym, c) super-ordinate word, and d) general and specific word.

The second category of lexical cohesion, collocation cohesion, refers mainly to the sense of connected discourse created by the close co-occurrence of relatively low frequency words that tend to appear in similar contexts. Halliday and Hasan (1976) include four types of semantic relations in the category of lexical collocation: a) antonyms, b) words from ordered sets, such as days of the week, c) words from unordered sets, such as names of colors; and d) whole-to- part or part-to-whole relations.

Hallliday and Hasan (1976) suggest that the cohesive power of the co-occurrence of two or more words is affected by three factors: the frequency of their occurrence in the language as individual words, the frequency of their co-occurrences in texts in general, and their physical proximity in a text. While sometimes the relation between the members of a tie is easy to identify, like near-synonymy (disease/illness), complementarity (boy/girl), or whole-to-part (box/lid), it is difficult in most cases to classify lexical cohesive devices because the semantic meaning of the lexical connectors is interconnected (Morris and Hirst (2004)

Hoey (1991, p.7), whose work is mainly inspired by Halliday and Hasan, explains that they have "loosely labeled" the category of lexical cohesion because they have included a "ragbag" of lexical relations, which are difficult to specify. He clarifies such difficulty by stating

> It would be easy to criticize the heterogeneity of this motley assortment of pairings, but to do so would be unfair. At least Halliday and Hasan's discussion of lexical cohesion acknowledges the existence of important text-forming properties of lexis, even though the apparatus was not available for the precise classification of the kinds of lexical relations that perform this role.

Hoey agrees with Haliday and Hasan's view, stresses that lexical cohesion is the most important form of the cohesive devices, and supports his claim by indicating the frequency of lexical cohesion as it appears in comparison to reference, conjunction, ellipsis, and substitution in Halliday and Hasan's analysis. Hoey (1991, p.9) states that,

> Lexical cohesion is the only type of cohesion that regularly forms multiple relationships (though occasionally reference does so too). If this is taken into account, lexical cohesion becomes the dominant mode of creating texture. In other words, the study of the greater part of cohesion is the study of lexis, and the study of cohesion in text is to a considerable degree the study of patterns of lexis in text.

Hoey adopts the same typology identified by Haliday and Hasan for lexical cohesion. He advocates that lexical reiteration, which includes repetition, is an important means of marking cohesion in a text because it forms clusters among sentences. He stresses, using Halliday and Hasan's sample texts, that the most dominant type of cohesion in English is lexical cohesion as it constitutes about 40% of the sample texts. Additionally, he argues that lexical repetition is more important than any other type of lexical cohesion, especially when forming cohesive ties over large spans of text, because there is less scope for ambiguity.

Hoey (1991) has studied patterns of lexical cohesion in text and has identified a number of other precise devices which ensure lexical cohesion. He shows in his work that lexical cohesion can be further classified. He focuses generally on the repetition of nominal terms, both single and compound terms, that are used in scientific text, in particular, for connecting sentences and parts of sentences. We have noted above that lexical cohesion devices, according to Halliday and Hasan, could be either reiterations or collocations. Hoey argues that these two types of lexical cohesion can be expressed using various lexical repetition devices.

Hoey (1991) further categorizes repetition into several types: first, simple repetition refers to repetition of exact an item, such as bear and bear. Second, complex repetition, results from two items sharing a lexical morpheme but differing with respect to grammatical function such as human (N) – human (ADJ), dampness (N) – damp (ADJ). Third, paraphrasing refers to the act of rewriting, or rewording parts of

the text. Hoey argues that paraphrasing is demanding because it requires awareness of the semantic relationships between words in a text.

Other researchers criticized Halliday and Hasan's (1976) classification of lexical cohesion claiming that the organization of the categories is not clear. Stotsky (1983), for example, challenges Halliday and Hasan's theory and points out that Halliday and Hasan do not base their theory for the analysis of lexicon cohesion on expository essay samples, but on conversation discourse. Spoken discourse, as Stotsky claims, is not helpful to composition teachers as a way of assessing "appropriate lexical resources in the prose of developing writers" (p. 439). As Stotsky points out, their proposed model has two major flaws. The first one is its lack of comprehensiveness in accounting for lexical cohesion in expository essay writing. Their scheme fails to identify the text-forming relationships created by the use of derivatives or derivational elements. She claims if we consider any derivative as simply a repetition of its base form, then we are not providing an accurate description of the semantic relationship between the two words. In addition, derivations appear to be useful in creating an additional cohesive tie for a pair of related lexical items, such as "realistic/idealistic." Moreover, Stotsky suggests that the use of derivatives is a dominating feature of expository writing and provides stylistic functions such as preciseness in meaning, conciseness in expression, and supporting the cohesive quality of a text to make up for the increasing density of ideas. Therefore, derivations should be distinguished from repetition because an increase in the use of morphologically complex words is considered an important index of lexical maturity.

The second serious flaw in Halliday and Hasan's framework, according to Stotsky (1986), is the lack of clear and constant principles underlying the formulation of their two categories and the subcategories. Halliday and Hasan do not offer a consistent reason for grouping the different types of reiterated items together in one category. Although they state that reiterated items are related through a common referent, they later suggest that it is not necessary for two lexical occurrences to have the same referent in order to be cohesive. In addition, it is not clear from Halliday and Hasan's explanation of collocation cohesion why antonymous relationships, for instance, are collocations whereas synonyms are not, specifically, when there are no referential relations between the two synonyms.

Stotsky (1986) claims that expressions of similarities and contrasts seem to be related to semantic boundaries and lexical sense relations and are different from collocations. She, therefore, proposes a model that consists of two major categories for analyzing expository texts: semantically related words and collocationally related words. The first category embraces all types of lexical cohesion in which words have a systematic semantic relationship with each other, whether or not they co-occur frequently. Stotsky asserts that words that have such a relationship with each other have a stable relationship in the language regardless of the frequency of their co-occurrence. For instance, words related through an antonymy, such as "effective/ineffective," maintain this relationship in all contexts regardless of the frequency of occurrence. Therefore, Stotsky groups semantic relations, such as repetition, synonymy or near synonymy, opposition or contrast, co-ordination, super-ordination, subordination, derivations, and repetition of the derivational elements under the category of semantically related words. The second category is collocationally related words, which is a type of cohesion in which one lexical item is connected to another through frequent co-occurrence in similar contexts such as "worker", "skills", and "job" (p. 439). Stotsky concludes that stylistic flexibility and lexical development in the writing of L2 learners may be overlooked if we do not distinguish derivatives from other lexical items and if we place words with explicit semantic relations in a category with words that co-occur. Since this study addresses the importance of semantically and collocationally related words in developing coherent texts, they will be discussed in further detail below.

Repetition

Semantically related words assist lexical cohesion when some of the essential words of a text are repeated several times directly (repetition), or through (near) synonyms or other relations, such as antonymy and hyponymy, to establish effective inter-paragraph relations. Halliday and Hasan (1976) argue that semantically related words or reiteration can be easily identified whereas collocation is the most difficult type of cohesion to analyze because items said to collocate do not involve repetition, antonymy, synonymy, or hyponymy.

Repetition refers to the presence in a single text, oral or written, of one or more linguistic segments following an early occurrence. It enables speakers/writers to

add information to or supply further details in their discourse by employing identical or similar linguistic forms (Hoey, 1991). Hoey argues that lexical repetition is a form of lexical cohesion, whereby words are repeated across the sentences of the text in a way which reminds the reader of the thread of the argument.

In many studies of cohesion, lexical repetition is considered a major device for text connectedness. Salkie (1995) includes a very comprehensive chapter on lexical cohesion in his book, *Text and Discourse Analysis*. Salkie explains that repetition and synonymy could be used to mark text coherence. He argues that although functional words are necessary for text coherence, repetition of content words is more important in forming coherent texts for two reasons. First, it is possible to give a summary of a text using some of the repeated words. Second, if content words were not repeated, a text would make little sense. However, Freebody and Anderson (1991) emphasize that just because a word is repeated or related in meaning to an item earlier in the text does not mean that it is necessarily coreferential with the first occurrence.

Ting (2003) points out that a significant difference exists between good essays and poor essays in terms of the number of errors in the two subcategories of lexical cohesion: repetition and synonymy. This means that the ability to use lexical items appropriately in writing constitutes a major discriminating factor between good and poor L2 writers. The findings of Ting's study, which investigated the use of cohesive devices in English essays written by Chinese, revealed that all errors in repetition involved redundant use of repetition. Although redundant repetition is not a serious hurdle to the meaning of the delivered massage, it inhibits the flow of ideas and renders the expressions dull and boring. Martin (1989) points out that the main cause of redundant repetition seems likely to be limited L2 vocabulary, which prevents L2 learners from employing wide rang of vocabulary items such as synonyms.

Another factor that contributes to redundant repetition, according to Fakaude and Vargs (1992)), is related to the fact that L2 students seem to be unaware that one of the most important features of academic writing is to avoid redundant words and expressions. Students might be accustomed to using redundant words in speech and bring this habit into formal writing. The fact that good essays reveal no errors of redundant repetition suggests that good writers not only possess a large active vocabulary in comparison with poor writers, but also are familiar with the convention of language use for academic writing.

According to Hoey (1991), lexical repetition has structural and semantic effects. At the structural level, it creates the sense that the ideas introduced in different sentences are related to each other, and consequently builds levels of cohesion within the text. At the semantic level, the repetition of key words clarifies the content of the text. As Hoey claims, lexical repetition is a means of explicitly marking cohesion in a text. It also demonstrates the important communicative function of cohesive markers. Furthermore, lexical repetition is considered an indicator of the rhetorical structure of a text, in other words, how the writer organizes, connects, and develops ideas in the text. In conclusion, lexical repetition is a device for structuring texts and focusing attention on specific content.

Given its rhetorical importance in structuring texts, it seems appropriate to investigate how native and non-native speakers use cohesive markers and lexical repetition in writing. It is worth mentioning that the results of the majority of studies that investigated differences in the use of cohesive devices among natives and non-natives were contradictory and inconclusive (see for example, Conner, 1984; Reynolds, 2001; Scarcella, 1984). Conner (1984) analyzed the cohesive density exhibited in the argumentative essays of two L1 English and two advanced ESL writers. He found that to be cohesive, L2 texts did not need to be coherent, and that there was no difference in the use of reference and conjunction in ESL in comparison to L1 English texts. Furthermore, Conner suggests that the L2 essays lacked lexical variety and elaboration while the L1 English texts demonstrated greater lexical variety. Neuner (1987) also investigated the connection between cohesion and the writing quality of L2 texts and found that the number of cohesive ties did not distinguish good from weak essays, but longer cohesive chains, greater lexical variety, and effective word choice characterized well-written texts.

In their analysis of conjunction use in the argumentative essays of Australian eleventh graders and Chinese students from three schools in Hong Kong, Field and Oi (1992) found that L2 English texts contained considerably more conjunctions compared to L1 English ones. Johnson (1992) also studied the use of cohesive devices in essays written in L1 Malay, L1 English, and Malay ESL and found that there was no significant difference in the degree of cohesion between good versus poor essays in any of these groups. The results of the study showed that well-written Malay texts

exhibited more instances of repetition and the well-written English essays demonstrated more instances of reference and conjunction.

Such controversial and inconsistent findings were evident in Ferris's (1994) analysis of text variables found in low and highly rated essays written by 11 Arab, Chinese, Japanese, and Spanish ESL students in a university placement test. Ferris found that low rated essays relied on repetition, the same result obtained by Conner (1984) and Neuner (1987). On the other hand, Norment (1995) analyzed the use of cohesive devices in expository and narrative essays written in L1 Chinese, Chinese ESL, and L1 English. The results demonstrated that high proficiency Chinese and English writers used more cohesive devices, and the more frequently used ones were repetition, pronouns, and conjunctions.

In a more recent study, El-Shiyab (1997) examined the use of lexical cohesion and the interaction of identity chains in different types of Arabic texts and concluded that chains show the semantic relationships between and among referential and cohesive devices. In addition, Norment (2002) investigated the occurrence of cohesive devices in narrative, argumentative, and expository essays of African American students' representing two proficiency levels (high and low). He found a positive correlation between the cohesive density of a text and a writer's level of proficiency in English. The results of this study concur with the results of previous studies that were discussed above that concluded that proficient ESL and L1 English writers use more cohesive devices, and the more frequently used ones were repetition, pronouns, and conjunctions. The results of the majority of the studies that investigated the differences in the use of cohesive devices among native and non-native speakers, as Hyland (2003) points out, are controversial.

Writers' use of lexical repetition changes in relation to the topic they are writing on and the language proficiency of the learners. Reynolds (2001) argues that the use and function of lexical repetition differs across different writing modes. Reynolds asserts that there is a higher frequency of repetition in non-narrative texts as opposed to narrative texts to indicate connections between the propositional content of the sentences. The second variable that affects lexical repetition is the writing ability of the learners. The findings of studies on writing and cohesion are conflicting. Several studies indicate that greater use of repetition is a feature of less proficient writers or less native like writing (Witte & Faigley, 1981). Scarcella (1984) compared

the use of repetition in expository essays written by native and non-native speakers, and found native speakers used more repetition than non-native speakers did. Reynolds (2001) concludes that the writing of proficient learners shows more lexical diversity, which indicates more precision in the choice of lexical items to refer to specific concepts.

In conclusion, repetition expands the possibility of discourse connectedness. In this respect, Hoey (1991) stresses that "the traditional advice to avoid repetition needs to be couched with special care if it is not to interfere actively with the development of mature writing skills" (p. 243). The presence of repetition in speech and in writing, besides facilitating textual organization, reinforces a particular idea and enhances interaction between the reader and the text. Hoey asserts that writing teachers should adopt a flexible attitude with regard to teaching practices. By doing so, they would come to see forms of repetition not merely as a trait of spoken language or a linguistic defect, but rather as a source which learners can resort to in developing their writing skills. In conclusion, Hoey stresses that the presence of repetition in L2 learners' discourse should not be viewed as a negative feature that impoverishes their language development because it could serve as a useful bridge between oral and written language. As mentioned before, the use of lexical repetition differs according to cultural background and language proficiency.

Overall, the use of repetition in a particular context has to be viewed with reference to its role and function and how it presents a smooth flow of information from one paragraph to another. If used reasonably without redundancy, repetition of lexical devices helps in engaging the reader in a text, facilitates comprehension, and most importantly, provides the basis for introducing new information, ultimately assisting the reader to establish the appropriate schemata.

Synonyms

Synonymy refers to the relationship between semantically equivalent words, which are exchangeable in all textual contexts. Salkie (1995) argues that mastering synonymy is essential for writing quality because "It can get boring if the same word is repeated, and this is one reason why synonyms are used instead…. Using synonyms adds variety" (p. 9). It has often been suggested that English is mainly rich in synonyms for historical reasons and that its vocabulary has come from two different

sources, from French, Latin, and Greek on one hand and from Anglo-Saxon on the other hand. Words borrowed from such different origins long ago have now become an essential part of the language and considered native words because they are used frequently and are known by many people.

Researchers assert that there are no real synonyms. That is to say, there are no two words that have exactly the same meaning. Nunan (1991) explains that it would seem unlikely that two words with exactly the same meaning would both survive in any language. Palmer (1996) stresses that true synonyms are uncommon, whereas near-synonyms are the most frequent form of synonymy in text. Laufer (1997) further states that true-synonymy is generally limited to technical terms like "groundhog/woodchuck" (p. 25). She provides the following example of near synonymy to illustrate her viewpoint, "lie/misrepresentation" (p. 25). Laufer states that whereas a lie is a deliberate attempt to deceive, the use of misrepresentation tends to imply an untruth told merely out of ignorance. Accordingly, it seems that the context determines the terms that may be interchanged. If we look at possible synonyms, as Palmer (1996) points out, there are at least five ways in which they can be seen to differ.

First, some sets of synonyms belong to different dialects of the language; for example, the term "fall" is widely used in the United States, whereas "autumn" is used in Britain and other European countries. Second, some sets of synonyms are used in different situations. For example, "a nasty smell" is colloquial and accepted in a particular context, but "obnoxious effluvium" is very colloquial and would not be accepted in most situations. Thirdly, some words may be said to differ only in their evaluative meaning but their cognitive meaning is the same. For instance, although the words "terrorist/freedom fighter" are used to legitimize behavior, the function of such words in a language is to influence attitudes. Fourthly, some words are collocationally restricted, and in such case, closely related words cannot be interchanged. Palmer (1996) points out that this does not seem to be a matter of difference in meaning but of the "company such words keep" (p. 45). Fifthly, there are many words that are either close in meaning or their meanings overlap. Palmer mentions that such closely related words have a loose sense of synonymy and therefore could include large set of meanings. Dictionary makers often exploit such

words. Palmer argues that dictionaries in general tell us little about the precise connections and difference in meanings between words. Thus, L2 learners should be cautious when using dictionaries to get the subtle differences in meaning between words because they are sometimes misleading.

There are two phenomena that teachers have to be aware of when teaching synonymy. The first is context-dependent synonymy where two items appear to be synonymous in a particular context. For example, "buy" and "get" in "I will go to the shop to (buy) or (get) some bread" (Palmer, 1996, p. 93). Palmer argues that these two words could be used interchangeably; however, learners have to be aware that they are related together in terms of hyponymy. That is, one term is more specific than the other. The context, however, supplies the specific information that is needed. The second kind of synonymy is through paraphrase, for example "bull" and "male adult bovine animal" (p. 93). Applying the interchangeability test, one would rule these out as completely synonymous because we never say, "There is a male adult bovine animal in the field," although in a way, the two items seem to have the same meaning. Palmer notes that using paraphrases is not a natural linguistic phenomenon, but was created by linguists and lexicographers for the purpose of definition and paraphrase in dictionaries.

University EFL students may know many synonymous words, but not their complete range of meanings in all contexts because their knowledge is limited by the type and amount of instructional input they have received and also by the impact of bilingual dictionaries which gloss some words as synonyms without explaining detailed contextual differences (Ellis, 1994). This raises the following question: How is meaning conveyed in a foreign language context? At the beginner level, meaning comes through either glosses in the native language or by visual representations such as pictures or actions. At the intermediate level, new vocabulary is introduced through definitions and synonyms in the second language. New words are equated with ones that have already been learned and thus give the elusion that words are used interchangeably. This technique reinforces the fallacy of exact synonymy because subtle differences in meaning are often ignored.

Ellis (1994) points out that errors in the choice of synonyms by second language learners are understandable because they do not enjoy the advantage that native speakers have. Native speakers come to choose the appropriate synonymy or

vocabulary item by encountering the words many times and in a variety of contexts. These successive encounters reinforce native speakers' understanding of a word, its meaning, and its suitability in a variety of contexts. Such repeated encounters help native speakers develop a sense for what kind of linguistic and pragmatic relevance a word tends to have and appreciate the minor distinctions between a word and its "nearest cousins in the lexicon" (p. 132). Thus, the luxury of successive exposure to a word in a variety of contexts is not provided to second language learners.

Sa'addedin and Akram (1989) suggest that as the fluency of learners increases, the number of vocabulary errors they produce increases, too, in speaking as well as in writing. Some of these errors could be attributed to negative language transfer from their L1, but the majority is attributed to inter-lingual factors, which reflect confusion between and among lexical items in the vocabulary of the second language.

Although synonymy is one the most frequently used cohesive ties in academic contexts, L2 writers face problems in choosing the appropriate synonyms because they do not have the lexical proficiency that enables them to choose the appropriate lexical word (Francis, 1994). Errors of synonyms involve inappropriate use of synonyms and antonyms. Ting (2003) points out that this problem is probably due to students' weak ability to differentiate synonyms in meaning and usage. Furthermore, Mahmoud (2005) states that stylistic appropriateness is a difficult task for second language learners as they use words that frequently contain a mixture of styles. A learner may use a formal expression in an informal situation and visa versa. Mahmoud, therefore, suggests that new vocabulary has to be clearly labeled as to style: formal, informal, colloquial, technical, taboo, or archaic. According to Mahmoud, active vocabulary should be limited to the register they will actually use. In addition, when correcting errors, teachers need to explain to students the nature of the stylistic differences, pointing out the mismatch between a word and its context. Mahmoud emphasizes that stylistic values should be an inherent part of vocabulary teaching.

To sum up, appropriate use of synonymy is a vital aspect of language proficiency. Native speakers are able of use synonymy appropriately because of multiple exposure of a word in several contexts. In contrast, non-native speakers do not use synonymy effectively and appropriately because they lack linguistic proficiency that enables them to distinguish the denotations and connotations of

words. In addition, because of insufficient knowledge of style and register, L2 students are vulnerable to wrong word choice. Researchers, therefore, stress that explicit vocabulary instructions along with stylistic awareness are necessary to enhance the lexical knowledge of L2 learners.

Collocation

Recently, collocation has emerged as an important aspect of L2 vocabulary acquisition and as such has become an established unit in most language teaching courses and materials. Collocation is the way words co-occur in a natural context in a "statistically significant way" (Lewis, 2001, p. 132). There is some ambiguity in the definition of collocation as a category. Nunan (1993) argues that most linguists who have written about cohesion admit that lexical collocation is a problem for most ESL/EFL learners. Nunan (1993) points out that while there are problems in defining collocation, its impact in text coherence "is so significant that it cannot be ignored" (p. 30) because it facilitates reading comprehension and indicates the overall writing quality. Witte and Faigley (1981) assert that an examination of the lexical cohesive ties and lexical collocation in particular shows how writers build ideas, and are able to construct a text together by using word associations.

Halliday and Hasan (1976) recognize collocation as the most problematic part of lexical cohesion and resolve the matter by pointing out that when reiterations stand in some recognizable "lexico-semantic" relation, they collocate. They assert that collocation is the most difficult type of lexical cohesion to analyze because it involves words that "share the same environment" (p. 286). Most researchers who define collocation agree that it is a lexical unit consisting of a cluster of two or three words from different parts of speech (Channell, 1981). Mahmoud (2005) asserts that most definitions of collocation are paraphrases of Firth's (1957) definition that collocations are "words in habitual company" (p. 183). Collocations consist of two categories, lexical and grammatical collocations. Lexical collocations or open collocations are words that can cluster with a wide range of other words, whereas grammatical collocations are more restricted and fixed like phrasal verbs and collocations of prepositions (Ellis, 1997).

Cruse (1991) offers a more comprehensive and more exclusive definition of collocation. He developed criteria to distinguish collocations from idioms. According

to Cruse, collocation refers to "sequences of lexical items which habitually co-occur, but which are nonetheless fully transparent in the sense that each lexical constituent is also a semantic constituent" (p. 65). Moreover, collocations have a kind of "semantic cohesion" (p. 66) where constituents are mutually selective; for example, the word "heavy" in "heavy drinker" and "heavy smoker" has a defined contextual environment. As Campbell (1998) points out, the collocation of particular lexical items is not necessarily based on the subject's knowledge of the world but on the intuitive understanding of a native speaker. The predictability of certain word combinations can be weak, for example, "dark" can collocate with a diverse range of words whereas a word such as

"rancid" tends to have strong collocabilty because it collocates with a limited range of words (Haung, 2001). Because of the problematic nature of collocations, researchers have not yet been able to develop a unified definition of collocations. However, the definitions mentioned above revolve around the notion of co-occurrence of words in a particular context.

Researchers agree that different types of collocations should be placed along a continuum because it is difficult to draw a clear-cut distinction between them (Howarth, 1998). Howarth's model of lexical collocation is widely adopted because it provides a thorough explanation of the categories and presents an easy to follow model. According to Howarth, the collocation continuum contains four categories: free combinations, restricted collocations, figurative idioms, and pure idioms. A free collocation depends on the literal meaning of individual words and its constituents are freely interchangeable, such as "blow a trumpet." A restricted collocation is more limited in the selection of elements and usually has one element that is used in a more restricted context, for example "blow a fuse." Figurative idioms have a metaphorical meaning as a whole that to some extend can be derived from its literal interpretation, such as "blow your own trumpet." Finally, pure idioms, on the other hand, have a unitary meaning that is totally unpredictable from its literal meaning, for instance, "have bitten off more than you can chew."

Hamblin and Gibbs (1999) investigated further the use of idioms by non-native speakers and suggest that idioms are considered an exceptional form of collocations, which is why several factors affect their comprehension and productive use. These factors include the context in which the idioms are used, the meaning of

the constituents of the idioms, and finally, the learners' knowledge and competence of metaphors and figurative language. Based on the results of several studies, Hamblin and Gibbs conclude that idioms are perceived as being more appropriate by native speakers when the context of the idiom is apt with the intended meaning. They also point to the fact that, in general, utterances produced by second language learners include very few idioms because they lack sufficient lexical knowledge and appropriate cultural competence that would enable them to use idioms more frequently.

Generally, collocations are those word pairs that occur frequently together in the same environment, but do not include lexical items that have a high overall frequency in language. According to Halliday and Hasan (1976), the co-occurrence of highly frequent words in either written or spoken discourse does contribute to the cohesiveness of a text. Highly frequent words such as "make," "do," and "go" enter into associations with all kinds of words in all contexts. They indicate that words with relatively low frequency may contribute to textual cohesion because they could be associated with a limited number of words in a limited number of contexts.

It seems difficult to establish clear-cut criteria for distinguishing words contributing to collocational cohesion. Halliday and Hasan suggest that, in general, common sense and the knowledge of the native speakers of the language are probably the most appropriate guides in judging what words contribute to cohesion. Stotsky (1986) argues that words that contribute to cohesive ties in academic discourse are usually the content words that have tended to be produced by writers writing on similar topics for similar audiences. If such words characterize academic essays rather than speech and literature, one might argue that words contributing to cohesive ties in exposition tend to be literary words that are more suitable to be written than spoken.

Stotsky (1986) suggests that if words contributing to collocational cohesion in academic discourse are found more in academic essays than in speech or literature, then the reader's prior experience in expository reading would logically be the major source of the cohesive power. As Stotsky points out, for a reader unfamiliar with the concepts and vocabulary of a particular written text, few words could contribute to collocation cohesion regardless of their proximity in the text. She points out that semantically related words depend more on the reader's knowledge of word meanings than on his/her reading experience, whereas collocation depends more on the reading

experience. Since the analysis of lexical collocation in an experienced writer's text by an experienced reader may be very different from the analysis of collocation by an inexperienced reader of the same texts on a particular topic, decisions about what words contribute to collocation cohesion in an expository text need to be made by readers experienced in that topic. Stotsky, therefore, concludes that collocations do not have a systematic semantic relationship with each other; they are related to each other only through their association with the topic of the text. After examining the essays written by ESL college freshmen, Witte and Fraigley (1981) also claim that highly rated essays contained many more examples of lexical collocation than low rated ones. They assume that the number of collocational ties in an essay indicate the amount of elaboration of the major ideas introduced by the writer.

To sum up, collocations receive particular emphasis in this study because automation of collocation is considered an essential aspect of language learning that has to be acquired to achieve near native like proficiency. Teachers have to be aware that there are several factors that affect internalizing and using L2 collocations: learner's language proficiency, frequent exposure to and use of the language, and effect of first language. Such factors will be discussed in detail in the section below.

<center>The Problematic Nature of Collocations</center>

McCarthy and Carter (2004) emphasize that native speakers have a good intuitive knowledge of typical collocations because such knowledge is based on years of experience and exposure to the regular co-occurrence of particular words. Given that collocability is language specific, it could be problematic for second language learners because it represents particular socio-cultural connotations and associations. In other words, it is not governed by rules but by conventions. Collocation behavior such as collocational mismatches is a major problem for L2 learners but they are not aware of the conventions that restrict word combinations and that not all semantically related words can be interchanged in all contexts (Martin, 1989).

Since errors in collocation are persistent in the writing of NNSs, who are not fully aware of the countless collocational combinations, research in the field of second language acquisition recognizes collocational knowledge as a crucial part of L2 competence. Awareness of the restrictions of the lexical co-occurrence can facilitate ESL/EFL students' ability to encode language. It also enables them to

produce semantically and grammatically accepted sentences (Nattinger, 1989). As the area of collocations is of prime importance in language learning and forms a serious problem to language learners, Aziz (1988) states that "the claim that the major problems the learner frequently encounters are predominantly lexical rather than grammatical is probably more apparent and valid in the area of collocation" (p. 60). Furthermore, Bonk (2000) agrees with Nattinger (1998) and states that collocational competence is essential for grammatical accuracy because it means less reliance on "creative construction" (para. 21) in grammar and lexis, and accordingly less processing load which results in more fluency.

Collocational competence and idiomaticity in language usage is dependent upon lexical knowledge. Native-like utterances mean the ability of the speaker/writer to choose the appropriate vocabulary for a specific social context and register. While appropriate use of idiomatic expressions gives the impression of language competence and fluency, lack or overuse of idioms renders a text to have a foreign flavor (Martin, 1989). Yue (1993) points out that one of the most salient problems that learners of English face is their failure to produce collocations in the proper order because they are not rule-governed and thus, these linguistic sequences do not follow a prearranged pattern. While native language speakers acquire them throughout the natural acquisition process, ESL/EFL learners need to be instructed and trained in producing them in the proper context. Tannen (1988) implies that fluency in foreign language is enhanced by "automation of collocation" (p. 113), which means that the more the learner is capable of discourse. The acquisition of appropriate collocations is a vital for language competence because it reflects deep knowledge of the target language (El-Khatab, 1984).

Acquisition and correct production of word combinations is a mark of an advanced level of proficiency in a language. As Lewis (1997) points out, "fluency is based on the acquisition of a large store of fixed or semi-fixed prefabricated items" (p. 15). Tyler (1994) also agrees that the correct usage of collocations contributes greatly to one's idiomaticity and native-likeness. While Taiwo (2004) sees lexical errors and grammatical errors as equally important, Mahmoud (2005) goes further and emphasizes that lexical errors are more critical because effective communication depends on the choice of words. Beginning and intermediate learners may not have processing capacity available to pay careful attention to how words are conventionally

related, which results in a complete avoidance of non-free companions of words. In addition, advanced L2 learners experience problems with low-frequency lexical items and restricted collocations. As Howarth (1998, p.162) points out,

> Learners are, understandably, generally unaware of the large number of clusters of partially overlapping collocations, which display complex semantic and collocational relationships. It is of course, not only learners who are unaware of this category: it is an unrecognized category in language pedagogy and little understood in lexicography.

Studies have identified several factors that may influence learners' performance in producing collocations. These factors include semantic fields, meaning boundaries, and collocational restrictions. Conceptual fields of a lexicon determine its semantic field, such as, color, kinship, and marital relations (Biskup, 1992). Bahns (1998) examined Polish and German EFL learners' performance in English collocations. He concludes that the wider the semantic field of a given lexical item, the more L1 interference errors it might cause. In addition, the more synonyms an item has, the more difficulties learners face in producing a restricted collocation, for example, "lead a bookshop" instead of "run a bookshop." Such conclusion coincides with Lennon (1998) also points out that L2 learners usually face problems in using high frequency verbs such as put, go, and take, because these verbs require special attention to their collocational environments, which leads to different degrees of difficulty for learners.

The second factor concerns the influence of learners' native language. Different languages have parallel fixed expressions that are syntactically and semantically similar. However, due to cultural differences, certain elements embedded in these expressions differ across languages. As a result, these similar yet different expressions may cause a negative transfer from learners' L1 (Palmer, 1991). Therefore, according to Hunt and Beglar (2005), when learners lack collocational knowledge, they depend extensively on their L1 as the only source and perform better in collocations that have L1 equivalents than those that do not. A number of researchers have tested second language learners' knowledge of lexical collocations with an emphasis on the role of L1 in acquiring L2 forms. Bacha (2002) and Hinker (2003) reviewed studies testing homogenous L1 groups of EFL learners on close and L1-L2 translation type items. All these studies used verb-object restricted collocations

as the basis for their tests. The results revealed that learners commit many errors in such tasks and transfer restricted collocations from L1 to L2 when they are not sure of the correct L2 form.

The third factor refers to individual learners' collocational competence. By comparing the writing texts of ESL/EFL learners and native speakers of English, Granger (1998) concludes that ESL/EFL learners demonstrated deficient knowledge of English collocations. Compared with their native speaker counterparts, Granger found that ESL/EFL who have a weak sense of the salience of collocation patterns tend to produce a low percentage of conventional collocations but a higher percentage of deviant combinations. Granger, therefore, concludes that most L2 learners have a huge gap between their receptive and productive knowledge of collocations.

In addition, research suggests that culture related knowledge affects collocational and lexical competence of L2 learners. Yu-Chih and Li-Yuch (2003) suggest that lack of cultural competence might be responsible for the learners' failure to acquire culturally marked collocations, in particular idioms, because their metaphorical meanings are highly connected with cultural connotations.

Due to insufficient knowledge of collocations, L2 learners may adopt certain strategies to produce collocations and thus commit certain types of errors. The first strategy is literal translation or approximate translation. This strategy is the most commonly used one among L2 learners because of learners' assumption that there is a one-to-one correspondence between L1 and L2. In addition, Holloway (2002) asserts that L1 transfer play a role in the production of L2 collocation to a great extent, especially when there is lexical deficiency. Mahmoud (2005) also supports this claim and points out that beginning and intermediate Arab-speaking students commit errors when producing collocations in English, especially lexical combinations. Results show that lexical errors result from inter-lingual transfer from Arabic and indicate that L2 learners depend on inter-lingual and intra-lingual strategies to facilitate learning and to compensate for their linguistic deficiency. Such strategies help in the case of perceived linguistic similarities but could lead to problems in the case of differences.

The second strategy is use of synonymy. Students tend to overuse synonyms as a strategy in solving L2 lexical problems because they fail to provide the appropriate items of which they have passive knowledge. Consequently, they change

the intended meaning of the collocations. Although resorting to synonymy might be intuitively appealing, without appropriate collocation information of the synonyms they are using, learners frequently produce unidiomatic collocations (Fraghal & Obiedat, 1995).

The third strategy often used by L2 learners is paraphrasing, which is related to the use of synonymy to some extent. Learners may substitute the target item with a synonym and use paraphrasing to express the target collocation with which they are not familiar. A study on the use of synonyms by Arabic EFL learners conducted by Fraghal and Obiedat (1995) revealed that the subjects' heavy reliance on the open choice principle for item selection led to deviant and incorrect collocations. Thus, the researchers concluded that paraphrasing is used as an "escape-hatch" (p. 317) to assist communication, and the more collocations learners acquire, the fewer paraphrases they use in their L2 production.

Huang (2001) adds other strategies that are frequently adopted by L2 learners such as analogies and repetition. She reports that Howarth (1998) examined of the errors in a corpus of non-native writers and found that L2 writers created collocations based on familiar L1 collocations. She studied the use of cohesive devices by college Chinese students and found that intermediate level Chinese students tended to use a limited number of collocations repeatedly, such as the combination of "very" with a variety of adjectives. She stresses that repetition is favored when L2 learners do not possess sufficient knowledge of collocations.

To summarize, collocation is the tendency of words to co-exist. At its simplest level, it is a predictable association of words that naturally fall together in a certain context. However, on a more idiomatic level, it demands that one word is used rather than another in a particular context, and this idiomatic use often defies any obvious logic and is thus very difficult for non-native speakers to predict. The learners' tendency to resort to literal translation or approximate translation from L1 is the most commonly used strategy for L2 learners because of the assumption that there is one-to-one correspondence between L1 and L2 and, most importantly, it is a strategy used to compensate for language deficiency. The learners' tendency to use high-frequency words to substitute for target lexical items is the second most used strategy among L2 learners. It reveals learners may not be aware of the collocations' restrictions and are confused by the different collocates of a particular word. Overall, collocation

problems can be attributed generally to language deficiency and the unawareness of the semantic range and restrictions of the English lexicon. This problem may be attributed to the learners' habit of learning English vocabulary as isolated words. To overcome such critical problem, teachers and students must be aware that learning L2 vocabulary involves learning its cultural connotations, semantic fields, and collocational restrictions. Such strategies allow learners to raise their language competence to an appropriate level for effective communication and language use.

<div align="center">Lexical Cohesion and Vocabulary</div>

Investigations into L2 texts have found that in large-scale testing and university-level placement tests of student essays, syntactic and lexical simplicity is often considered to be a severe handicap at the academic level and that essay raters always point out simple lexical and grammatical constructions as major reasons for reduced ratings (Read, 2000). Such a claim is supported by a number of researchers who found that academic texts written by non-native speakers are marked by limited and simple lexical word choice, high frequency of everyday vocabulary, and lexical as well as grammatical constructions that are more prevalent in spoken and conversational discourse. This, consequently, results in vague and less sophisticated prose in comparison to that of native speakers (Palmer, 1996). The importance of studying and identifying the grammatical and lexical features of L2 essays, according to Hinkel (2003), can contribute to developing an L2 syllabus that caters to the academic needs of L2 students.

In the light of many studies of lexical features in academic L2 texts, Rygiel (2005) emphasizes the potential value of explicit vocabulary teaching of words to improve students' lexical knowledge. Rygiel contends that L2 teachers do no pay enough attention to words in composition courses, and this lack of attention results in reading and writing deficiencies. Rygiel argues that in reading, L2 learners usually demonstrate lack of understanding of the meaning of words in context and lack of sensitivity to multiple word meanings. Consequently, their writing is characterized by incorrect, ambiguous, loose, inappropriate, and ineffective choice of words. He further asserts that L2 learners have to be able to identify the denotations and connotations of the words they read in order to determine the intended message in a particular context. Finally, Rygiel claims that L2 learners have to be familiar with

semantic relations of words such as synonymy, hyponymy, polysemy, and antonymy in order to be able to recognize stylistic variations and the richness of lexical items, because the ability to identify such vocabulary relations contribute to the cohesion of a discourse.

Lexical cohesion is a very important topic for language teachers, related as it is to vocabulary, because lexical errors tend to impede comprehension more than grammatical errors. The use of synonyms and near synonyms, general nouns, and collocations are features of a good text, but they are unfortunately frequently absent from the language-learning syllabus. In addition, it is only through authentic texts that language learners may familiarize themselves with these lexical cohesion devices (Bacha, 2002).

We know that vocabulary is acquired in incremental stages, as the learner moves from clarifying the fuzzy boundaries of lexical units to realizing their variations and roles in the greater discourse. Initially, the learner may gain a single sense of the word's meaning, perhaps remembering only the first few letters of the word. The word class may be noticed at this stage. Then, after a few more encounters, alternative meanings may be noticed, along with realization of the word's frequency of use, register constraints, and collocational behavior (Schmitt & Meara, 1997). In other words, lexical items are not either known or unknown to the learner. Instead, students have partial degrees of lexical knowledge that falls along a continuum, ranging from passive and receptive to active and productive language use. Thus, both incidental and explicit learning are useful strategies in vocabulary learning. Incidental learning comes from using language for communicative purposes or from extended exposure to comprehensible language input, but it is slow and gradual. Explicit learning is difficult, but is very useful for acquiring the most important words, for example, those that are required to meet the threshold that enables incidental learning 3,000 to 5,000 word families according to Nation and Waring, 1997.

Nation (1990) explains that L1 learners begin with labeling, and then move to categorizing, and then network building. From core meaning, they move on to exploring the word's boundaries, a process that continues into adulthood. L2 learners acquire core-meaning senses before more figurative senses. Although they also must learn word boundaries, L2 learners have the advantage of their existing world knowledge, yet their disadvantage is that they may initially have trouble

distinguishing between related words that are less common, for examples, job, career, and vocation. This confusion usually occurs because there is not a one-to-one correspondence in their language. In addition to knowing the meaning of a word, learners need to know morphological structure of English words. The study of morphology is crucial in L2 developing word knowledge because it allows L2 learners identify the basic form of words, and the meaning of different suffixes, and prefixes. This knowledge allows them to build up their L2 vocabulary and cope with new words encountered while reading.

In conclusion, analysis of L2 academic texts supports that claim that non-native speakers use simple syntactic and lexical features extensively and that their productive range of grammar and lexis is small, limited, and consists of constructions that are more prevalent in spoken discourse. Thus, in order to help L2 students meet required academic standards, they need to be explicitly taught the uses of advanced textual features of grammar and lexis. In other words, instruction needs to focus on expanding the learners' syntactic competence and lexical repertoire because without such instruction, students may not learn to differentiate between written and spoken discourse.

<center>The Role of Cohesion in L2 Comprehension</center>

Text cohesion relies on the interaction of various linguistic elements such as clause relations, vocabulary, and grammatical structures. For L2 learners, understanding and forming the relations between these elements can be difficult (Holland 2001), especially when the approach to language learning is bottom-up. Progressing from studying grammar and vocabulary in non-contextualized instances to understanding longer texts can be frustrating for the learner, with some learners developing anxiety towards reading (Holland, 2001; Rygiel, 2005).

The question is not only how to teach learners to recognize cohesion in a text, but also how to use it. For a while, a text may include multiple elements of cohesion. Addressing all of them and maintaining focus on the message may either intensify reading anxiety or alienate the students. The problem of getting through a vast amount of reading materials is relevant to many L2 college students. The issue of learning how to read effectively is also of importance in L2 learning because many L2 learners usually prefer translating word for word

The ability to construct the meaning of a written text requires a complex mix of different abilities, each somewhat dependent on the other. However, two main domains of knowledge are required for successful comprehension: linguistic and background knowledge. The combination of these two types of knowledge allows us to make inferences and understand the intended message of a particular text. In other words, we can go beyond the literal interpretation allowed by competence in the language, to make inferences related to our knowledge of the world (Read, 2000).

Since reading is an interactive process of communication, interaction between the writer and the reader is possible through the text. The text allows the writer to encode a particular message, and it is through the text that the reader gets the meaning of the message by decoding it. The importance of cohesion lies in the continuity it expresses between one part of the text and another. This continuity is necessary for the interpretation of text. Cohesion, therefore, provides the main thread of a text by showing that some entity or circumstance, some relevant features or arguments, continue from one moment to another in the semantic process as the meanings unfold. It creates the characteristic sense of a text.

The continuity expressed by cohesion does not only make a text interpretable but, also, provides it with its affective power. It enables the reader to supply all the missing items necessary for the interpretation of a text. In texts, especially in spoken texts, there are generally a lot of omissions and substitutions. This is because the interlocutors are in a direct, face-to-face interaction, and their mutual understanding is made easier by their facial expressions, gestures, and other linguistic and nonlinguistic contexts. However, in reading, the reader cannot appeal to the writer for the clarification of meaning. To conclude, cohesion plays an important role in the interpretation of text because it provides the basis for making predictions and building expectations while reading (Norment, 2002).

The major task of reading teachers is to develop efficient readers. One of the ways that the teacher can help students is to teach them how to use cohesive devices, particularly lexical cohesion, as "signposts" (Norment, 1995, p. 53) because these connectors function as textual markers that indicate to students what they should pay attention while reading. In the view of Halliday and Hasan (1976), the continuity that cohesive relations bring about is a "semantic continuity" (p. 66). This makes it possible for cohesive patterns to play an indispensable role in the processing of text

by a listener/ reader. It is therefore necessary to help our students identify different kinds of cohesive connectors that form the backbones of different types of text, because such devices in turn signal the organizational patterns of different types of text.

Nunan (1993) finds a high correlation between general reading ability as measured by standardized reading tests and the ability of pupils to identify cohesive relations, suggesting that the perception of cohesion is a significant factor in reading performance. He concludes that pupils having high scores on standardized reading tests have successfully perceived cohesive relationships in texts. Nunan stresses that that if L2 learners acquire the necessary vocabulary used in the central sentences of a text, then they should be able to work their way through the text. This could be achieved, for example, by selecting sentences that share a certain amount of repetition to ensure some lexical carryover from one sentence to another. Finding sentences with the same or closely related words will promote success in interpreting the sentences, and thus encourage further reading of the text.

Language comprehension is also an area where the effect of collocation competence has potential importance. Bonk (2002) stresses that quick top-down processing of a language would be problematic without knowledge of word combination conventions in a particular language. As he points out, access to this type of knowledge would reduce the amount of work a listener/reader has to do, since lexical access can occur without focused attention on all aspects of the sentence or speech. Having pointed out the close relation between cohesion and comprehension in general, a close investigation of the relation between vocabulary and reading comprehension would enhance and develop the discussion further.

Reading and Vocabulary

There is no clear evidence to show that there is a direct link between vocabulary and success in reading, but the relationship between the two has been strongly suggested by several researchers. Ellis (1994) found that the factor correlated mostly highly with comprehension is knowledge of word meaning. He suggests that since words are considered the "building blocks" (p. 65) of connected text, constructing text meaning depends, partially, on the success of searching for individual word meanings.

Celce-Murcia and Olshtain (2000), however, suggest that simply improving a reader's lexical knowledge is not sufficient because comprehension depends not only on vocabulary size but also on the automatic access of the words and their meanings in the memory. Adams (2001) supports such a position and argues that fluent readers automatically recognize most of the words they read because automatic lexical access decreases processing load and allows learners to construct meaning from text supports. Thus, good readers are good decoders of words and their meanings.

Rapid and accurate decoding of language is essential to reading, especially for L2 readers. Good readers know most of the words they encounter not by guessing from context or prior knowledge of the world, but by a kind of automatic recognition, that does not require any cognitive effort. This automaticity frees the minds of fluent readers of a language to think about and interpret what they are reading (Richards & Renandya, 2002). As mentioned earlier, in L2 research, a number of studies (e.g., Koda,1989; Laufer, 1989, 1992, 1996; West, Stanvoich, & Mitchell, 1993) have investigated the relationship between vocabulary size and academic reading comprehension. Based on the findings of these studies, researchers conclude that there is probably a strong association between the learner's breadth of vocabulary knowledge and his/her level of reading comprehension.

Given the fact that vocabulary is vital to language comprehension, Cummins (1979) states that in terms of vocabulary size, there is a threshold level below which the reader will be handicapped by a lack of comprehension, and above which the reader will be able to apply his or her reading strategies to help comprehension and ultimately achieve better results in reading and writing. Similarly, Laufer and Paribakhat (1998) claims that a threshold of 95% lexical coverage of a text is needed for minimum comprehension, which constitutes around 3,000 word families, or about 5,000 individual word forms. They confirm that explicit learning of 3,000 high frequency English words produces considerable positive effect on reading comprehension. Of course, this threshold merely indicates a minimum desirable level for effective comprehension of general academic texts.

In brief, vocabulary is a crucial aspect in language proficiency and provides a basis for how well learners speak, read, and write. Reading and vocabulary

complement each other. Sufficient vocabulary knowledge facilitates reading comprehension and makes it an enjoyable activity. Similarly, reading allows learners to meet words several times in different contexts and, thus, helps them to acquire more vocabulary items and familiarizes them with multiple meanings a word may have. In addition, reading acquaints learners with the rhetorical pattern a language has, which could help them to follow the writing patterns of the target language. To conclude, without sufficient lexical proficiency, learners often achieve less than their potential and may be discouraged from making use of the language opportunities around them.

<div align="center">The Role of Cohesion in Writing</div>

Early studies in contrastive rhetoric and second language writing have shown that the differences between non-native and native speakers' writing in terms of cohesion is closely related to linguistic and cultural differences such as thought patterns, writing organization, writing style, linguistic proficiency, and writers' awareness of the concept of cohesion (Kaplan & Palhina, 1982; Ostler, 1987). Many researchers criticize much of the early work in contrastive rhetoric and stress that a great deal of the work was intuitive rather than empirical and tended to focus on surface features of texts such as anaphoric reference that are incapable of explaining contrastive patterns in larger segments in discourse. Leki (1992) goes on to question the extent to which insights from contrastive rhetoric are applicable to pedagogy. While it can be helpful for students to be aware of differences in the ways in which their own language and English transform ideas into discourse, this awareness does not necessarily lead to improvements in students' writing. The real benefit of making learners intentionally aware of the differences between discourse patterns of their language and those of the target language is that it reassures learners that they do not suffer from individual defectiveness but that their deficiencies result from the differences between both languages.

Connections between sentences and ideas are possible because all texts have structure. This structure is created through an overall textual pattern, lexical signals, inter-clause relations, and lexical and grammatical cohesive links (Carson, 2001). However, recognizing this structure and the relations found within the text can be

problematic for L2 learners, and this negatively affects language acquisition. The ability to see how grammar and vocabulary add to the linking of sentences and ideas not only helps in their comprehension of the language, but also helps them to develop the ability to use the language in a more fluid way.

Studies carried out on English-writing problems of L1 Arabic non-native speakers showed that student writing lacks lexical variety, subordination and relies heavily on redundancy and co-ordination which does not add any new information to the text (Abisamra, 2003; Aziz, 1988, El-khatab, 1984; El-Shiyab, 1997; Bacha, 2002). These studies confirm that parallelism, co-ordination, and repetition characterize Arabic writing rhetoric and that is why at a certain stage of language development, learners who are not aware of the English rhetoric tend to use the rhetorical patterns in their L1 to construct L2 texts. Arab learners believe that since such devices enable them to achieve coherence in their L1 texts, they can also use them to achieve coherence in their L2 essays (Bacha, 2002).

Research on writing suggests that cohesive ties contribute heavily to writing quality and the use of cohesive ties varies according to the genres. Campbell (1998)) contends that although L2 students might structure their writing correctly, native speakers will not necessarily perceive the texts as being coherent. The studies on cohesion and writing that compared groups of ESL and native English writers are controversial because they reveal diverse results: First, there is no significant difference in the frequency of use of various cohesive devices. Second, ESL writers tend to use more cohesive devices than native speakers do. Finally, native English writers use repetition devices to connect ideas over considerable distance in a text, whereas ESL students tend to repeat ideas at shorter distances (Carrell, 1982, 1983; Freebody & Anderson, 1983; Francis, 1984; Enkvist, 1987; Glister, 1997; Hoey, 1991; Read, 1993).

Reading, Vocabulary, and Writing Quality

Although reading and writing research have progressed separately, their results echo each other. The close relation between reading and writing comes from the fact that reading builds knowledge of diverse kinds to use in writing and that writing reinforces such knowledge in a way that develops prior knowledge to facilitate reading. Reading and writing are considered communicative acts that

involve composing (Fakuade & vargs, 1992; Haberlandt, 1982; Hunt & Beglar, 2005; Hyland, 2003; McGingley, 1992).

Studies in L2 reading and writing have revealed that less skilled readers and writers appear to resort to the same strategies when reading and writing. Poor L2 readers tend to read locally, failing to link new and old information, and because they are unskilled in L2 text processing, they depend too much on bottom-up reading strategies to decode meaning. They, therefore, find difficulty in grasping the overall meaning or idea of the text they are reading. Similarly, poor L2 writers focus mainly on sentence level-grammar and lexis and overlook discourse coherence, which has been shown to be detrimental to the unity of a text. In contrast, good readers and writers focus on global coherence and broader concerns related to communication as well as on local coherence and sentence level discourse patterns that allow successful communication (Channell, 1981; Ferris & Hedgcock, 1998; Zamel, 1992, 1998).

A number of studies have shown that students' writing can accurately reveal information about their reading knowledge and writing quality. For both reading and writing, one must have knowledge of the subject matter, as well as linguistic knowledge and knowledge of conventions. The linguistic knowledge shared between reading and writing occurs in all areas: phonemic, orthographic, semantic, syntactic, and discourse structure knowledge (Yates, 1995; Wenjun, 2001).

Reading proficiency and appropriate lexical competency develop L2 writing quality. This is manifested by the fact that holistic assessment of ESL learners' writing is generally related to some form of vocabulary analysis. Scarcella (1984) found that lexical errors were rated as the most serious in EFL students' wiring by university professors. Vocabulary choice is a strong indicator of whether the writer has adopted the conventions of the relevant discourse community. Researchers found that second language learners perceive lack of vocabulary as the main factor affecting writing quality. Therefore, to succeed in academic settings, L2 learners need to gain productive written control of English vocabulary in order to be recognized as a member of the academic writing community (Paribakhat & Wesche, 1993).

To summarize, L2 students need to master the rhetorical aspects, discourse-level features of writing, and appropriate language proficiency in order to succeed in

academic contexts and develop coherent texts. The power of vocabulary comes from the fact that words allow us to speak, read, and write clearly and confidently. Reading is also of great importance in teaching the ESL learner because it provides content for discussion, a model for good English texts, and introduce words in different contexts.

Conclusion

The literature reviewed above stresses the importance of lexical devices in maintaining cohesive texts. The relation between reading and vocabulary on one hand and writing on the other hand was discussed briefly, though it was not the focus of the study to give an overall view of the connectedness between reading, vocabulary, and writing. The current study aims to examine the use of lexical devices in L2 Arab students' essays and the difficulties they might encounter when using lexical devices. The literature has emphasized the importance of developing sufficient vocabulary knowledge, awareness of the rhetorical and cultural context, and appropriate reading skills as a possible means of developing L2 writing skill. To comprehensively examine the use of lexical connectors in L2 writing, the following questions are addressed to guide and focus the study: a) Which lexical devices are used most frequently in L2 expository essays? b) Are these connectives used appropriately? c) What kind of difficulties do Arab students face in dealing with lexical devices, and whether these difficulties are systematic?

To sum up, this chapter has reviewed the literature on cohesion, and coherence, and lexical cohesion in particular. The relation between writing and vocabulary and reading was addressed to give an overall picture of the accumulative and development stages needed to master writing. Furthermore, the aims of the present study have been clarified in the context of the literature. The methodology and analytical framework in terms of which the main aims of the study are addressed will be explained and defined in chapter three.

CHAPTER THREE

METHODOLOGY

The current study attempts to examine how Arab students use lexical cohesive devices to create cohesive texts in their L2 English writing. In this chapter, the statement of the research problem, research design, and methodology are presented. Furthermore, the instructional context, the research procedures, and the sources for data collection are discussed

Statement of the Problem

Studies in contrastive rhetoric and second language writing have revealed that the differences between non-native and native speakers' writing in terms of cohesion is closely related to linguistic and cultural differences such as thought pattern, writing organization and style, language, and writer's perception of cohesion. In his significant study of the causes of difficulties in learning to write in English, Kaplan (1966) focused on the need to distinguish between "language bound" (p. 3) and "culture bound" (p. 3) writing problems. He emphasized that language-bound writing features can be explained, illustrated, and L2 students are easily able to acquire such discourse patterns. For example, in English discourse, reiterating the same point several times in a parallel fashion is not desirable and strongly discouraged. On other hand, culture-bound discourse patterns that are related to establishing and maintaining organizational pattern and developing ideational cohesion in appropriate ways are complex because L2 learners transfer preferred rhetorical patterns of their native languages into their second language writing discourse.

Leki (1992) further supports Kaplan's view and argues that it seems reasonable to assume that different cultures orient their discourse construction in different ways. She states that even different discourse communities within a single language, such as academic disciplines, have different writing conventions regarding sentence length, choice of vocabulary, and amount of metaphorical language accepted. Based on research in the areas of cohesion, coherence, and contrastive rhetoric reviewed in chapter 2, this study investigated Arab students' knowledge and use of lexical cohesion in their academic writing involving semantically related words

and collocationally related words, as discussed by Stotsky (1986), Hoey (1991), and Salkie (1995). The study investigated how Arab students used lexical devices to create local cohesion in their expository essays. It was hypothesized that intermediate and advanced Arab learners of English still faced difficulties in their writing resulting from insufficient knowledge of lexical cohesion. These difficulties were manifested in the form of lack of connector variety, inappropriate use of connectors, long distance between cohesive ties in a chain, and uncertain inference that could lead to several interpretations. To test this hypothesis, the study specifically addressed the following research question: How do Arab L2 learners use cohesive lexical deceives to create local cohesion in their expository essays? It also addressed the following sub-questions: a) Which lexical devices are used most frequently in Arab students' L2 expository writing? b) Are these connectives used appropriately? c) What kind of difficulties do Arab students encounter in dealing with lexical cohesion? Are these difficulties systematic?

In comparative studies, researchers have found that when Arabic speakers write in English, they tend to use fewer paragraphs and less rhetorical connectedness, as well as a looser, less formal, organizational structure and fewer types of conjunctive elements, favoring coordinate rather than subordinate clauses. Many researchers in L2 writing and contrastive rhetoric believe that Arab L2 learners transfer discourse patterns and textual features from their L1 rhetoric. Studies carried out on L1 Arabic speakers' English-writing problems, for instance, have shown that the texts lack lexical variety and subordination, and students tend to have a heavy reliance on redundancy that does not add any new information to the text (Aziz, 1988; Ostler, 1987). One of the discourse aspects that Arab students find difficult to cope with in their academic texts is the use of cohesive devices that form meaningful connections between and among sentences over large stretches of text, such as lexical cohesion.

Sa'adeddin and Akram (1989) also emphasize that English texts written by Arab students rely mainly on theme and rheme repetition patterns for the purpose of rhetorical persuasion. They point out that such repetition is frequently employed in parallel constructions and might create an impression that English essays written by Arab students lack progression. They conclude that ESL/EFL writing of Arab students frequently displays persuasion devices that are considered inappropriate in English

academic discourse and seem to be unlike the persuasive devices in the essays of native speakers of English.

To answer the main research question as well as the sub-questions, quantitative analysis of cohesion in Arab ESL learners' academic writing was conducted, focusing on the subjects' use of local cohesive devices in writing assignments. The theoretical framework developed for this study was based on the models proposed by Stotsky (1986), Hoey (1991), and Salkie (1995). The examination of the cohesion devices, in this study, was limited to the category of lexical cohesion, which was further divided into eight subcategories, from which cohesive ties were quantified and compared. The subcategories investigated were the following: repetition, reference, synonymy, inclusion, hyponymy, antonymy, derivations/inflections, and collocations. It is worth mentioning that the study, in particular, investigated the use of repetition and collocations in the students' essays because of their importance in maintaining text cohesion. This was guided by several previous research studies that confirmed that L2 Arab learners tend to overuse repetition as a strategy to establish cohesion in their writing and, also, avoid using collocations because of deficient collocational competence.

Methodology

The study examined the writing of 40 students enrolled in advanced academic writing classes, COM 204, at the American University of Sharjah (AUS). The texts were analyzed quantitatively to identify how frequently Arab learners used different lexical devices in their essays and to ascertain whether some types of lexical errors appeared systematically in the students' texts.

Participants

The study involved 40 Arab students in an advanced academic writing course (COM 204) at AUS. They were a mix of males and females, with ages ranging from 19 to 22 years old. All students at AUS are required to take advanced English academic writing as a mandatory course for the completion of their English requirement, regardless of their majors. Since the focus of the study was to concentrate on the use of lexical cohesive devices by Arab students in expository

essays, age, gender and major were not influencing variables in the study. All participants had at least eleven years of English instruction in school prior to their acceptance into the university, and had to receive a minimum score of 500 on the TOEFL exam before being enrolled in their majors.

Academic writing courses at AUS join the practices of reading, reflection, and writing as an approach to the teaching of academic writing. Students enrolled in writing courses are expected to develop critical reading, analytical skills, learn to articulate, and structure arguments. The writing courses are designed to help students to write clear, correct, and effective essays through engaging them in frequent writing assignments. Elements of effective writing are always examined, and students are expected to utilize their teachers' instruction and responses to their essays to further develop, and enhance their writing style. Com 204 offers students who have mastered the fundamentals of the critical essay an opportunity to develop sophisticated reasoning processes, complex organizational strategies, as well as research strategies, and editing techniques that meet the standards of academic writing. To achieve these tasks, advanced academic writing course requires students to write a research paper on topics of their own choice, find a research problem, develop research questions, and construct a convincing and well-developed argument.

Materials

Two professors teaching COM 204 provided the writing samples. The data consisted of 40 writing samples from take-home and in-class essays. The subjects were asked to analyze articles following specific given guidelines (see Appendix A). The students had to respond to several writing prompts about nationalism, grading systems, grading and self-esteem, and teaching methods. Instructions for completing the composition tasks were the same for all the subjects and were provided in writing to each subject. The writing prompts were designed to elicit writing in the rhetorical mode of exposition with the purpose of convincing and informing an unspecified general audience. The following prompt is a sample of the topics students received. It instructed them to respond to the article provided and analyze the effect of technology on nationalism as discussed in the article verifying the author's claims and indicating his viewpoints:

Read the attached article entitled "The end of nationalism" and write its critique following "guidelines for writing critiques" practiced in class (introduction, summary, analysis, and response). Your critique should pay special attention to the validity of the arguments and significance of the evidence used by the author to support his claim. Your own arguments should avoid logical fallacies. Your summary of the article should be brief but should include all of the author's main points. The critique should be around 750 words and include at least three quotes. Your are allowed to use "tools" to search for definitions of words you do not understand, or the thesaurus to look for synonyms; but remember that your time is limited to 2 hours. Make sure you write your name, ID, and number of your pages.

Expository rhetorical mode was selected because of its appropriateness to the university setting because purely descriptive or narrative essays are rarely required of students in American universities (Scarcella, 1984). Besides, selecting essays written in response to different prompts had the goal of reducing the effects of individual prompts on the quality of writing as Carlson (1988) emphasized.

With regard to contexts of writing, the data consisted of twenty-three in-class essays where the subjects did their writing in class under test conditions, and seventeen take- home essays where students wrote under natural conditions. Time spent writing the take-home essays was not controlled to obtain a natural sample to approximate conditions in which these students normally write their assignments. As for the in-class essays, students were asked to type their essays on computers within a two-hour timeframe. The aim of including take-home and in-class writing samples was to ensure data reliability and to accommodate all circumstances in which students are asked to produce written texts. All students were encouraged to use thesauruses and a spelling and grammar checker to edit their writing. The students were not told that their use of lexical collocations would be studied. Had they been told, they might have underused or overused such lexical connectives.

Data Analysis

To determine the frequency of occurrence of the lexical types in the students' writing, the number of words in each essay was counted followed by a count of the

occurrences of different lexical types. The percentage rate of each lexical type was calculated separately for detailed analysis. Two instruments were used to analyze the data in the study:

1. A cohesive model, based on the work of Stotsky (1986), Hoey (1991), and Salkie (1995), was developed to determine the frequency of occurrences , appropriate, and inappropriate use of different lexical connectors in L2 expository texts (see Appendix B and C).

2. MS Excel was used to calculate the frequency of occurrence of different lexical types, the average number of sentences in the essays, average number of words per sentence, and average number of correct and incorrect use of different lexical types.

The framework for identifying local lexical ties consisted of two categories, semantically related words and collocationally related words (Stotsky, 1986; Hoey, 1991; Salkie, 1995). Although the study was inspired by the work of Halliday and Hasan (1976), it did not follow their model because their framework was developed for the analysis of only conversation discourse as pointed out in chapter two. In addition, their scheme did not account clearly and completely for all types of lexical cohesion. Furthermore, the subcategories of collocations were not clearly defined. For example, it was not clear from Halliday and Hasan's explanations of collocational cohesion why antonymous relationships were collocational whereas synonymous ones were notespecially in cases where there were no referential relations between the two synonyms (Stotsky, 1986).

The analysis of cohesion in academic expository essays focused on how Arab students used lexical connectives to create local cohesion in their essays. The texts were examined for appropriate and inappropriate use of repetition, reference, derivation/inflection, synonymy, inclusion, antonymy, and collocation. The aim of the quantitative analysis of different cohesive ties was to investigate appropriate and inappropriate use of different cohesive connectors, identify errors, and extract typical cohesive errors for further analysis. Analysis of such errors revealed the strategies Arab students employed to deal with lexical problems. An understanding of such strategies illuminated appropriate approaches for teaching L2 writing and vocabulary.

For cohesion analysis, a table was prepared consisting of separate columns to indicate number of sentences, number of words in a sentence, lexical types,

presupposed items, and number of corresponding sentences, correct use and incorrect use (see Appendix D). Each cohesive item in a given sentence was entered in the appropriate column on a line corresponding numerically to that sentence. To sum up, this chapter identified the framework of the study and the rationale for the constructed model based on Stotsky, Hoey, and Salkie's paradigms. The materials, procedures, and methods for analysis were discussed with reference to the main aim of the study and related to earlier research.

CHAPTER FOUR

DATA ANALYSIS AND DISCUSSION

Chapter four presents the interpretation of the sample texts analyzed followed by a discussion and a summary. Further details of the data are given in the appendix and will be mentioned where appropriate. The findings are presented to test the hypothesis, research question, and subquestions raised in chapter three.

The purpose of this preliminary study was to determine how Arab learners used English lexical devices to develop coherent expository essays and the difficulties they faced when using these devices. Analysis of the students' errors may help language teachers take appropriate pedagogical procedures to deal with such errors in students' essays. It was hypothesized that intermediate and advanced L2 writing demonstrate weak lexical cohesion due to lack of connector variety, inappropriate use of connectors, long distance between cohesive ties in a chain, and uncertain inference that could lead to several interpretations. The data were analyzed quantitatively by using two sets of instruments, the cohesive scale adapted from Stotsky (1986), Hoey (1991) and Salkie (1995) and MS Excel.

Results and Findings

This section serves to illustrate the application of the framework by presenting sample analyses of the texts. Some of the students' samples were reproduced in their original form without any correction. The analysis of cohesion in this study focused on how Arab students used cohesive devices in their expository writing. The results were presented separately in terms of repetition, reference, synonymy, hyponymy, antonymy, inclusion, derivations/inflections, and collocation. A summary of these parameters was presented in Table 1 below and Figure A. Quantification of each of these devices was reported in detail. The results were analyzed with reference to these two subquestions:

    a) Which lexical devices were used most frequently in Arab students' expository essays?

    b) Were these connectives used appropriately? These two criteria were discussed for each lexical type.

Table 1

Numbers and Percentages of Correct and Incorrect Occurrences for All Lexical Types

Lexical Types	All		Correct		Incorrect	
	# Occurrences	%	# Occurrences	%	# Occurrences	%
Repetition	1,603	45.0	1,497	93.3	106	6.6
Reference	625	17.5	409	64.9	216	34.5
Collection	568	15.9	435	76.5	133	23.4
Derivations/ Inflections	296	11.1	371	93.6	25	6.7
Synonymy	155	4.3	136	87.7	17	10.9
Hyponymy	154	4.3	148	96.1	6	3.8
Antonymy	61	1.7	58	95.0	3	4.9
Total	3,560	100	3,054	85.7	506	13.2

Note: Total number of content words in all essays is 17,849

Correct Usage of Lexical Types

Repetition

Among the 40 essays that were analyzed, there was a total of 1,603 instances of repetition, which constituted about 45.0% of the total lexical types that occurred in the study. Of those instances, there were 1,497 that were correctly used. This accounted for 93.3% of the total number of occurrences of repetition, and 50% of total correct lexical types found (see Figure A). The use of the same word or phrase as a lexical cohesive tie was examined in the writing samples. The subjects in the study tended to use exact repetitions in the essays more often than paraphrases. The predominant preference of exact repetition reveals that the subjects favored lexical repetition, perhaps, because it is a simpler means of maintaining lexical cohesion than other cohesive devices, such as synonymy. The findings are compatible with that of other researchers who found that Chinese students tend to rely on lexical repetition mainly for textual cohesion (Connor & Johns, 1990; Duin & Graves 1987; Enkvist, 1987).

Figure A

Percentages of Correct Usage of Different Lexical Types
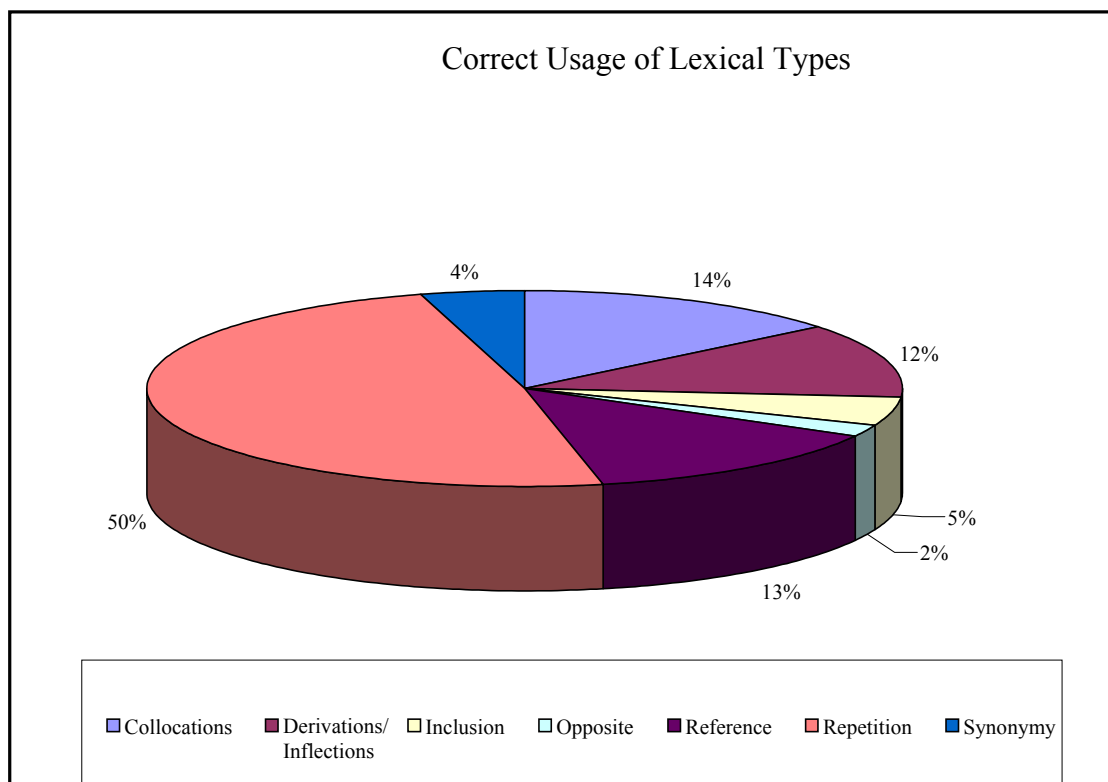
When used correctly, repetition serves a twofold purpose: First, to emphasize the importance of a particular proposition, and second, to establish cohesion on the structural and semantic levels. At the structural level, lexical repetition creates the sense that the ideas presented in different sentences are related, which results in building levels of cohesion within the text. At the semantic level, as Reynolds (2001) points out, appropriate use of repetition indicates the writer's ability to expand upon his/her ideas and relate new with old information. Hoey (1991) develops this idea further and states that when repetition is used for emphasis, it has a paradigmatic function rather than a syntagmatic one.

The samples in this study illustrate well Hoey's view that lexical repetition is the principle means of marking text cohesion. Although this study did not investigate the relation between writing quality and cohesion, it is noteworthy to mention in this context that the findings of several studies on the relation between use of repetition and writing quality are conflicting, as pointed out in chapter two. In addition, analysis

of the use of cohesion in expository essays reveals the importance of repeated segments in the textual organization of the text.

However, analysis showed that repetition was not used so much to emphasize the importance of propositions, as it was to emphasize particular ideas within the text. For example, "technology" and "nationalism" were repeatedly used to emphasize the effect of technology on nationalism. The student wrote:

> Since these variables are not considered in technology, nationalism would be thrown away. The author discusses the benefits of the advanced technology and... It true that Palestinians were better-off due to technology…. The author believes that advanced technology would kill nationalism…. Palestinians were able to group again due to technology…. Referring to technology and specifically faxes to be the solution to the isolation of Palestinians due to Israel forces is oversimplifying the topic…. Yes, it may be true that it helped, but…. Almost technology have…. That internet would affect our nationalism, as he states, but is nationalism something that we can easily get rid of?…. Technology helped Palestinians, but to what extent was not mentioned, and Internet would affect nationalism.

Here, nationalism and technology were repeated several times to emphasize the writer's point of view regarding the effect of technology on nationalism.

Furthermore, "grade" and "grading" were repeated several times to indicate the effect of the grades on the students' performance. The student wrote:

> Lean discusses, with the help of examples, how grades are not a proper way of evaluating a students capability, Lean mentions the irregularity of the grading scale and explains how grades vary with different professors…. He distinguishes between " 'earing' and 'deserving'" a grade and "giving" a grade…. Simultaneously clearing out the common misconseption that student "earn" a grade…. He concludes his essay by giving a possible alternative to grading…. When he gives his example about the mathematics professors grading the same paper, Lean forgets that professors grade differently…. Not everyone has had a bad experience with grading…. Also when Lean talks about grading not accomplishing its purpose, he doesnot mention what the purpose of grading actually is.… Students don't learn to be cynical because of grading…. Moreover, if may be helpful to ponder how the editor got such

classified information like the grade of every student…. Lean approached this topic by mentioning the pros and cons of grading.

Repetition helps readers to interact with the text. In most of the cases, the student writers used repetition for textual organization to grasp the readers' attention and help them to relate new information with old (Tannen, 1984, 1989). For instance, "technology" was repeated several times within the text. In one such case, technology was used to illustrate the significance of the use of technology for communication between Palestinians and Israelis across long distances:

Hockenberry argues that…technology is the killer. Hockenberry… asserts that although technology may have broke the borders and boundaries in the world… Technology as a form of globalization has immensely changed… He states that during the intifada, Israelis tried to isolate the Palestinians too but the technology provided had helped the Palestinians…. However, Hockenberry states, this technology have provided the chance to the Israelis.... He then argues that technology has invaded most of the countries.

Such types of examples that were prevalent throughout the essays revealed that the use of repetition was very common in academic texts written by these 40 Arab students and served multiple functions. Besides being used to facilitate textual organization, it was used to reinforce particular ideas to enhance interaction between the reader and the writer.

Reference

There was a total of 625 instances of references, which constituted about 17.5% of the total lexical types that occurred. Of those instances, 409 were correctly used. This accounted for 64.9% of the total number of occurrences of references, and 13% of the total correctly used lexical types.

Third person singular and plural pronouns, she, he, they, himself, their, his, themselves, them, and it, serve as markers of reference to persons and objects away from direct scope of the writer's view (Biber, 1988). These pronouns are common in narrative and expository texts and serve as text-referential cohesive devices. Third person pronouns are preferred in academic essays because they demonstrate formality, detachment, and objectivity in academic discourse and help to develop and maintain a text's referential structure (Hinkel, 2003; McCarthy, 1991). This is

illustrated in the following excerpt, where the student used third person singular pronoun to refer to the writer, Hockenberry:

> The reason why he disagrees is because <u>he</u> believes that exposure to a certain language can lead to students acquiring it… The authors' claim has no proven evidence making <u>his</u> argument a non-sequitor one.... <u>His</u> further misuse of persuasive strategies only makes <u>his</u> own argument to look weak…. The author tries dismissing the argument by saying that <u>he</u> is…. The author claims that the success of <u>his</u> method is being…. However <u>he</u> does not give any evidence of his success, therefore he might be misleading the reader…. <u>His</u> argument tends to give an oversimplified.

In addition, the student used third person plural pronoun "their" to refer to "people" across the sentences:

> How can categorizing people according to <u>their</u> believes and thoughts can be meaningless?.... Hockenberry is underestimating the value of the people's thoughts and ideas and he is misinterpreting <u>their</u> interaction… Hockenberry then correctly states that technology has helped the people to get out from <u>their</u> cocoons tremendously.

Moreover, the student used third person pronoun "it" several times to refer to "technology" and stressed its importance in people's lives. The student wrote:

> Technology is improving our life styles, but thus <u>it</u> is creating…. Considering technology as a revolution, the author thinks <u>it</u> broke and is braking down barriers that were unbreakable…. Technology can be considered as a discovery that changed people's lives but most importantly <u>it</u> changed people's thoughts and minds…. Giving out the advantages of technology he then relates <u>it</u> to the disadvantages. The author finally argues on the critical changes technology brought to the global world and defined <u>it</u> as the digital revolution…. The author argues about technology…and claims that <u>it</u> was used to satisfy nationalistic purposes…. And that on the contrary of what some may think <u>it</u> does not eliminate nationalism <u>it</u> actually fuels nationalism.

In summary, the subjects in this study used third person pronouns to span several sentences and help the reader to identify the referential links across the sentences.

Synonymy, Hyponymy, and Antonymy

Since the categories of synonymy, hyponymy and antonymy are semantically related and constituted small number of examples in the data, they were discussed together in this section. Out of the total number of lexical types, there were 155 instances of synonymy. This constituted approximately 4.3% of all lexical types, of which 136 (87.7%) were correct. These correct instances accounted for 4% of all instances of correct lexical types (see Figure A).

Here synonymy is defined as words with equivalent or supposedly identical meaning. Carter (1987) notes that a synonymy "is essentially a bilateral or symmetrical sense relation in which more than one linguistic form can be used to have the same conceptual or propositional meaning" (p. 19). Students used synonymy to provide lexical variety and avoid the monotony of excessive use of repetition. For examples, the student used "author" as a synonym for John Hockenberry: "In 1995, John Hockenberry has published his article 'The End of Nationalism?' in the international journal of Worldpaper. The author explains…"

In another essay, "discovery" was used as a synonym for "invention": "Identity, national borders, as well as ethnical and religious barriers were all reduced by the invention of the internet… Technology can be considered as a discovery that changed…" In addition, "intifada" was used as a synonymy for "uprising": "To support his argument he gave an example of the Palestinian uprising and the Israeli officials dealt with the Palestinian intifada and controlled it by technology…" Furthermore, the student used "unified," "connected" and "joined" interchangeably: "Hockenberry claims that technology has unified nations together…. Hockenberry reports that there are lots of evidence leading to the fact of joined nations…one of the evident of nations being connected is when the Palestinians revolution rose…"

Also, the student used "view", "opinion," viewpoint," and "idea" as synonyms to emphasize the author's argument: "The article mainly consist of viewpoint of Hockenberry…. Although the author may be correct in raising the issue, he is opinion about …Hockenberry tries to explain his idea by…" The synonyms "method" and "approach" were used interchangeably to point out how teaching methods/approaches affect the learning process. The student wrote:

> Whilst traditional grammar translation method may not be the ideal method to
> teach English, to suggest as the author does, that the best method is to just

communicate with the students constitutes a gross oversimplification of the issue…. The author goes out of limb by claiming the success of communicative approach by citing the frequency and willingness with which the students attempt to communicate. Thus, though the author may be justified in criticizing the traditional approach of language learning he makes himself susceptible to justified criticism by over simplifying the issue and not providing enough evidence in support of his strong communicative method…

The results showed that the students were able to identify the relationships and categories between certain related words, specifically with relation to hyponyms. Hyponymy is defined as the relationship that exists between specific and general lexical items (Carter, 1987). Interestingly enough, it was found that inclusion occurred within the studied essays nearly as often as synonymy did; there were 154 instances of inclusion in total, accounting for 4.3% of all lexical types. Of these, 148 (96.1%) were correct, constituting 5% of all correct lexical types (see Figure A). As can be seen in Table 1 students were able to correctly identify hyponymy with considerably more frequency than with synonymy.

Instances of inclusion occurred when students were writing about a particular topic, which involved both broad concepts as well as narrow concepts related to it. While it was likely that such instances of inclusion were used at times to provide variety of word use, the study showed that it was possible that at times students used inclusion in cases they needed to address a topic in both a general and narrow sense. For example, the student stated: "In his article 'The end of nationalism?', originally published in Worldpaper in 1995, John Hockenberry claims that today's advanced technology is eliminating nationalism…The issue of electronic communication, especially CMC, is a hot topic these days." Here, the broader term "advanced technology," was used followed by the narrower term "electronic communication.

Moreover, the student used broader terms "digital technology" and "digital devices" followed by narrower terms "web," "internet," "fax," and "phones" to show the deep impact of technology on people's lives. The student wrote:

Digital technology has removed away nationalism that was practiced among people…Identifying that many citizens and groups used the internet in a way… Almost all the technologies have drawbacks especially in the case of the Internet.... The web has helped Israel in keeping an eye on them through

many <u>digital devices</u> such as <u>phones</u>, <u>faxes</u>, <u>satellite</u>…. He does not state how <u>internet</u> changes nations can and why they change. Why <u>internet</u> or <u>faxes</u> end nationalism?

Also, the specific words "internet forum," "chatting software," "Yahoo," "hotmail," "e-mail," and "pop up windows" were used as hyponyms to the more general word "internet": "Today, half billion people around the <u>internet</u> interact daily…. No one can control the advertisement bare on <u>hotmail</u> and <u>yahoo</u>…. Also, very few can avoid reading the <u>pop up windows</u> that appear in <u>free email</u>… while using the <u>internet forum</u> and cha with people everywhere using the <u>chatting software</u>…"

Of all the lexical types found, opposites occurred the least. There was a total of 61 instances of antonyms found during the course of the analysis, which constitute a mere 1.7% of all lexical types. Out of this total, 58 (95%) occurrences were correct, which were 2% of all the correct lexical types (see Figure A). It is possible that the nature of the topics did not allow for extensive use of antonyms.

According to Carter (1987), antonymy refers to "a notion of semantic opposition or unrelateness" (p.19). Students generally used opposites when addressing topics that involved varying or contrasting viewpoints. The student wrote: The student stated: "The author tries to create a <u>negative</u> view of professor Jones by stating that he is a 'well known traditionalist'…. Here, the author uses these words to create a <u>positive</u> image of his method…." Here the student used the opposites "positive" and "negative" to point out opposing views regarding different teaching methods.

Another example of the correct usage of opposites was where the student referred to "old teaching methods" in one sentence, and then referred to "modern teaching methods" in the following sentence: "Professor Jones complains about the and he prefers going back to the <u>old</u> <u>methods</u>. Jones also believes that <u>modern teaching</u> methods if we forgot the mistakes of the past we are going to repeat them."

In addition, the student used opposites correctly to indicate the opposing views regarding nationalism as "old" and "new". The student wrote "Moreover, Hockenberry views nationalism as <u>old</u> and restricting.... He believes that people showed consider nationalism from a <u>new</u> perspective." Also, in the same essay the student pointed out the opposing views regarding the effect of technology on national feelings, "foster," and "strengthen" as opposed to "weaken": "Free online

communication can <u>foster</u> nationalism not necessarily <u>weaken</u> it…. On the contrary, there so many online nationalistic websites…where people virtually gather to <u>strengthen</u> their common feelings…"

Moreover, the student used "pros" and "cons" correctly to indicate the effect of the grading system on students' performance: "It would have been better if Lean approached this topic by mentioning the <u>pros</u> and <u>cons</u> of grading. Then proving that there are more <u>cons</u> than <u>pros</u>…"

The limited use of synonymy, hyponymy, and antonymy as observed in the writings of Arab students supports Odlin's (1997) claim that second language learners with a limited range of vocabulary resort to repetition a great deal more than all the other lexical types to interact with readers and establish text cohesion.

Derivations and Inflections

There were 396 occurrences of derivation accounting for 11.1% of all lexical types. Of all the instances of derivation and inflections, 371 (93.6%) were correct and constituted 12% of total correct lexical types (see Figure A). Derivations and inflections were used to indicate the syntactic functions of the semantic units.

While inflection is the process of adding inflectional morphemes to a word to indicate grammatical information, such as, case, number, person, gender, tense, aspect, mode, or word class. Derivation is the process of creating new word from an existing one by simply changing the grammatical category, for example, changing a noun to a verb.

Derivations and inflections appear to be useful cohesive ties for related lexical items. In addition, they are a dominating feature of expository writing and provide several functions such as stylistic variations, precision, and conciseness in expressing ideas and views (Stotsky, 1986). Stotsky further stresses that the use of derivations and inflections indicate a lexical maturity and flexibility, which adds to the cohesive quality of a text.

The analysis showed that the most prevalent instances of derivations and inflections involved the use of "-ion," "-ing,", "-ism", and other grammatical information to indicate tense, aspect, person, and number. For example, the student used the inflections and derivatives of "idea" throughout the essay to establish a cohesive relation:

In the article, 'The End of Nationalism' Hockenberry argues that advanced technology have helped in shifting peoples <u>ideologies</u> away from … After that the author declares another model which was internet and gave us an <u>idea</u> about how it have helped in disregarding the borders between them… Nationalism is defined by some researchers as what combines a group of people that share the same faith, culture, thoughts, and <u>ideology</u>… nationalism is what makes his claim to be wrong; for people's shared <u>idea</u>…

In the following example, the student used the derivational and inflectional forms of "nation". The student wrote:

Technology as a form of globalization has immensely changed the meaning of <u>nationalism</u> today…. He then argues that the global <u>nations</u>…. The linkage between ideology and <u>national</u> borders…. No single <u>nation</u> in the world…. Hockenbery predicts that technology will enter the fields of politics to get rid of the <u>nationalistic</u> model…

The morphological analysis of the students' writing in this study revealed that the recognition of derived word families such as nation, national and nationalism, and nationalistic were the most prevalent. Most of the derivations that appeared in the writings were derivational suffixes that change words from one part of speech to another. It was assumed that students understand that these words are related and that affixes are applied to the same root to produce different parts of speech, and thus, they have a powerful tool for learning new words.

Collocations

This study revealed how Arab students used lexical connectors and collocations, in particular, to establish cohesion in academic writing. As presented in Table 1 and Figure A, of all the lexical types that were analyzed, there were 568 (15.9%) instances of collocations, of which 435 (76.5%) were correct. These correct instances accounted for 14% of all correct lexical types. Table 2 displays the numbers and percentages of correctly used lexical and grammatical collocations. The high percentage of the correct usage suggested that students achieved adequate mastery of the collocations they used.

Table 2

Numbers and Percentages of Correct Lexical and Grammatical Collocations

Collection Types	Total		Correct	
	# Occurrences	%	# Occurrences	%
Collections of Preposition	469	82.6	396	70
Open Collections	77	13.6	29	5
Phrasal Verbs	20	3.8	10	2

The three main categories that were identified during the analysis were collocations involving prepositions, open collocations, and phrasal verbs. The percentage of correct collocations involving prepositions was higher (70%) than that of the other two, phrasal verbs and open collocations. The category of correct phrasal verbs had the lowest percentage (2%), while the category of correct open collocations was slightly higher than that of phrasal verbs (5%). The results showed that collocations involving prepositions appeared to be the easiest to deal with, whereas phrasal verbs and open collocations were more challenging and created almost similar degrees of difficulty for learners.

A possible reason for these findings could be that the learners were exposed more to collocations involving prepositions, as these were easier for teachers to explain and for students to understand out of context. This was manifested in the high number of prepositional collocations that occurred in texts provided at the secondary level. Another possibility for the high percentage of correctly used collocations involving prepositions was positive language transfer from their native language. For example, the student used the prepositional collocation "agree with" which was a direct translation of *yuwaafiq ma* in Arabic: "I <u>agree</u> <u>with</u> the fact that internet would …" Table 3 below provides further examples that illustrate correctly used collocations of prepositions.

Table 3

Correct Usage of Collocations of Prepositions

- "The author discusses… how it <u>helped</u> Palestinians <u>to</u> group again…"
- "It is true that Palestinians …<u>due</u> <u>to</u> these technologies…"

- "He <u>refers</u> <u>to</u> the Palestinian uprising to support his idea."
- "He shows that… these Palestinians were <u>able</u> <u>to</u> group again"
- "<u>Referring</u> <u>to</u> technology… be the <u>solution</u> <u>to</u> the…"
- "I <u>agree</u> <u>with</u> the fact that internet would…"
- "And he didn't <u>relate</u> <u>to</u> any reliable source…"

The study focused on how students used lexical and grammatical collocations in their essays to establish cohesion. Grammatical collocations or collocations involving prepositions involve a combination of a lexical word with a grammatical word, such as aware of, whereas lexical collocations combine two lexical components, for example, evasive answer (Lewis, 1997).

While analysis of the data covered open collocations in general, it is worth noting that collocations involving adjectives and adverbs were almost non-existent. This may be because the use of adjectives and adverbs in texts requires a wide range of vocabulary that allows learners identify lexical sense relations and differentiate shades of meaning (Francis, 1994). Hinkel (2003) supports this claim and stresses that the minimal use of adjectives and adverbs in the students' essays could be attributed to limited syntactic and lexical knowledge. Table 4 shows instances of correctly used open collocations.

Table 4

Correct Usage of Open Collocations

- "…on how people still <u>maintain</u> <u>values</u>…"
- "The author was successful to <u>address</u> this <u>issue</u>…"
- "He then <u>gives</u> again an <u>example</u>…"
- "The issue of electronic communication… is a <u>hot</u> <u>topic</u>…"
- "…this new booming technology is … scrutiny for its <u>side</u> <u>effects</u>."
- "However… Palestinians … <u>took</u> <u>advantage</u> <u>of</u> the fax technology…"
- "He is right that it has provided many people… to <u>express</u> their…<u>ideas</u>…"

Since phrasal verbs do not exist in Arabic, the correctly produced instances in the data suggested that students acquired such idiomatic expressions through exposure to the language and explicit teaching. The limited occurrences of phrasal verbs in the

data may imply lack of collocational knowledge. In addition, because of the syntactic and semantic functions of the particles in English, phrasal verbs could be confusing to Arab learners of English (Read, 2000). Students tended to use one-word equivalents to compensate for their limited knowledge of collocations. The findings coincide with Farghal and Obiedat's (1995) claim that phrasal verbs have a more restricted context for their usage and, thus, could be easily avoided. They stress that avoidance is a strategy adopted frequently by L2 learners who lack sufficient vocabulary knowledge. Learners might develop a "natural tendency to avoid using what they do not properly understand and to prefer the more familiar one-word verb" (Dagut & Laufer, 1985, p. 78). Table 5 provides examples of correctly used phrasal verbs appeared in the students' essays.

Table 5

Correct Usage of Phrasal Verbs

- "I agree with that internet would affect our nationalism… we can easily get rid of?"
- "A nation can be declared by people… nationalism would be thrown away."
- "… although the author may be correct in bringing up the issue of nationalism…"
- "He also creates a false analogy… bring out our inborn abilities."
- The argument brought up by the author is of great importance, not only it is changing our Globalizing world,

To sum up, analysis of lexical cohesive revealed that students relied heavily on repetition to maintain text cohesion. Repetition was predominant in the students' essay because it was more transparent than and not as challenging as other word relations. Third person singular/plural pronouns were used extensively in the writing samples to span sentences and avoid unnecessary repetition. In addition, the use of third person pronouns helped writers develop referential ties necessary for text cohesion. Although there was a limited usage of semantically related words, such as synonymy, hyponymy, and antonymy in the data, the findings revealed that these categories served a twofold aim: First, to emphasize particular ideas by pointing out contrasting views, and second, provide lexical variety and show precision. Students used derivational and inflectional morphological constructions to show their mastery

and knowledge of word forms. They used inflections more frequently than derivations because indicating the grammatical functions of words is easier than changing their grammatical categories. Finally, the findings showed that students have achieved adequate mastery of the collocations they have used. The correct usage of lexical and grammatical collocations could be attributed to positive language transfer from Arabic, instructional input, and exposure to the language. It is noteworthy to indicate that the minimal usage of phrasal verbs and lexical collocation revealed that students need to extend their range of vocabulary knowledge to be able to these two categories in appropriate contexts to express their ideas clearly and precisely.

<div align="center">Incorrect Usage of Lexical Types</div>

The discussion of the data, in this section, is presented with reference to the following questions: What kind of difficulties did Arab students face when using lexical cohesion? And were these difficulties systematic? Recently, many researchers and language teachers are concerned with error analysis as well as its implications for teaching strategies related to vocabulary and collocations, particularly. Johns (1997), for instance, suggests that error analysis can be implemented to identify strategies which learners use in their language learning to find out causes of the errors and to obtain information on general difficulties in language learning as an aid to language teaching. It is essential, however, to point out that analysts need to be cautious when conducting an error analysis study because as James (1998) suggests, "Humans are prone not only to commit language errors themselves but also to err in their judgment of those errors committed by others" (p. 204).

The results provided direct answers to the previously mentioned subquestions about the difficulties students faced when using lexical devices and how systematic these difficulties were. Further examination of the errors would reveal the strategies L2 learners used to develop local coherence. Lexical errors presented in Table 1 accounted for 13% (506) of the total lexical occurrences. For consistency, the following discussion of errors followed their order of presentation in Table 1, rather than their importance in the data. Table 1 shows the numbers and percentages of lexical errors found in the data, they account for 13.2% (506) of the total lexical occurrences.

Errors in Repetition

There were 106 occurrences of incorrect repetition, which accounted for 6.6% of the total number of occurrences of repetition. These occurrences constituted 21%of incorrect lexical types (see Figure B).

Figure B

Percentages of Incorrect Usage of Different Lexical Types
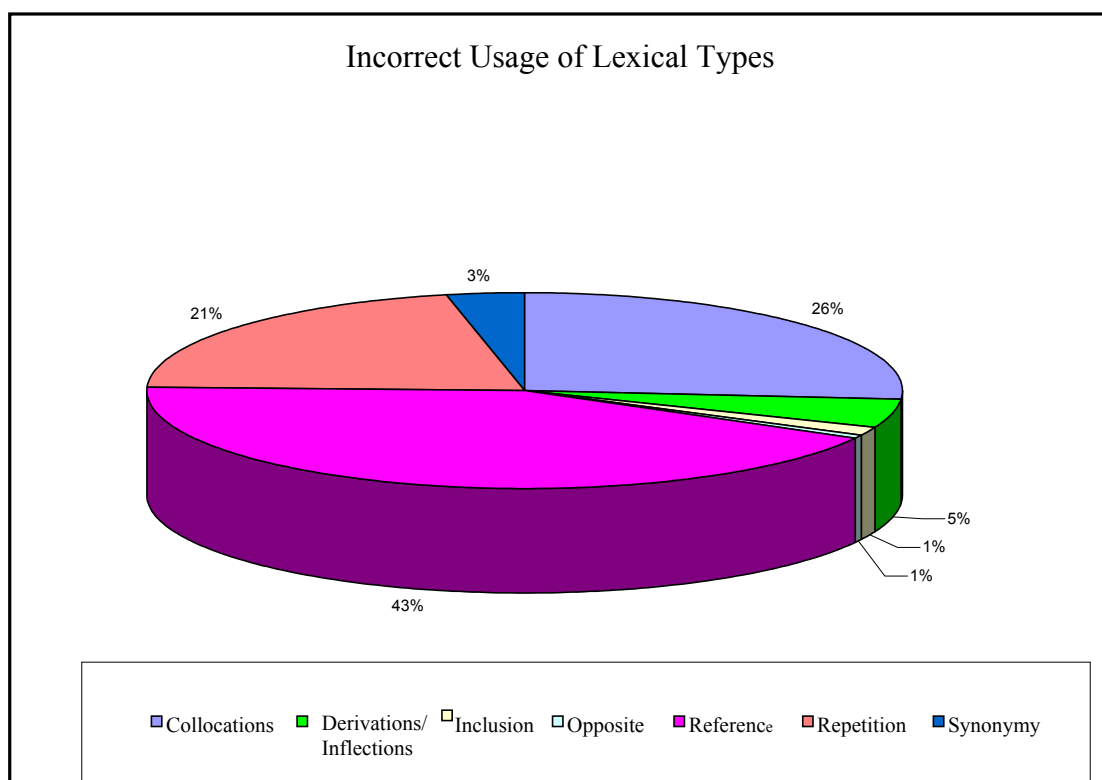
All errors in repetition involved redundant use of repetition. Although redundant repetition did not seriously obscure the meaning, it hindered the flow of ideas and developed feelings of monotony and boredom (Johns, 1997). The study showed that students tended to repeat almost exact phrases several times in the essays, which could be attributed mainly to limited vocabulary knowledge. The findings were consistent with Lennon's (1998) conclusion that lack of an appropriate lexical repertoire prevented students from employing varied words and expressions. Perhaps, limited by their lexical competence and inability to develop more ideas to support their views, students resorted to redundant repetition as an escape to fulfill the word count requirement as the prompts given to the students in this study asked them to

write a certain number of words. Examples of redundant use of repetition are provided in Table 6.

Table 6

Errors in Repetition

• "However, he has induced <u>his side of the argument</u> in the emotionally loaded terms used in order to strengthen <u>his side of the argument</u>…"
• "In one of the <u>examples</u>, Lean shows how grades are not precise, and uses the <u>examples</u> to the crest to try and convince his readers that grade should be abolished…"
• "He thinks that the quality of students and their work <u>should be evaluated</u>. However, it <u>should be evaluated</u> fairly..."
• "Lean dissusses, with the help of examples, how <u>grades</u> are not a proper way of evaluating a students capability, Lean mentions the irregularity of <u>grades</u> and of grading scale and explains how <u>grades</u> vary with different professors."
• "Also when Lean talks about <u>grading</u> not accomplishing its purpose, he does not mention what the purpose of <u>grading</u> actually is… and how <u>grading</u> can help students."
• "By using faxes, which were used daily or even each hour, the Palestinians reached to everyone everywhere either to <u>call for</u> strikes or to <u>call for</u> other sorts of protests by using faxes."
• "He then argues that the global nations, the internet <u>nations</u>, are just groups of people different <u>nations</u> who share the same ideas and same thoughts, but these <u>nations</u> are easily destroyable…"

Analysis of the essays showed that students included several ideas but they were not fully developed because they did not have sufficient lexical knowledge to allow them to express their ideas fluently and accurately. Thus, they resorted to repetition as a possible way of establishing cohesion and interacting with the reader (Haung, 2001). Another reason that could be attributed to the redundant use of repetition is that Arab students in this study may not have been aware of the conventions of academic writing, as they were accustomed to using redundant words in speech and, hence, brought this habit to formal writing (Wenjun, 2001). That is to say, L2 learners do not seem to be aware that one of the important features of English academic writing is to avoid redundancy and monotony. The following example illustrates redundant use of repetition as the student repeated the word "songs from their own home countries" unnecessarily: "Now a day's people have distorted away

from <u>national songs</u> and would barely listen to <u>songs from their own home</u> <u>counties</u>...." Here the student could have referred to national songs the second time by using "them," yet he chose to unnecessarily include the phrase "songs from their own home country." One reason for this could be that the student was aware of his limited vocabulary and so, in order to meet the required word limit, he chose to paraphrase the words instead of using a single pronoun. Most of these examples showed that limited by their vocabulary and word count requirement; it seemed that students tended to use repetition redundantly.

Errors in Reference

There were 216 instances of incorrect reference usage, which accounted for 34.5% of the total number of occurrences of reference. As shown in Figure B, this constituted 43% of all incorrect lexical types.

The nature of the errors found with respect to reference confirmed the previously stated hypothesis that intermediate and advanced L2 writing demonstrated weak lexical cohesion due to long distance between cohesive ties in a chain and uncertain inference. Biber (1988) points out that many L2 texts show uncertain inference ties because they do not provide precise specification. One example that illustrated such uncertain inference was where the student used "its": "In his article Hockenberry claims that there are many evidence leading to having <u>cyberspace</u> <u>technology</u> and <u>digital technology</u> breaking the borders of nations, and still has <u>its</u> beneficial points." Here, the reference "its" did not refer to a particular referent. In such a case, it could refer to cyberspace technology or to digital technology. Table 7 provides some examples of deviant usage of reference that occurred in the students' essays.

Table 7

Errors in Reference

• "Ending the article with a question leaves the <u>reader</u> with <u>their</u> own opinion, rather than the auther's conclusions."
• "Lean supports the abolishment of <u>grading</u> <u>systems</u>, while Moore thinks <u>its</u> essential to the process of education."

• "Finally he ends by stating that the ability to address to the world without having to show <u>your</u> passport or anything that defines <u>you</u> is a revolution."
• "How can he say that nationalism ends or it is ending? There is still the nationalism feeling in everyone in this world. There are nations who live based on their culture and tradition. Changing the state's border does not mean end of nationalism. Over time as we see in history most of the borders changed because of war. Technology for communicating is used in every war not just Palestine. <u>They</u> can not communicate or get information without using fax or internet."
• "Strong countries like the <u>United States</u> <u>have</u> "globalized" the world on <u>its</u> own way and for <u>its</u> own benefits… Millions of people spend their time chatting, these money transactions and economic agreements the author mentioned are for the good of the controlling countries."

Biber (1988) points out that one of the cohesion problems of L2 learners is that the distance between the cohesive items in a chain is often great. Arab students in this study had the same problem. The following excerpt illustrated the long distance between the cohesive items in a chain:

According to <u>John</u> wars had broken the boundaries of many countries and the exploration of technology hadn't join those nations rather it was a way to held news and plant flags. However this new revolution had destroyed the borders and identity of people in the world. However many people took advantages of the technology for example, the Israeli government had spread the Palestinians all over the world. Palestinians used faxes to contact with the POL out side the country. They connected each other easily and the Israeli government could not stop it. <u>He</u> stated that this technology will make people address the world without showing any passports because there will not be any borders in the world." In this example, the distance between the inference ties "he" and "John" is too great, with interruptions, such as the comments on the effect of technology on the Palestinians' lives, within the cohesive chain.

Errors in Derivations and Inflections

There were only 25 instances of incorrect derivations that accounted for 6.7% of all the derivations that appeared in the essays. These errors constituted 5% of the total incorrect lexical types.

Table 8

Errors in Derivations and Inflections

• "After the war between Palestine and <u>Israel</u>… <u>Israeli</u> did that using technology for communication."
• "The author seems to oversimplify the major problem… to create classrooms where students can express themselves and be more imaginative and <u>creatively</u>. Because I feel learning a second language is the complex mix of learning the grammar-translation method and also the method of communicating <u>creative</u> with others."
• "However, Hockenberry states, this technology have provided the chance to the Israelis and the Palestinians to <u>interact</u>… Hockenberry then writes that half a billion people today are <u>interacts</u> …."
• "This is a gross <u>simplification</u> of the problem… However, To state that the solution simply lies there is an <u>oversimplifies</u> of the issue…"
• "Strong countries like the United States have "globalized" the world on its own way and for its own benefits… Millions of people spend their time chatting, these money transactions and economic agreements the author mentioned are for the good of the <u>controlling</u> countries."
• "Yet the most important case is when the author attempts to narrow down the current situation by <u>offer</u> only two solutions to the reader. Obviously, in the real world the <u>situations</u> is much more complex and <u>alternate</u> solutions would be provided to offer different teaching <u>practises</u>."

The main errors that appeared in this category were wrong word forms that did not match the context in which they were used. For example, the student used "Israel" and "Palestine" instead of "Israelis" and "Palestinians": "The author talked a lot about the problem between <u>Israel</u> and <u>Palestine</u> those to different nations live in the same area…" Another example that revealed word class problem appeared where the student used a noun "creation" instead of instead of a participle "was created": "In 1987 Intifadah, which started in Gaza was only a continuation of the Israeli violence that started when the <u>creation</u> in 1948."

The results showed that students seemed to have difficulty in distinguishing between adjectives, adverbs, nouns and participles. In many cases, the common errors could be attributed to the learners' insensitivity to the grammatical restrictions and semantic boundaries between words. In addition, the limited occurrences of adjectives and adverbs suggested that, in general, they were not well known and mastered. Stotsky (1990) explains that adverbs and adjectives are used to show subtle shades of meaning and this may be why they are problematic for second language learners. Researchers, therefore, emphasize that a valuable aspect that could develop the

learners' vocabulary is studying word forms and their various possible affixes depending on the context (Stotsky, 1990).

Errors in Synonymy, Inclusion, and Antonymy

There were 17 instances of incorrect synonyms, 6 of inclusion, and 3 of antonyms. These errors amounted to 10.9%, 3.8%, and 4.9% respectively. Out of all incorrect lexical types, these errors constituted 3%, 1%, and 1% respectively as illustrated in Figure B.

Errors in synonymy occurred because, some times students were not aware that words related in meaning could not be interchanged in all contexts. Schmitt (2000) suggests that partial synonymy is sometimes responsible for the inappropriate choice of lexical items. University L2 students know many synonymous words, but not their complete range of synonymy in all contexts, or the connotations and denotations associated with them. That is to say, they might not be fully aware of the restrictions imposed on the use of synonymous words.

Instructed to avoid constant repetition, students resorted to these three categories of semantically related words to attain variety in their word choices. Consequently, they relied on thesauruses and bilingual dictionaries to show lexical diversity. Unfortunately, they were unaware of the possible negative impact of bilingual dictionaries and thesauruses, which glossed some words as synonyms and antonyms with little information about their connotations or context of use. Thus, L2 students used inappropriate synonyms and antonyms that led to non-idiomatic utterances (Sams, 2003).

In addition to insufficient word knowledge, lack of awareness of the English rhetorical academic patterns caused students to use synonyms redundantly. Since redundancy is favored in Arabic because it is a sign of literacy and fluency, students tended to use synonyms redundantly in English as well without being aware of the preferred English rhetorical patterns. This was illustrated in the following excerpt where the student used synonyms redundantly: "John is a correspondent for the NBC news and was a reporter there and the middle east reporter too argues and believes that…" Inappropriate use of synonymy was also evident in following excerpt where the student used "schemes" as a synonym for "method": "…lastly, the author uses an either/or reasoning by asking the readers if we go back to the traditional method of

teaching…. Thus, the author…does not provide enough evidence for changing to the communicative <u>scheme</u>."

Colloquial use of words may be another reason for inappropriate use of synonyms. Unaware of academic conventions, students tended to use conversational discourse in their writing. In essay (21), the student used "high tech" as a synonym for "advanced technology": "The author believes that <u>advanced technology</u>… He thinks that <u>high tech</u>…"

Table 9

Errors in Synonymy

• "The author does have a <u>valid </u>argument… The author has a <u>positive</u> argument but he undermines it by making use of unreasonable persuasive strategies…"
• "…it has affected our Nationalism <u>negatively</u> tremendously. Technology … has<u> harmfully</u> changed the meaning and definition of nationalism…"
• "…he asserts that the linkage between the<u> culture, religion</u>…. Nationalism is defined by some researchers as what combines a group of people that share the same <u>beliefs</u>, <u>backgrounds</u>, thoughts…"
• "…he prefers going back to the old <u>methods</u> … where there are only two possibilities either the old <u>schemes</u> or the new methods."
• "Strong countries like the United States have "globalized" the world on its own way and for its own benefits… Million of people spend their time chatting, these money transitions and economic agreements the author mentioned are for the good of the <u>controlling</u> countries."

Errors in the use of opposites could be attributed to the fact that the students in this study were not sensitive to the subtle differences in meaning between words. The study of antonyms is essential for L2 learners, as Rygiel (1978) stresses, because they reveal the specific denotative and connotative relations of words. An example of incorrect use of antonyms appeared where the students used "powerful" as an antonym for "breakable" without realizing that it does not suit this context: "His further misuse of persuasive strategies only makes his own argument look <u>breakable</u>.... The author goes on terms…to make his own argument look more <u>powerful</u>."

Table 10

Errors in Antonymy

• "Secondly, the author compares how <u>babies</u> learn their mother tongue language as they hear it from their mother to how <u>students</u> at schools learn a second language, by say "…in which exposure to natural language triggers the innate acquisitional processes".
• "What is happening on the economic level for the long run is that rich countries are becoming <u>richer</u> and the third world countries are becoming <u>inferiors</u>."

L2 learners are sometimes insensitive to the distinctions between closely related lexical items and, thus, they tend to use them interchangeably ignoring the connotations and denotations words usually imply in different contexts. In this study, analysis of inclusion showed that errors regarding inclusion occurred because of insufficient knowledge of lexical relations. For example, there is an inclusion relationship between "human" and "people" as used by the student: "Now all <u>people</u>… <u>Human</u> is doing…" In addition, the student used a general word "thesis" instead of a more specific one "argument." The student wrote: "This because begging the question is to assume as a proven fact the very <u>thesis</u> being argued, which would be the communicative method he encourages. Lastly, he is using the either/or reasoning approach as he is giving a choice between the two methods." It should be noted that in this example that a more specific term would have been preferred to give the reader a more explicit idea of the issues the student addressed. The data revealed that L2 writers are not always aware that words that are similar in meaning cannot be interchanged in all contexts. Due to insufficient exposure to the language and limited vocabulary knowledge, some L2 learners were more comfortable using general words than specific ones. The examples provided in Table 11 show that errors in inclusion could be attributed to limited knowledge of specific forms required for explicitness.

Table 11

Errors in Inclusion

• "Hockenberry claims that today's <u>advanced technology</u>. The issue of <u>technology</u> is a hot topic these days…"
• "Today in many countries, <u>humans</u> are discriminated according to their ethnicity and religion."

•	"The author bases his arguments on a Far-From-proven <u>possibility</u> and misguided the <u>audience</u>…"
•	"This a because begging the question is to assume as a proven fact the very <u>thesis</u> being argued, which would be the communicative method he encourages. Lastly, he is using the either/or reasoning approach as he is giving a choice between the two methods."

Errors in Collocation

Analysis of the subjects' collocational errors in each category suggested that there were different degrees of difficulty for the subjects. A total of 133 collocations (23.4%) were incorrect, which constituted 26% of all incorrect lexical types (see Figure B). In most cases, errors were due to the addition of an incorrect preposition, absence of a correct preposition, or wrong word choice. Table 12 displays the numbers and percentages of incorrect collocations that occurred in the essays.

The results indicated that collocations of prepositions created the least amount of difficulty with only 73 (15.6%) of them being incorrect. However, phrasal verbs and open collocations were the most challenging. There were 20 phrasal verbs of which half were incorrect. There was a total of 77 instances of open collocations, of which 48 (62.3%) were incorrect.

Table 12

Numbers and Percentages of Incorrect Lexical and Grammatical Collocations

Collection Types	Total		Incorrect	
	# Occurrences	%	# Occurrences	%
Collections of Preposition	469	82.6	73	15.0
Open Collections	77	13.0	48	62.3
Phrasal Verbs	20	3.8	10	50.0

In the collocations involving prepositions, errors might be attributed to the fact that nouns and verbs in English usually collocate with some particular prepositions and the knowledge of such nouns and verbs is incomplete without knowing which prepositions usually accompany them (Cutting, 2002; Taiwo, 2004).Violations of such collocations would mark a text as non-standard or odd. For example, the student

used "linger for" instead of "linger on." The student wrote: "He state's that we need not <u>linger fo</u>r Jones' arguments for he is a well-known traditionalist."

In addition to inappropriate choice of prepositions, negative transfer from Arabic led to redundant use of prepositions. Prepositions pose a great difficulty for L2 learners because there are various prepositions in English that have the same meaning. As a result, when students are not sure which preposition to use in a certain sentence, they often compare that sentence with its Arabic equivalent, and thus give a literal translation of that Arabic proposition (Aziz, 1988).

Furthermore, the analysis showed that some students were not aware of the functions of transitive and intransitive verbs in English. Thus, due to limited knowledge of English syntax, they resorted to direct translation from Arabic. To illustrate this, the student used "entered to" instead of "entered": "It is unfair that students are <u>entered to</u> universities...." In this case, the student translated an Arabic transitive verb, *yadkhul ila*, (verb + preposition) to English. Unfortunately, there are no simple techniques to distinguish between the transitive and intransitive verbs. As with many grammatical problems, it is necessary to learn what kind of structure follows each verb.

Another source of collocational errors would be the use of correct collocations in incorrect contexts. This error has to do with the breaking of mutual expectancies that hold between words (El-Shiyab, 1997; Sa'adden, 1989). It is not enough to know that certain words collocate, the context of the use of such words is equally important. For example, the student used "pride of" instead of "pride in." The student wrote: "Also it is very important for a person's self <u>pride of</u> the country they live in…."

Table 13

Errors in Collocations of Prepositions

• "In his essay "The Farce Called "Grading"," Arthur E. Lean <u>opposes against</u> grading systems… ."
• "He <u>refer for</u> the Palestinian uprising to support his idea."
• "Also it is very important towards a person's self <u>pride of</u> the country they live in…"
• "Does technology have <u>consequence</u> <u>upon</u> people's lives?"
• "The auther begs the question by saying that all we <u>need</u> observe the students to see how much more they <u>use</u> the english language <u>for</u> prove that he is write."

• "Yet I agree mostly with Professor Jones sinces I believe humans <u>learn for</u> test by the process of trial and error whereby they make mistakes and quietly learn from them."
• "They <u>provide</u> goods to us <u>in</u> a price that makes our manufacturers do suicide."
• "He claims that, the same way Palestinians used faxes to communicate and travel in the digital world; it should be <u>possible to</u> everyone to address the world without passport."
• "Hockenberry then uses the example of the Israeli <u>invasion on</u> Palestine and explains the Israeli's strategy of isolating themselves in cocoons away from their enemies."

Although the analysis revealed that only 0.28% of all lexical types were incorrect phrasal verbs, this may be due to the avoidance strategy. El-Shiyab (1997) stresses that although young native speakers of English learn phrasal verbs earlier than any other verbs, L2 learners do not master them under current teaching conditions for several reasons. In addition to the great number of phrasal verbs in English that have many shades of meaning that L2 learners are not aware of, L2 vocabulary is learnt in isolation not in chunks. Learning vocabulary items in isolation does not allow L2 learners to be aware of context of use and, thus, they tend to misuse them. Another reason for the incorrect use of phrasal verbs could be that the use of particles with certain verbs is based on convention rather than rule. For example, the particle in a phrasal verb may have some kind of direction but may have a meaning that is not related to direction at all. For instance, the preposition "back" and "up" suggest direction, yet in "back up," they acquire an entirely different meaning. Moreover, because the use of certain particles with certain verbs is unpredictable and L2 learners need to know the English conventions. Often, they are more likely to avoid using phrasal verbs in the written or spoken discourse.

Possibly one of the main reasons behind errors in phrasal verb use in this study was that students attempted to use phrasal verbs in wrong contexts. This was illustrated where the student used the phrasal verb "put off," which is colloquial, instead of "halted" which would have been closer to the student's meaning: "We all know, the have <u>put off</u> the Intifada using there security checkpoints and cocoons." Table 14 provides some examples of deviant usage of phrasal verbs.

Table 14

Errors in Phrasal Verbs

• "Nationalism is the base on what a country <u>stand for</u> and how strong…"
• "The former NBC news correspondent, and a news-reporter for the ABC news, believes that technological revolutions frees people from time, place and <u>knock down</u> obstacles such as borders."
• "We all know, the have <u>put off</u> the Intifada using there security…"
• "…although the author may be correct in <u>bringing of</u> the issue of nationalism…"
• "The author believes that we should have classrooms where exposure to natural language <u>sets about</u> innate acquisitional processes."
• "The auther has successfully <u>put for</u> his opinions through this argument..."
• "… importance technology <u>brought in</u> braking political and ethnical barriers."

In the case of open collocations, errors occurred frequently because of wrong word choice, particularly with nouns and verbs. This could explained by the fact that in English, the unacceptability of some combinations is not necessarily based on compatibility in meanings of individual words, but on convention as pointed out before. Accordingly, learners who are not be aware of these conventions may produce unacceptable combinations (Sussex, 1996). For instance, the student used "brake…shields" instead of "break…isolation": "He then argues that technology has invaded most of the countries and that it had made major changes but still had helped them to <u>brake</u> their <u>shields</u>." In addition, in another essay the student did not know whether a lexical word is complete in itself or whether it requires another word to complete its meaning: "People who are emigrated and other countries' citizenship didn't <u>lose nationalism</u>." In such a case, the student should have added the word "sense" to be able to deliver the intended meaning correctly, "lose their sense of nationalism". Table 15 provides some examples of deviant usage of open class collocations.

Table 15

Errors in Open Collocations

• "He shows that although Israel have <u>separated Palestinian</u>…."
• "I am not very happy as a nationalist that <u>borders</u> are going to be <u>broken</u>."

• "He then argues that technology has invaded most of the countries and that it had <u>done</u> major <u>changes</u>…"
• "…had helped them to <u>brake</u> their <u>shields</u>…"
• "They provide goods to us in a price that makes our manufacturers <u>do suicide</u>."
• "…the Palestinians were isolated inside their state with a <u>checkpoint security</u>."
• "People who are emigrated and other countries' citizenship didn't <u>lose nationalism</u>."
• "And he illustrates how People can easily <u>create nations</u> on the net that are less complicated than those in reality…"
• "His technique of generalizing the audience with "we" and "our" helps to <u>gain</u> the reader's <u>attention</u>…"
• "On the other hand, the author has not <u>clarified</u> any other <u>evidence</u> supporting his argument of nations being united."

Discussion

The results confirmed Lennon's (1996) conclusion that L2 learners' lexical errors could be attributed to a hazy lexical knowledge in polysemy, collocational restrictions, and phrasal verb combinations. Since L2 learners usually rely on their ideas of the core meaning of polysemous verbs and nouns and, they are more likely to use verbs and nouns interchangeably when they should not. Furthermore, to get an overall picture of how vocabulary is taught at schools, a survey of English textbooks used in UAE high schools was conducted. The survey suggested that Arab learners may not be properly taught the lexical resources of the language as the textbooks focused on de-contextualized lexical items as listed in most monolingual and bilingual dictionaries. Consequently, L2 learners are not completely aware of the restrictions of various word combinations.

In general, the results substantiated previous research findings that indicated several reasons for collocation errors. First, inter-lingual or negative transfer from L1 could be one of the main reasons for collocation errors, as many researchers claim, because it is an indispensable learning strategy employed by L2 learners at all proficiency levels (Tang, 2002). In addition, intermediate and advanced students have a large stock of passive and active vocabulary knowledge and may find it easier to resort to L1 collocation equivalents and translate them into English. Second, collocations can be difficult for students to understand and produce because of their

syntactic and pragmatic functions. These functions are sometimes difficult for L2 learners to grasp and understand because they are not logically explained. In addition, collocations are more likely to occur due to their linguistic environment (Reid, 2000). In other words, students find problems in identifying and producing the correct collocations because collocation relationships tend to be semantico-syntactic and are generally problematic in nature, especially for L2 learners.

To support such a claim, Sussex (1996) measured the English collocation knowledge of 272 Greek students of various proficiency levels and found that their collocation competence did not increase alongside their grammatical competence. He concluded that lexical collocations seemed to be more difficult to acquire for several reasons: the degree of L1 and L2 differences, complexity of the collocations, and frequency of exposure to L2.

To summarize, collocations have been recognized as one of the ways that differentiate between native speakers and second language speakers. William (2000) believes that automatic processing of collocations helps native speakers to combine spontaneously certain words with other words to form a meaningful semantic unit. The lack of this automation, however, makes L2 learners prone to produce incorrect utterances that are considered odd by native speakers. Therefore, in order to achieve native-like competence, L2 learners need to be aware of the syntactic and semantic functions of words. This study provided empirical evidence supporting the claim that collocations constitute an area of difficulty for L2 learning. The findings revealed that Arab learners commit errors when producing lexical and grammatical collocation, especially those involving prepositions. In most of the incorrect collocations, the errors were cases of selection or addition of incorrect prepositions.

Significance of the Number of Words in a Sentence and the Referential Links

Grammatical coherence was not the focus of the study; however, it is worth mentioning that there was an average of 20 words per sentence, and the average number of sentences per essay was approximately 21. Several essays contained rather lengthy sentences due to the existence of such errors as run-ons, comma splices, and fragments. Actual analysis was not conducted concerning the relationship between sentence length and sentence structure, in particular, grammatical errors. In general, it

was found that shorter sentences had fewer errors because such sentences did not entail expressing more than one idea. In contrast, longer sentences that expressed a number of ideas contained more errors as students had difficulty connecting these ideas using appropriate cohesive devices.

Although the rhetorical persuasion strategies used in the essays were not analyzed with reference to writing quality and text cohesion. It is necessary to point out some of the rhetorical features that appeared in the students' essays that affected the connectedness of the discourse. The analysis revealed that the subjects rarely addressed the readers in their writing. In addition, they gave many undeveloped examples to illustrate their point of views. Accordingly, their essays appeared incoherent and not well- structured. Such rhetorical pattern, as Cutting (2002) points out, is considered to be inappropriate in English academic discourse and judged as "awkward" by native speakers.

Conclusion

The purpose of the study was to first investigate Arab students' knowledge of lexical cohesive devices and then analyze their errors. It was hoped that a better understanding of students' errors would help teachers take relevant pedagogical procedures. The findings confirmed the hypothesis that intermediate and advanced level students encounter difficulties when using lexical devices. These difficulties were demonstrated in the form of lack of connector variety, inappropriate use of connectors, long distance between cohesive ties in a chain, and uncertain inference that could lead to several interpretations. The results indicated that the students relied on extensive use of repetition to establish text cohesion because it is not as demanding and challenging as other lexical devices. In addition, students used synonymy, antonymy, and inclusion to provide stylistic variety, though these categories were not used extensively. Moreover, students used simple morphological constructions to establish cohesion throughout the text. Finally, the limited occurrences of collocations, particularly, lexical collocations showed that students need to develop their collocaitonal competence to develop the quality of their writing.

While correct usage of different lexical connectors could be attributed to positive language transfer and L2 instructional input, deviant usage of devices could be related to negative L1 language transfer, insufficient vocabulary knowledge, and

lack of awareness of academic conventions. In general, the subjects in this study correctly used collocations most of the time. Yet, the cases where they made errors are more important as they obstructed the follow of ideas while reading and led to several interpretations.

Phrasal verbs and open collocations were not frequently used in the students' essays because they have a more restricted context for their usage and can be easily avoided. Avoidance is a strategy adopted frequently by many L2 learners who lack sufficient vocabulary knowledge. Although students encounter phrasal verbs and open collocations in their readings, this does not imply satisfactory productive usage according to Farghal and Obiedata (1995). To ensure productive usage of different types of collocations, they should be explicitly addressed.

As shown in the analysis of error types produced by the subjects, redundant use of repetition plagues the essays. The students were not able to develop logical arguments to express their ideas clearly and precisely because of limited vocabulary knowledge; consequently, they resorted to redundant word use to meet word count requirement and maintain text cohesion.

It is also useful to point out the students' tendency to use high-frequency words to substitute for the targeted lexical items. This implies that the subjects are not fully aware of the denotations and connotations of words and, thus, tend to use words with similar meaning interchangeably regardless of the context. This tendency confirms Lennon's (1996) conclusion that L2 learners' errors are due to hazy lexical knowledge of polysemous words, collocational restrictions, and phrasal verbs combinations. In addition, the analysis revealed that due to limited lexical repertoire and knowledge of specific forms required for explicitness, some of the student writers used general words more often than specific words.

In conclusion, the findings of the study suggested that the subjects had limited vocabulary knowledge, particularly collocations. The student writers were not able to identify the semantic boundaries that separate lexical items. This lexical deficiency did not allow them to observe the connotations, semantic boundaries, and collocational restrictions of words. Limited lexical knowledge deprives students of producing coherent and meaningful texts. A clearer understanding of sense relations between related words can provide greater precision in guiding students to identify subtle differences in meaning and in helping them to define boundaries that separate

lexical items. Consequently, it seems clear that L2 instruction needs to focus on expanding the vocabulary range of non-native students as well as identifying lexical features of formal academic texts that are distinct from those employed in spoken discourse.

CHAPTER FIVE

PEDAGOGIAL IMPLICATIONS

The findings of the data analysis suggest that particular consideration should be given to the teaching of lexical cohesion when teaching writing. The results discussed in chapter four indicated that despite many years of studying English, some Arab students still may not be capable of producing well-written discourse in English. It is suggested that merely exposing non-native speakers to written academic texts and engaging them in the writing process to encourage their self-expression by focusing on content, organization, and grammar do not help the learners to attain a high level of English proficiency that approximates "near-native" (Hinkel, 1999). Moreover, the Arab students, in this study, had a tendency to overuse and misuse some lexical connectives in their writing, which may negatively affect the coherence of the texts. More importantly, the findings suggested the necessity of teaching vocabulary to improve students' writing. Since the learners' deficiency in the use of appropriate lexical ties in written texts has been identified, how students make use of these connectors while writing and how they deal with improper connector usages while writing are issues worthy of note.

Vocabulary

"Knowing a word in a language means to know both its syntagmatic and paradigmatic relations. To know a word is also to know it in context. Syntactic and semantic knowledge must also include pragmatic knowledge" (Carter, 1987, p. 152).

Researchers assert that developing the quality of L2 writing is interconnected with teaching vocabulary. We cannot talk about teaching vocabulary without mentioning Lewis (1993) who highlighted the importance of vocabulary as being the basis of communication. Lewis believes that if learners do not recognize the meanings of keywords they will be unable to participate in a conversation, even if they know the morphology and the syntax of that language. In addition, Lewis stresses that grammar and vocabulary are equally important for effective communication whether oral or written.

Arab learners studying at AUS need to exhibit a wide range of academic skills. To participate effectively in an English medium instruction, they need to have an excellent command of vocabulary, notably, academic vocabulary. Obviously, the subjects in this study have inadequate mastery of the rhetorical academic conventions and lack lexical proficiency that allows them to participate efficiently in an American university curriculum.

The question we have to ask here is what kind of vocabulary should we teach? According to Cruse (1991), teachers should begin by excluding highly technical words. They need to focus on academic vocabulary, which is defined as context independent words that occur with high frequency across disciplines. Nowadays it is widely acknowledged that vocabulary teaching should be part of a second language syllabus, and should be taught on a regular basis in a well-planned way. Lewis (1993) argues that vocabulary should be at the centre of language teaching, because "language consists of grammaticalised lexis, not lexicalised grammar" (p. 34).

Martin (1976, 1989) argues that the goals of vocabulary teaching must be more than simply covering a certain number of words. Teachers must use teaching techniques that can help students realise the importance of what it means to know a lexical item. In addition, they must provide learners with opportunities to use the items learnt. Martin also suggests that academic vocabulary taught to L2 learners should be selected from various sources: items that students submitted from their readings in different fields; items based on vocabulary problems students had encountered in writing or speaking about some aspects of their fields of interest as noticed by their instructors; and items that occur frequently in journal articles. He further asserts that the chosen vocabulary should be assessed according to the following pedagogical criteria. First, it should be unfamiliar to or incorrectly used by the students. Second, it should not only help students recognize familiar items but also help them to extend their knowledge to include unfamiliar items. Therefore, vocabulary should be introduced structurally and contextually. Third, words chosen should be useful to students in the four areas of language use listening, speaking, reading, and writing.

Raising Awareness, Noticing, and Lexical Retention

Understanding how lexicon is organized in memory might help teachers to consider effective methods for teaching vocabulary. It seems that learning new items involves storing them first in short-term memory, and afterwards in long-term memory. Research also suggests that our mental lexicon is highly organised and efficient, and that semantically related items are stored together. Word frequency is another factor that affects storage, as the most frequently used items are easier to retrieve. We can use this information to attempt to facilitate the learning process, by grouping items of vocabulary in semantic fields, such as types of fruit (Lewis, 1997; Mora & Carlos, 2000).

Meaningful tasks, therefore, seem to offer the best answer to vocabulary learning as they rely on students' experiences and reality to facilitate learning. Tasks that are more meaningful also require learners to analyze and process language more deeply, which should help them maintain information in long-term memory. Since forgetting seems to be an inevitable process, learners should regularly use the items learnt to sustain them in their long-term memory (Hollowat, 2002).

L2 students need to be engaged in building interactive dictionaries to foster L2 lexical competency, as Zamel (1992, 1998) belives. Zamel suggests that after each reading session students need to add to their personal dictionaries new words and expressions they have encountered while reading. This exercise will enable students to memorize words in context and to link new contexts to older ones. Consequently, by the end of the year students will have encountered most of the words they need in their appropriate and authentic context. Personal dictionaries are effective because they help students to deduce the word meanings from context and discover the relationships among words.

Studies in discourse analysis and applied linguistics have emphasized the importance of awareness and noticing in developing L2 proficiency. Schmidt (1995) and Leki (1999) point out a high degree of awareness of the L2 discourse structure can lead to learners' understanding of how formal academic discourse is developed. However, Schmidt believes that awareness alone is not sufficient for productive learning. Learners should pay conscious attention or "noticing" to the convention of the academic written discourse to be able to learn it. Noticing is a complex process because it involves the "intake" of both form and meaning, and it takes time for

learners to proceed from initial recognition to internalizing the underlying meaning of a particular word. Zimmerman (1997) urges teachers to provide recurring opportunities for learners to notice, since one noticing task is not sufficient. Teachers need to introduce their students to different kinds of noticing tasks to serve different psycholinguistic factors. Noticing tasks, as Lewis (1997) accentuates, involve introducing students to receptive and productive vocabulary tasks to develop the process of noticing. Such conscious raising and noticing tasks can be effective in both identifying/consolidating particular patterns or usage and highlighting significant features of a text.

Intensive Vocabulary Instruction

An important finding from the present study is that lack of cohesion in writing results from inappropriate use or lack of use of lexical devices. Therefore, to help students overcome lexical problems, Liu (2000) suggests a series of exercises to allow students to increase their vocabulary knowledge as well as help them to understand better the semantic boundaries of the words being studied, such as synonyms, antonyms, super- ordinates, and hyponyms. A better understanding of the lexical sense relations between words allows students to use appropriately them to improve cohesion in their writing. The proposed exercises include finding synonyms, antonyms, super-ordinates, and hyponyms, or classifying words into these categories, identifying lexical ties or the lack of them in writing, and finally asking students to create lexical ties. These activities, as Liu emphasizes, are very practical and do not require complex preparation by teachers. Successful vocabulary teaching and learning is achieved in an ordered and systematic way to prevent misuses and assist retention (Conru, 1998)

Intensive vocabulary instruction prior to writing tasks positively affects the quality of the students' writing and results in students' increased enthusiasm. Current studies have shown that, in some cases, vocabulary leads to increased reading comprehension. Duin and Graves (1987) point out that teaching a related set of words to students before they write an expository essay in which the same words might be used can improve the overall quality of the essays produced. rich vocabulary instruction provides an advantage for students because it allows them to incorporate words and context in such a way that reduces processing time. Rich instruction allows

students to use the words spontaneously in natural contexts outside the classroom. Such spontaneous use may lead to acquiring a wider variety of semantic links to the new words, which in turn makes the new words more accessible.

Rygiel (1978) suggests that teachers have to familiarize students with the following aspects of word knowledge to enhance their lexical competence:

1) Context: Students should be fully aware of the context of the words in spoken or written discourse because words have precise meanings. In order to develop sensitivity to words, students must study them in context. 2) Syntax: It is important to determine the grammatical function of a word because it is one important dimension of the meaning of a word; in addition, it could be related to differences in pronunciation, sense, scope, etc. between words sharing a common form. 3) Semantic relations: It is important to identify the lexical meaning of a word in terms of denotation or connotation because a precise meaning is a function of context, especially in studying a word that has many senses. It is, therefore, necessary that teachers discuss and analyze the semantic relations of words in terms of homonymy, polysemy, synonymy, and antonymy to clarify any confusion regarding word meanings. For example, studying antonyms is useful because it reveals a specific sense of a word. Studying synonyms also is fundamental to the stylistic study because style is often perceived as a choice among alternatives. 4) Levels of abstraction: It is important to identify the degree of abstraction and generality because by analyzing a word in context and by setting it against other words that might be used in its place, one can get an idea of its relative position on the scales of abstractness.

5) Morphology: It is essential for L2 learners to be aware of the origin and development of a word to know the associations and scope of a word, particularly with respect to borrowed words from Greek and Latin. Pittman (2003) stresses that by systematically and gradually studying the most prominent prefixes, roots, and suffixes, L2 learners can acquire a large amount of vocabulary. The pedagogical importance of teaching morphology arrives from the fact that morphological knowledge is critical when students encounter less frequent words in their reading because most of the vocabulary words in English are derivations of familiar words. Accordingly, in accordance with the critical importance of this type of morphological analysis, teachers should address the morphological structure of English words explicitly. For instance, teachers must instruct students to use different forms of words

to fit appropriately in a sentence. This is essential because the fact that students must write out the changed form is valuable for it allows them to understand and practice spelling regularities across derivations.

Teachers should be aware that the aforementioned model does not provide solution for all students' problems, but it helps to reduce the number of grammatical and lexical problems that some students may encounter. Since this study focused on lexical cohesion in general and repetition and collocation, in particular, it is noteworthy to address their teaching implications to help L2 learners to make the utmost use of these connectives to enhance the quality of their writing.

Repetition

We observed that the students in this study had a tendency to overuse lexical repetition. Therefore, one would suppose that it would be a good idea to encourage the students to use less lexical repetition. However, Hoey (1991) suggests, "The traditional advice to avoid repetition needs to be couched with special care if it is not to interfere actively with the development of mature writing skills" (p. 243). This is because inexperienced writers will resort to restating what has already been said when they do not know what else to say. Hoey illuminates that restricted by limited vocabulary and not knowing how to repeat what had been said in a way that is not clumsy hinder students from using repetition more effectively. Worries concerning repetition are reasonable; nevertheless, advising students to avoid repetition may be harmful if they are not given alternative methods.

Having indicated that the subjects in this study relied heavily on repetition to create text cohesion, teachers should make use of such a lexical connector to help them produce coherent text. Complex repetition could be a very effective technique that allows learners develop coherent texts, as Hoey (1991) suggests. In order to help students use complex repetitions, Hoey proposes that learners should not be encouraged to say the same thing repeatedly, but they should be advised to make connections between what they are currently saying and what they have said before. In addition, teachers should help students to make use of different forms of a word, such as clumsy, clumsily, and clumsiness to provide stylistic and lexical variety. Complex repetition is favored because it is less obtrusive than simple repetition as Stotsky (1990) states, "An increase in the use of morphologically complex words,

rather than the repetition of a simple word or the use of a cumbersome phrase may be an important index of growth" (p. 40).

To help students use complex repetition effectively and efficiently, Hoey (1991) recommends that teachers should consider developing materials that allow students to practice bonding back to earlier sentences. For example, teachers could provide learners with an incomplete text and ask them to complete it. Similarly, Reid (2000) proposes the use of paragraph hooks and states, "A paragraph hook uses the coherence device of repetition. The writer repeats one or more words from one paragraph in the first sentence of the next paragraph. The echo of the words helps to 'hook' the paragraphs together" (p. 75).

Collocations

Arab learners in this study showed limited collocational competence. Lack of collocational knowledge, as Reid (2000) highlighted, makes learners vulnerable to all sorts of lexical and grammatical errors. Having said that, two important questions arise: What kinds of collocational information do learners need? In what ways can such information facilitate learning? Since the two questions are interrelated, any attempts at answering one are bound to involve issues concerning the other.

As pointed out in the previous chapter, lack of collocation competence in this study could be attributed to insufficient knowledge of the lexical sense relations and L1 negative transfer, as Tawio (2001) concluded. Since it is now recognized that much of our vocabulary consists of chunks of different kinds of collocations, fixed and semi-fixed expressions as well as idioms, it follows then that collocations occupy a fundamental role in language comprehension and production and are the key to fluency, and as such should be a top priority in every language course. Teachers, therefore, need to explore ways and develop techniques to help their students to increase their collocational competence (Lewis, 1997). Lewis (1997) emphasizes that native-speakers store vocabulary as individual words or as phrases and larger chunks. The large chunks can be retrieved from memory as a whole thus reducing processing load. Alternatively, learners who only learn individual words will need a lot more time and effort to express themselves. For that reason, it is necessary for teachers to make students aware of the chunks and give them opportunities to identify and organize them.

In addition to exposure to the language through reading and listening, L2 learners could benefit from direct teaching and exercises aimed at raising awareness of collocations. Direct teaching tasks are essential because they are considered a way of conscious-raising and making students more involved in deeper processing. Depending on students' cognitive development, simplified contrastive comparisons between English and Arabic collocations might help students see when to transfer and when not to (Leki & Carson, 1994).

In addition to the monolingual collocation dictionaries such as the *Collins COBUILD English Dictionary*, the *BBC English Dictionary*, and the *Oxford Advanced Learner's Dictionar*y, bilingual English-Arabic and Arabic-English dictionaries of collocations are needed because such dictionaries could be useful not only to the learners of English, but also to translators. Bilingual lists of collocations could also be included in course books to minimize inter-lingual errors. Such bilingual lists may show students when to transfer from Arabic and when not to, and also, could be a source of input for direct acquisition (Mahmoud, 2005).

To summarize, many L2 learners feel uncomfortable using collocations, yet it is access to collocations that assists them in acquiring near-native like language proficiency. While collocations may be a difficult aspect of vocabulary for teachers to teach and learners to acquire, it is possible to achieve successful results if systematic procedures are adopted. Therefore, researchers stress that collocations need to be integrated with the teaching of vocabulary. Learners need to "notice" collocations and then use them. If teachers could help learners to understand the use of collocations in discourse patterns often enough, such familiarity may lead to confidence in using them eventually. Furthermore, dictionaries on collocations can foster the development of collocational competence as long as they provide examples, and draw attention to the fine differences between collocations that appear structurally similar. Finally, teachers need to be aware of their students' learning styles and adopt relevant teaching techniques accordingly. By doing this, they can understand the needs of their students and change their methods when necessary. The question remains, however, as to how to achieve these desired goals.

Writing, Reading, and Vocabulary

The writing proficiency of L2 learners, as Campbell (1998) suggests, develops over a period of twelve years or more. Therefore, instead of having every teacher try to address all aspects of writing every year in a chaotic way, teachers need to adopt a combination of grammatical and lexical instructions to develop the learners' proficiency gradually. L2 learners need to see the words that are joined together, identify how they are joined, and recognize the relationships according to the intended meaning.

One possible technique that would help learners develop the quality of their writing in terms of lexical connectors is asking them to analyze what they have written. The ability to analyze sentences and to understand how parts cohere together, as Sams (2003) points out, is central to the writing process. Essays that have local coherence problems can be improved easily by spending more time on careful proofreading, such as adding words or phrases to make relationships between sentences more explicit, or correcting mechanical errors that interfere with the reading process.

Nevertheless, Sams (2003) believes that telling students to revise their work is not enough as students need to be trained to revise their work constantly. Constant revision of essays entails arranging ideas in a logical order, identifying how ideas are related to one another, distinguishing between main ideas and supporting details, separating ideas, and organizing where a thought begins and ends. Thus, teachers should help students to practice analyzing relationships between words, phrases, clauses, sentences, and paragraphs. In addition, engaging students in writing journals and sharing feedback about their work with their peers are effective techniques that teachers could use to develop L2 writing. In addition to developing the ability to analyze written texts, second language learners need to be aware of the constraints of academic discourse and the expectations of the academic audience (Hinkel, 2003; Reid, 1993, 2000).

ESL teachers should assist their students to acquire the appropriate schema to be able to write coherent texts that meet the readers' expectations. With this in mind, writing teachers, therefore, need to be aware of different discourse patterns, to inform their students about discourse differences and audience expectations, to provide practice regarding different academic patterns, and to offer opportunities for practice

with the new schema. To achieve such tasks, teachers need to collect different academic assignments from across the curriculum, analyze and describe audience expectations for each assignment, and plan lessons to meet the students' needs and writing objectives (Lee, 2000).

Conclusion

Dealing with the types of cohesive errors frequently made by Arab students will entail some changes in the English writing curriculum and teaching materials. Given that academic discourse requires large, diverse, and highly literate words, as well as a richness of cohesive ties established through its vocabulary, L2 learners need to acquire sufficient mastery of vocabulary to be able to express their ideas clearly and effectively (Schmitt, 2000). How then, can teachers help students develop the lexical knowledge needed for effective essay writing? The major approaches to the development of the vocabulary of exposition, besides explicit lexical instructions and implicit vocabulary learning, would appear to be encouraging frequent discussion of essays and how effective the words were used to maintain flow of information and smooth comprehension. It goes without saying that teachers of English like all other teachers need to be creative and innovative. Activities should be enjoyable and enable students to develop sensitivity towards the language. Inclusion of any materials in a curriculum implies the need to assess them. Since vocabulary is an essential and often ignored component of many second language curricula, it is vital that it undergoes continuous evaluation. The aim of the strategies and techniques outlined in this chapter is to enhance the lexical knowledge of second language learners. To accomplish this goal, incorporating constant assessment measures reinforce the importance of vocabulary. The following quote summarizes the essence of this chapter: "Without grammar very little can be conveyed; without vocabulary nothing can be conveyed" (Wilkins, 1972, p. 111).

CHAPTER SIX
CONCLUSION

Summary of Findings

The main aim of the study was to identify how Arab learners use lexical devices in their L2 academic texts to develop cohesive academic texts. Lexical cohesion, an important determiner of establishing text cohesion, was investigated in terms of repetition, reference, derivation, collocation, synonymy, antonymy, and inclusion. To comprehensively investigate the research question, errors that appeared in the students' essays were examined. Identifying the types of cohesive errors in ESL essays would help teachers take relevant pedagogical measures to deal with such errors in students' writing.

The findings confirmed the hypothesis and revealed that Arab students at AUS faced difficulties in their writing resulting from insufficient knowledge of lexical cohesion. These difficulties were demonstrated in the form of the lack of connector variety, inappropriate use of connectors, long distance between cohesive items in a chain, and uncertain inference that could lead to several interpretations.

The findings showed that repetition was the most frequently occurring type of lexical device. This coincided with previous research and reflected earlier characterization of L2 essays as resorting mainly to repetition to maintain lexical cohesion (Castro, 2004). Lexical repetition is the most frequent type of lexical devices in L2 essays because it is governed by few syntactic and pragmatic constraints and is therefore, easier to use. Repetition allows writers who have little in common with their readers to build up enough shared knowledge to establish a clear theme. The fact that synonymy, inclusion, and opposites also occurred with relatively low frequency in the essays confirmed Connor's (1984) argument that L2 writers do not favor the use of synonyms in their essays because of their limited lexical knowledge. Moreover, the findings showed that Arab students did not have sufficient mastery of collocations, in particular, phrasal verbs and lexical collocations. This conclusion supported claims in the literature that these types of collocations are more difficult and need to be taught explicitly.

Summary of Pedagogical Implications

The findings of the present study suggested that particular considerations should be given to the teaching of writing with reference to cohesion and coherence on one hand and reading and vocabulary on the other hand. To begin with, analysis of the data demonstrated that students tended to overuse words, misuse words, and form unacceptable collocations because of their limited vocabulary and collocational knowledge. Limited lexical repertoire, according to Witte and Faigley (1981), represents a developmental problem, which could be solved over time with the improvement of overall language proficiency.

To reduce lexical errors, it would be advisable to encourage students to learn new words in their contexts of use rather than in isolation. Furthermore, it would be appropriate for the teacher to provide remedial instruction and intensive exercises tailored to poor writers. The instruction and exercises may take various forms, but the purpose should be to guide poor writers to eliminate redundant repetition, and to use synonyms, antonyms, and collocations properly and more frequently.

Dealing with the lexical errors frequently made by Arab students would entail some changes in the English writing curriculum and teaching materials. Since the study showed that errors in lexical cohesion were very common in academic essays, it might be necessary to introduce lessons focusing on these areas into the teaching of writing, explaining clearly with adequate examples the meaning and the correct usage of different lexical items. Moreover, teachers could present model texts and highlight some collocations, synonyms, antonyms, and hyponyms used in specific contexts and explain their meanings. This type of focused reading activity would help students become more sensitive to the correct usage of lexical ties in English.

Ultimately, improving the use of lexical cohesive devices in writing depends on students' independent reading, since the time available for classroom reading is limited. Generally, knowledge and awareness of how lexical devices should be used in English is obtained from examining such connectors in well-written English texts. Therefore, it is essential to direct students to get into the habit of reading texts as a whole rather than focusing on the meaning of individual sentences. This is essential because by analyzing properly used lexical devices in English texts, students could learn and internalize the ways in which such devices are used in English academic writing.

In order to raise the students' awareness of semantic boundaries, Heping (1992) advocates selecting collocations to teach learners with a common L1 background to raise the students' sensitivity to word associations and combinations. This would allow teachers to actually focus on particular set of frequently encountered collocations and, hence, shorten to some extent the long process of acquiring L2 vocabulary.

Helping students understand coherence in terms of lexical connectors together with the semantic relations possible between clauses and sentences makes the process of producing a coherent paragraph less confusing and more manageable. Obviously, well-read writers have absorbed the possible relations between sentences and can naturally reproduce them. Since many of L2 students do not have this intuition nor can the readings provided in composition classes supply it, teachers, therefore, have to train students to identify the reader-writer relationship and draw the students' attention to how lexical devices are used correctly to deliver the intended message. Raising the learners' awareness of such relationships could help them develop the quality of their academic essays. To sum up, rather than asking students to write "good" essays, teachers have to guide to write "effective" essays that guide readers along cohesive lines of thought, and build, step by step, on shared knowledge to enlarge their readers' expectations (Holloway, 2002; Sussex, 1996).

Significance of the Study

The main research question for this study was how Arab L2 learners use lexical devices to create cohesion in their writing. To answer the main research question, two subquestions were addressed: a) Do Arab students' essays exhibit any central tendencies or common features in terms of using lexical devices? b) What kinds of difficulties do Arab learners encounter in dealing with lexical cohesion? To answer the sub-questions, the frequency of use of several lexical types was considered and the difficulties associated with the use of these devices were examined. The findings confirmed earlier research and revealed that the Arab learners in this study resorted mainly to lexical repetition to develop text cohesion. In addition, due to insufficient lexical knowledge, the writing samples of the subjects in this study demonstrated limited lexical variety, inappropriate use of connectors, and uncertain use of inference that led to several interpretations. To identify the difficulties Arab

learners encountered in dealing with lexical cohesion, error analysis was carried out. Examination of the errors revealed that most of the incorrect usage of lexical ties found in this study could be attributed to, limited vocabulary knowledge, insufficient exposure to the language, and negative language transfer from Arabic. In addition, the data analysis revealed that the correct usage of lexical ties could be contributed to positive language transfer from Arabic and explicit language instruction. The findings confirmed the important role of vocabulary knowledge to establishing text cohesion. The pedagogical implications mentioned in chapter five could help L2 learners to read and write efficiently and effectively.

In conclusion, a clearer understanding of sense relations can provide greater precision in guiding students toward meaning and in helping them to define boundaries that separate lexical items. Teachers should direct their students' attention to the difficulties involved in collocation by teaching types of collocations with which learners have difficulties. The areas of difficulties can be observed in their writing. Teachers should also encourage their students to read a lot of literature written in English, since collocations are better acquired through reading, and chances that L2 learners cannot combine words correctly without having previously read them are very high.

Limitations and Suggestions for Further Studies

The relationship between lexical cohesion and coherence in students' compositions in expository writing had been investigated in the present study. The analytical process used, and the findings attained from it, suggested a lot of possibilities for future research that could lead to practical applications for teaching writing to L2 learners. The study is considered a preliminary one that gives an introduction to the performance of Arab students at AUS and should set the pace for other studies, which would be much more comprehensive, covering a larger number of students and a wider range of materials.

This study was conducted on a small number of students, and on a very limited number of essays. Therefore, the conclusions reached are far from being generalizable. Another important limitation of this study was that it did not assign native speakers as raters to assess the essays independently. Further discussions between the researcher and the raters should have been carried out to evaluate their

decisions regarding the writing samples according to the categories of the cohesive model used for analysis in order to reach a consensus and ensure reliability. Furthermore, a pilot study to test and modify, if necessary, the application of the cohesive model was not conducted due to time constraint.

Clearly, additional research is needed. There is a particular need to address how good and poor L2 writers use lexical devices to achieve text coherence. Further research is also required to investigate the use of lexical and grammatical cohesive devices in L2 academic discourse to provide an overall picture of the language proficiency of the students. Future studies on L2 writing would be greatly enriched by considering how socio-linguistic variables such as the writers' age, L2 proficiency, and different writing modes may influence the construction of cohesion in L2 English texts. Finally, it would be useful to look into the aspect of PV avoidance by the texts of L2 learners at both the advanced and intermediate levels of English proficiency so as to determine the role of language proficiency in the avoidance or non-avoidance of phrasal verbs.

The background reading for the topic of cohesion in English yields a great deal of information that could be relevant for language teachers. One would tend to agree with Hoey (1991) and Nunan (1993) who say that lexical cohesion is the most important form of cohesive tie and the most interesting of all cohesive ties. Obviously, this was only a preliminary investigation and more research needs to be conducted. However, it is evident that some knowledge of lexical cohesion is of significant value for L2 learners.

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APPENDIX A

Guidelines for Writing Critiques

- Introduction: introduce both the passage under analysis and the author. State the author's main argument and the points you intend to make about it. Provide background material to help your readers understand the relevance or appeal of the passage. This background material might include one or more of the following: an explanation of why the subject is of current interest; a reference to a possible controversy surrounding the subject of the passage or the passage itself; biographical information about the author; an account of the circumstances under which the passage was written; or a reference to the intended audience of the passage.
- Summary: summarize the author's main points, making sure to state the author's purpose for writing.
- Analysis of the presentation: evaluates the validity of the author's presentation, as distinct from your points of agreement or disagreement. Comment on the author's success in achieving his or her purpose by reviewing three or four specific points. You might base your review on one or more of the following criteria: 1) is the information accurate? 2) Is the information significant? 3) Has the author defined terms clearly? 4) Has the author argued logically?
- Your responses to the presentation: now it is your turn to respond to the author's views. With which views do you agree? With which do you disagree? Discuss your reasons for agreement and disagreement, when possible, tying these reasons to assumptions-both the author's and your own.
- Conclusion: state your conclusions about the overall validity of the piece-your assessment of the author's success at achieving his or her aims and your reactions to the author's views. Remind the reader of the weaknesses and strengths of the passage.

(Adapted from Behrens & Rosen, 2005, p. 75)

APPENDIX B

Categories of Lexical Cohesion in Expository Essays

1-Semantically related words: a type of cohesion in which one lexical element is semantically related to a previous one through:

- a- Repetition
- b- Synonymy
- c- Opposition or contrast
- d- Inclusion/ Hyponymy
- e- Derivations/ Inflections

2- Collocationally related words: a type of cohesion in which one lexical element is related to another only through co-occurrence in similar contexts. This category includes lexical collocations and grammatical collocations.

APPENDIX C

Collocation Typology

Lexical collocations in this study consist of three categories as identified by Lewis (2001)

1- Phrasal verbs

2- Collocations of prepositions

3- Open class

It is worth noting that though the classification seems to be based on grammatical principles, lexical collocations are identified and selected on semantically and usage based grounds.

APPENDIX D

Sample Table Used for Analysis

Sentence No. Words per sentence	Cohesive Item	Lexical Type	Presupposed Item	Correspo-nding Sentence No.	Correct Use	Incorrect Use
1.						
2.						
3.						
4.						
5.						

APPENDIX E

Sample of Texts Critiqued

Grades and Self-Esteem

Randy Moore

About the Author Randy Moore, a botanist, is a professor of biology at Baylor University in Waco, Texas, and the editor of the journal *The American Biology Teacher*. He has published numerous scientific articles and is the author of *The Living Desert* (1991).

The Context of the Reading "Grades and Self-Esteem" first appeared in 1993 as an editorial in the journal *The American Biology Teacher*, which is aimed at teachers of high school and undergraduate students. Moore makes reference to literature and popular culture:

- *Wizard of Oz:* a novel by L. Frank Baum (later made into a popular film) in which a fake wizard gives a cowardly lion a badge to show he is brave, a tin man a "heart" to show he is kind, and a scarecrow a "diploma" to show he is smart
- *Lake Wobegon:* a fictional town created by popular radio show host and author Garrison Keillor

If you're around teachers long enough, the conversation will inevitably get around to "today's under-prepared students." We complain endlessly that students don't know anything, don't *want* to know anything, can't write well and can't think critically. Our complaints are supported by much evidence, including firsthand observations and declining scores on objective tests (e.g., SAT, ACT). Indeed,

- Only 11% of eighth-graders in California's public schools can solve seventh-grade math problems.
- More than 30% of U.S. 17-year-olds don't know that Abraham Lincoln wrote the Emancipation Proclamation. Almost half do not know who Josef Stalin was, and 30% can't locate Britain on a map of Europe.

Employers echo our complaints: 58% of Fortune 500 companies cannot find marginally competent workers, and the CEOs of major companies report that four of 10 entry-level workers cannot pass seventh-grade exams. Does all of this make a difference? Yes. For example, several major corporations now ship their paperwork to countries such as Ireland because U.S. workers "make too many mistakes."

We have many prepackaged excuses for our failures, some of which are partly valid and others that are self-delusion. I argue that a major

reason for our failures is that the primary mission of many schools has shifted from education to "building self-esteem."

Disciples of the self-esteem mission for schools preach that we should take seriously—even praise—all self-expression by students, regardless of its content, context, accuracy or worth. This, the disciples claim, "humanizes" education and makes our courses "nonjudgmental." Everyone is right! Everyone's opinion has equal value! I'm OK, you're OK! Don't worry about learning, thinking or communicating; the important thing is to feel good about ourselves.

Of course, when we assign grades we become *very* judgmental. This upsets teachers who feel bad about holding students accountable to any kind of grading standards. To avoid feeling bad, these teachers lower their standards so that virtually all students meet them, regardless of the students' performance. There are many subtle examples of this: eliminating (or not recording) failing grades, allowing students to withdraw from courses when faced with making a poor grade, "dumbing down" our courses so that everyone "earns" an A or B, and renaming sub-remedial courses to make them appear to be academically viable. All of this produces grade inflation. Consider these facts:

- In 1966, high school teachers gave twice as many C's as A's. By 1978, the proportion of A's exceeded that of C's. In 1990, more than 20% of all students entering college had an A *average* for their entire high school career.
- In the 1980s, almost three-fourths of grades at Amherst, Duke, Hamilton, Haverford, Pomona, Michigan, North Carolina and Wisconsin were A or B. At Harvard, the average grade is now B – ; at Princeton, 80% of undergraduates get *only* A's or B's.
- In some colleges, the *average* undergraduate is an "honors" student.

Many teachers have lowered their standards so far that most of their students—the same ones we claim cannot think critically and who employers know are unprepared for entry-level jobs—are A or B students. These teachers apparently think that our students, like the children at Lake Wobegon, are all above average.

The belief that self-esteem is a precondition to learning is now dogma that few teachers question. However, this confuses cause and effect. Granted, people who excel at what they do usually feel better about themselves than do frauds or convicted felons. But does high self-esteem *cause* success? To many educators, it apparently does: These people claim that self-esteem precedes performance, not vice versa. I argue that self-esteem is *earned* and that schools, despite their good intentions, cannot dispense it as a prepackaged handout. We should avoid the "Wizard of Oz" syndrome in which we merely dispense substitutes for brains, bravery and hearts. We should insist on the real thing.

Despite having lowered our standards to new depths, many self-esteem crusaders claim that we've not lowered our standards far enough. For example, high school seniors in some states must pass a ninth-grade-level test before they can get their diploma. When some students failed the

test repeatedly and were told they would not graduate, the self-esteem gurus immediately jumped to their defense. "Outrageous!" they claimed. "If students failed, the tests must be flawed!" One educator even proclaimed that the students "would be stigmatized the rest of their lives because they don't have a diploma." Of course, asking the students to work harder, repeat a grade or achieve a meaningful goal is out of the question because such requests could damage the students' self-esteem. The result? Students who could not pass the ninth-grade test "graduated" and received a "diploma of attendance" (ironically, the fact that many of the students *didn't* attend classes was the basis for their problem). I'm sure that employers—people who care less about "self-esteem" than integrity and productivity— will be *very* impressed by a "diploma of attendance."

The delusion that results from our current emphasis on self-esteem rather than education is best shown by the results of an international study of 13-year-olds that found that Koreans ranked first in math and Americans ranked last. Only 23% of Korean youngsters claimed that they were "good at mathematics," as compared to a whopping 68% of U.S. youngsters. Apparently, self-esteem has little to do with one's ability to do math.

The products of our current emphasis on "self-esteem"—that is, grade inflation, lowered standards, meaningless diplomas and an ignorance of important skills—greatly compromise our work: We cheat students out of a quality education and give parents false hopes about their child's intellectual skills. Moreover, our teaching convinces students that achievement is an entitlement that is given, not earned. Luckily, life is not that way.

We cannot continue to equate higher self-esteem with lowered standards. If we do, we'll not only produce students who can't think, but also students who don't know what thinking *is*. At that point, self-esteem won't matter all that much.

We'll improve students' self-esteem most by helping and motivating our students to exceed *higher* standards. Only then will our students have accomplished something meaningful and will we have excelled at our work.

(Adapted from Spack, 1998, p. 136-138)

The Farce Called "Grading"

Arthur E. Lean

About the Author Arthur E. Lean, a professor at Southern Illinois University at Carbondale at the time he wrote this essay, is an educational philosopher. He is coeditor of *John Dewey and the World View* (1964) and coauthor of *Education or Catastrophe?* (1990).

The Context of the Reading "The Farce Called 'Grading'" is taken from Lean's book entitled *And Merely Teach: Irreverent Essays on the Mythology of Education* (1976). In the essay, Lean quotes four educators: Louis T. Benezet, Ernest O. Melby, William Clark Trow, and Thomas J. Fleming.

A sustained effort should be made to throw out false inducements to learning. In one way or another most of these refer to our obsession with grades. A few colleges that have ended the grading system, like those truly brave ones that have thrown out faculty ranks, have shown what can be done. It is possible to interest students in intrinsic learning, once we rid ourselves of the ancient hobby of making book on each performance. Grades may be useful for checking the memory of items of fact or the solving of pat mathematical problems. As a system for evaluating attainment of broad educational aims, it remains a failure. Few teachers have any systematic idea of how to grade fairly. Grading is also the chief villain behind the scandal of college cheating.

<div align="right">LOUIS T. BENEZET</div>

I have long ago reached the conclusion that the marking system itself is damaging in its impact on the education of our children and youth, and that it should go the way of the hickory stick and dunce caps. It should be abandoned at all levels of education.

<div align="right">ERNEST O. MELBY</div>

Of all the common practices in our schools, doubtless the most tyrannical and indefensible is our insistence on attempting to evaluate students' performance through a system of grades or "marks." The harm

done by this practice is incalculable, but we persistently cling to it in spite of its obvious unworkability. Every person who has ever gone to school can cite numerous instances of unfairness and injustice caused by grading systems and practices, but for some strange reason we seem to assume it to be necessary and intrinsic to the process of formal education.

Some years ago, when numerical grading on a percentage basis was more common than today, several experiments were conducted in an attempt to determine how precisely teachers could evaluate students' written work. In one well-known study, in order to "prejudice the garden to roses" an *exact* subject was chosen—mathematics, of course, because in that field, as everybody knows, things are either right or wrong—and a panel of experienced mathematics teachers, recognized by their peers for their competence, was assembled to do the evaluating. Student papers in plane geometry were graded by these expert teachers, each using an identical copy so as to eliminate any persuasive effect of extraneous factors such as neatness. The result was, of course, that the grades assigned to exactly the same paper ranged all the way from the 90s down to the 40s and 50s. And this in an *exact* subject where answers are "either right or wrong"! Similar results were obtained in other comparable studies.

The shift to letter-grading with fewer distinctions (the familiar A, B, C, D, with either E or F to designate failure) has not really solved the problem; it has merely reduced the number of categories (whereupon, of course, we promptly proceed recidivistically to attach plus and minus signs—multiple ones if single ones will not suffice). And of course we *must* have an equivalency table to indicate that A includes the range 93–100 or 90–100, B 85–92 or 80–89, and so on down, refusing in our obstinacy to recognize the fatal inconsistency involved: is A 93 or 100 or something in between? How about 95? 98? 96.123456789?

During the hectic post–World War II days I was pressed into service to teach Freshman Composition (Expository Writing) at a large university. There were more than a hundred sections of this course, each with a maximum of twenty-five students. We used a book of readings as a basis for class discussion and weekly themes. In addition to class sessions, each student had a short fortnightly conference with his instructor to go over his work and discuss ways of improving his written expression.

One of the "full" professors in the English department was in charge of all the teaching in this course, and he regularly convened the instructors—some seventy or eighty of us—for purposes of coordination and standardization of instruction. Usually at these sessions we were given identical copies of an actual student theme which had been selected at random and duplicated exactly as originally submitted. We took thirty to forty minutes to read and evaluate this short theme, whereupon we wrote on it a grade and an evaluative comment. Having listed our names alphabetically on the blackboard, the professor in charge then called them one by one, and each instructor responded to his name by stating the grade he had assigned to that theme. This grade was inscribed after his name on the blackboard.

Invariably the assigned grades on the same theme ranged all the way from A (excellent) to E (failure). Those instructors who judged that theme to be in either of those extreme categories were then called upon to stand up and justify their grades. This they usually did with great earnestness and sincerity, albeit with increasing reluctance, for in the process their own personal biases, prejudices, and confusions were soon revealed for all to see. (It quickly became obvious to many neophyte instructors that C-minus was an inconspicuous, colorless grade which would not require them to expose themselves to the public justification-humiliation process.) Most of the assigned grades tended, of course, to cluster in the middle of the scale, but there were almost always some on the extremes. But not once did we stop to consider the *student* who must maintain a certain minimum grade-average to stay in school, and whose mark on that theme might be A or E depending on which instructor he has!

All of us are familiar with the classic examples of students' submitting the same paper to different instructors (or even to the same instructor at different times!) and getting widely varying grades, of handing in obscure works of famous authors and getting them back marked "failure," and so on.

Grading tends to stigmatize and punish the less able student, who may be trying very hard but, through no fault of his own, simply did not inherit much in the way of native intelligence.

In spite of the staggering amount of incontrovertible evidence that grading not only does not accomplish its purpose but in reality inhibits and injures the educative process, we obstinately continue with this perverted practice.

After all, what is a "grade" supposed to be and do? Perhaps we could get general agreement on the statement that it is a symbol purporting to express a measurement of academic achievement—an evaluation of the quality and quantity of learning. Now, in order to measure anything, we need a standard such as a ruler or tapeline for linear measurement, a scale for measuring weight, and so on. By using such standards I can determine that the desk at which I sit is thirty inches high, and that its surface measures twenty-eight inches by twenty inches. I put my portable typewriter on a scale and determine its weight to be nine pounds. I look at the thermometer on the wall and discover that room temperature is sixty-eight degrees Fahrenheit. Other people using the same standards would arrive at the same results; any variations would be infinitesimal and certainly negligible for practical purposes.

If all this be so, then what sense does it make for us to speak of "giving" a grade to a student, or of his "earning" or "deserving" it? Do I "give" my desk a height of thirty inches? Does my typewriter "earn" a weight of nine pounds? Does this room "deserve" a temperature of sixty-eight degrees? Arrant nonsense, of course, but this ridiculous absurdity is exactly what we constantly do with our grading systems.

Compounding our criminal practices, we use grades for reward and punishment. Recently a coed sued her university because she claimed that her failing grade in one course was "unfair" and resulted from an attempt

"to discipline and punish her" for alleged wrongful conduct. She asserted that she had been found innocent by the university's disciplinary committee, but that the instructor and administrative superiors to whom she had appealed had refused to "raise the grade" to the B which she said she had "merited." And this occurred in an institution of what we fancifully call "higher learning"!

When students disobey instructions or otherwise transgress (often unintentionally) we say to them, "Because of this, I am lowering your grade five points (or one letter)." Such behavior is surely the epitome of cynicism, and if our students display disquieting evidence of becoming increasingly cynical, we have ourselves and our indefensible practices largely to blame. With grades, we *teach* them cynicism, to say nothing of lying, cheating, competitive throat-cutting, and other reprehensible practices.

"But," objects somebody, "after all, a grade is just a sort of *estimate*, and most teachers try to be fair and accurate in their estimates." Yes; most teachers try to be fair and accurate, but all the time they know—at least, those who are honest with themselves know—that they are attempting the impossible. No self-respecting teacher ever rests peacefully the night after turning in a set of grades, for he knows that the "system" has made a charlatan of him and he goes to bed hating himself for it. And as for the estimate, let us not disregard the fact that an *absolute* pass-or-fail system has no place for estimates. Is that 87 on your test paper an estimate? If it is, then mightn't it really be 88, or 86, or something else? Is that B-minus an estimate? No, indeed; when the reports come out, when the averages and grade-points are computed, when the failures are determined, when you are called in and told that you've flunked out of school, there is no room for estimates—this is a very *absolute* decision.

Incidentally, no teacher I know—myself included, God wot—can explain the precise difference between a B-minus and a C-plus, to say nothing of 60 and 59—or, for that matter, 60 and 59.999999999999.

"But," objects somebody else, "if grades are eliminated, what can we substitute for them?" This inevitable question reminds me of the books that have been written on the subject of how to stop smoking. Such a book can be written in one word: Quit!

We have had this asinine practice of grading in schools for so long that we unconsciously assume it to be necessary to the learning process, but this is a manifestly false assumption. Grades are one aspect of the artificial paraphernalia which we have deliberately superimposed upon education—along with courses, academic credit, "promotion," degrees, diplomas, certificates, commencement exercises, graduation, faculty rank, and so on *ad infinitum, ad nauseam.*

We hold these minatory requirements over the students because we assume that most of them are naturally lazy, stupid dolts who must somehow be coerced, cajoled, persuaded, threatened, strong-armed into learning what we have decided is "good for them." Much of this required material is dull, boring, meaningless, and will be forgotten almost immediately; and the way it is taught is even worse, but students realize that they must perforce jump through the hoops in order to emerge finally with

that coveted degree, that beribboned diploma upon which our society places such high value. What we invariably seem to forget is that this superimposed academic apparatus is not at all intrinsic to learning—not at all a *sine qua non* of education, formal or informal. *It is there because we put it there.* Just because we're accustomed to it, let us not delude ourselves into assuming that it is essential, organic or integral; it isn't. But once it becomes an established system, students often shift their motivations and values and begin to "work for grades." And when we talk to them about "earning" and "deserving" marks, we are only compounding this felony.

There have been successful attempts to eliminate marks. The Danish Folk High Schools and other brave experimental schools have gotten along very well without them. In place of report cards or transcripts covered with cabalistic symbols, written reports and parent-teacher (or parent-teacher-student) conferences are sometimes used to facilitate communication and understanding. For example, employers of young people find descriptive comments about such traits as dependability, resourcefulness, intelligence, honesty, ability to get along with others, and so on, much more meaningful than the conventional academic transcripts of prospective employees. If you were such an employer, would you prefer, on the one hand, a thoughtful evaluation from adults who have observed the young people closely over a period of time, or, on the other hand, an official piece of paper informing you about a C-minus in English history and a B-plus in college algebra?

Students themselves are so conditioned to grading that they soon become willing dupes of the system. They go to their instructors and ask, "How am I doing in this course?" But in most cases they already *know* how they are doing—better than the instructor does—and the fact that they ask the question demonstrates the unreliability of the system.

Some years ago I found a small midwestern town in which the editor of the local weekly newspaper regularly printed on its front pages the complete names and marks of all the children in that town's schools each time report cards were issued. This editor was obviously a sick man who needed immediate confinement in an institution, but his problem is illustrative of the pathology endemic to the practice of grading. Its elimination is more than I dare hope for in my lifetime.[1] But until the cancer is rooted out and destroyed we can hope for little real improvement in American education.

(Adapted from Spack, 1998, p. 130-134)

The End of Nationalism?

John Hockenberry

Revolution Frees People from Place and Time; Advancing Technology Destroys Borders

Who would have guessed that nationalism would end on Planet earth before the 20th century did, and that advanced technology, the coveted badge of national supremacy for the most sophisticated of the world's power, would kill it?

...

There's plenty of evidence to suggest that a formal declaration of the End of Nationalism might be premature (there are the situations in Bosnia, Rwanda, Angola and Chechnya ... I could go on). But considerably more permanent, if less tragic, phenomena of our era suggest that the linkage between ideology and national borders, and even linguistic identity, has been irrevocably broken.

For generations, science has predicted that the exploration of space would severe the tethers between humanity and the earth. Instead, it has done the opposite. Space travel is itself nationalistic enterprise, a high tech opportunity to plant flags and hold news conferences while running rather prosaic errands in near earth orbit.

In the past decade it has become possible to see how digital technology may finally hold the potential to free humanity from its shackles of place and time. The global history and culture that, for a millennium, has been dominated by defining and disputing notions of national identity, is shifting subtly but unmistakably. It is being siphoned off in to digital world where identity is no longer static, and attempting to categorize people according to their position in space is as meaningless as trying to find box of water in a river surging at your feet. In the digital domain, the lines around groups of citizens can not be neatly drawn and the overlapping between communities is the most important thing about them.

In 1987, the violent Palestinian uprising erupted inside the Gaza Strip and spread into the Occupied West Bank, affecting Palestinian communities from Lebanon and Syria to Jordan and Iraq. There had been such violence before and in every instance Israel had

moved to isolate the Palestinians inside military checkpoints and rigid rings of security. Since its creation in 1948 and territorial expansion after the 1967 war, Israel had always wrapped itself in a military cocoon. For Israelis, defense has always meant being insulated from their warlike neighbors behind a shield that only stayed of the art military technology could buy.

During the Palestinian uprising, better known as the *intifada*, the violence and the enemies were inside that traditional Israeli cocoon, so the army and security forces worked to isolate and disarm the Occupied Territories of the West Bank and Gaza Strip by wrapping the Palestinians in their own cocoons. The latest technology was incorporated into the security web, which relied on numerous levels of communication including satellite, telephone, wireless cellular, and fax. Israeli official had at their fingertips a detection system to keep people inside secure borders, monitor the movements, and prevent them from interacting with the outside world, especially the Palestine Liberation Organization (PLO) leaders and Tunis.

Everyday that the shield was in place a secret community of Palestinians sent and received faxes from PLO headquarters, via New York, London, Turkey, and other places. The fax machine's familiar digital shriek was as common as the Arabic call to prayer five times a day. By their very nature, faxes could not be tapped or stopped without obstructing the entire Israeli phone network. A fax confiscated in Gaza was easily replaced by one Jericho or Nablus, or even Nazareth, inside Israel.

The faxes called for strikes and various other forms of protest that were mostly ineffectual and easily controlled on the ground by the Israelis. The *intifada* claimed it wanted a tactical victory over Israel, but clearly the most stunning tactical victory of the uprising was the creation of this virtual/Digital nation, independent of border checkpoints and locations on a map. It was a network of fax machines around the world that broke the Israeli shield, revealed the limits of nation as place, and linked the Palestinians inside the West Bank and Gaza with the PLO on the outside. From Israel's outmoded defensive cocoon a new form of political activity was released that the world is still trying to get a handle on.

Today, only seven short years later, a half-billion people around the world interact on the internet in a space that is absolutely real but where notions of place and nationhood are utterly arbitrary, easily fabricated, and where the only flags are the posted home pages of individual users. Nations exist only as groupings of convenience for the discussion of common ideas, to argue and protest, or for commercial exchange. These distinct groupings of ideology grow and die in the cyber-domain. Nations are formed and disbanded, absorbed, destroyed, and conquered with a speed that no geology or planet-based history can dispute.

In digital technology, it is not the absolute performance of an innovation that drives change; it is the incremental effect of hundreds of millions of hybrid changes and combinations of low- and high- tech by diverse populations of users. Participation traditionally drives democratic politics, and in the cyberdomain, on the digital

infrastructure beyond internet, participation is the politics, is the space, and the battlefield all rolled into one.

Also seven years after the *intifada* began, a peace process had set the flag of Palestine flying over Gaza and areas of the West Bank. The process is crude and rocked by periodic carnage and it may even go away. But what will not go away, and is probably more revolutionary, is Israel's access to the internet as of the first of this year. Today, unlike of most human history, there is a place where Israelis and Palestinians can interact without having to identify themselves ethnically, religiously, or politically. In cyberspace an Israeli school- child can, in theory, e-mail Chairman Yasser Arafat of the PLO, something that until very recently was a seriously treasonous offense in Israel. If Arafat ever gets an address in the Internet he will probably get more questions about garbage collection in Gaza than anything else. This delightful marriage of high- and low-tech feeds the true user-based revolution of the digital world.

There are similar changes in Russia and among the nations of the former Soviet Union, in Europe, America, and India (I could go on). The outmoded cocoons have been abandoned as wealth is slowly being channeled away from defense and military infrastructure and into the information infrastructure.

The world may some day be able to take advantage of the potential efficiencies of trade and politics online rather than in the nationalistic model where they are always mediated through security checkpoints and confiscatory tax barriers and licenses. With billions of humans available online, wealth can be distributed a few cents at a time in trillions of transactions per day. Profit and loss are no longer local boom-and-bust distortions but subtle non-threatening shifts of wealth as people with common interests find each other.

Hyperbole aside, the participation that drives the digital revolution is not because of some over-enthusiastic analyst's claims that it will some day lead to world peace or another utopia. Just as there was no checkpoint to stop the PLO faxes during the *intifada,* today it is possible to address the world without having to show a passport that defines you culturally, ethnically, or religiously. That is a revolution.

(Adapted from Holeton, 1998, p. 156-159)

APPENDIX F
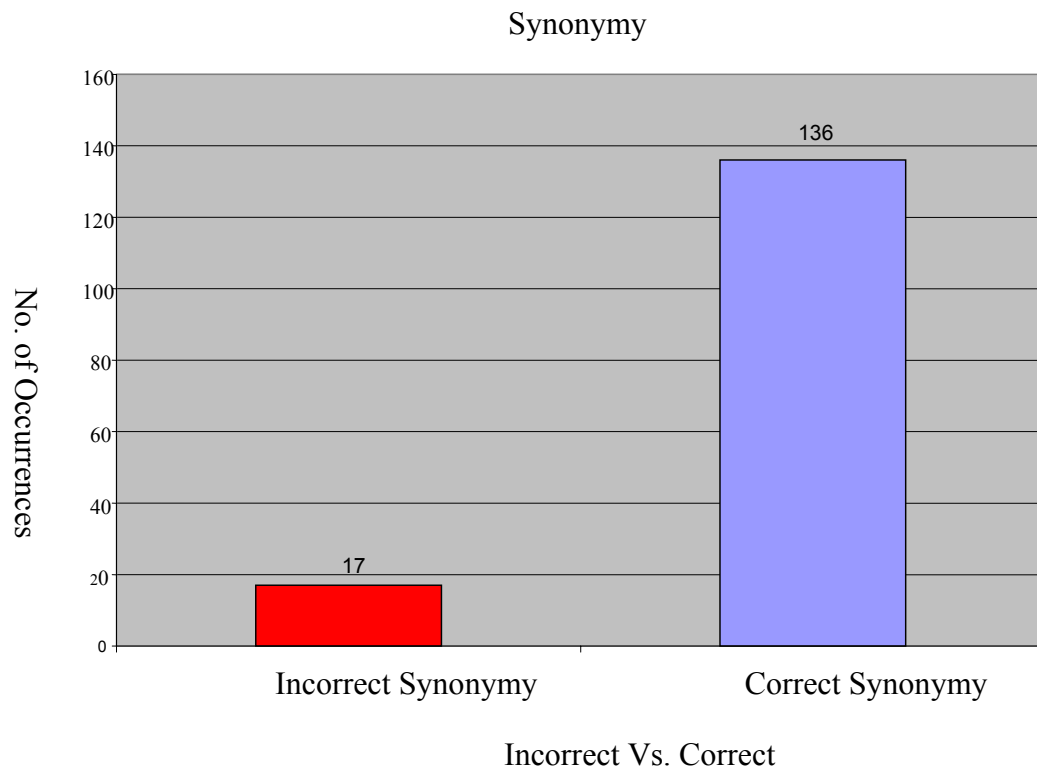
Figures

Figure C: Correct vs. Incorrect Usage of Synonymy

Synonymy

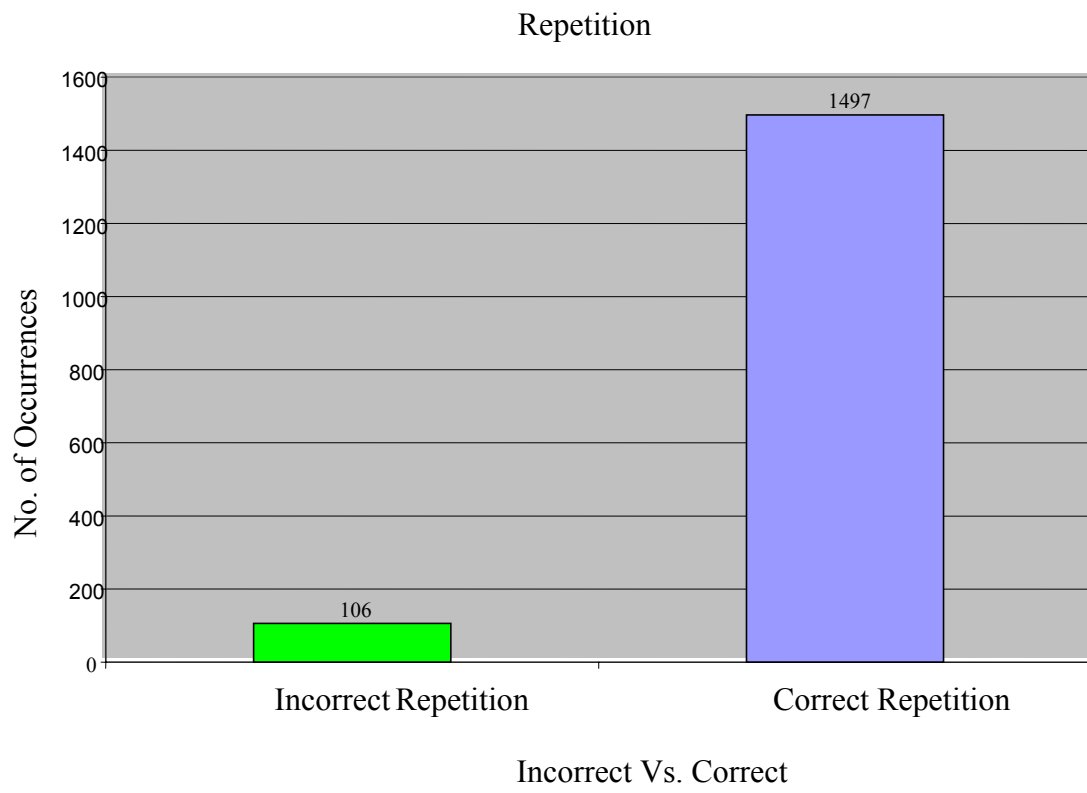Figure D: Correct vs. Incorrect Usage of Repetition
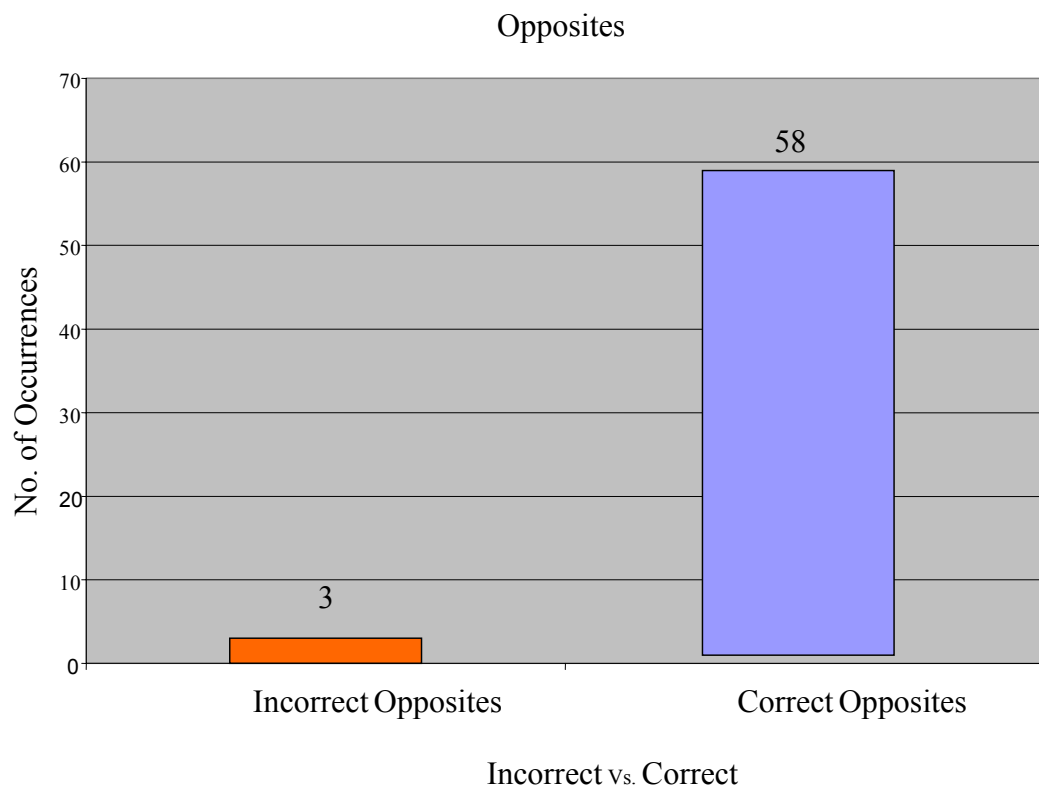
Figure E: Correct vs. Incorrect Usage of Opposites

Opposites

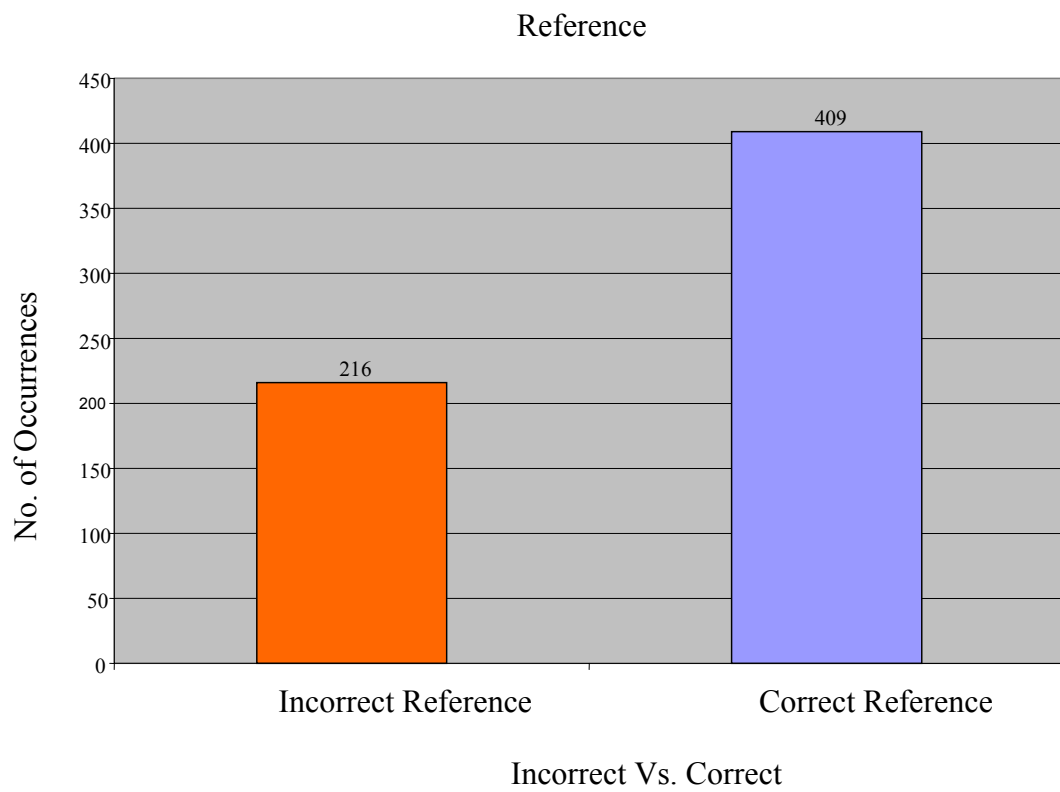Figure F: Correct vs. Incorrect Usage of Reference
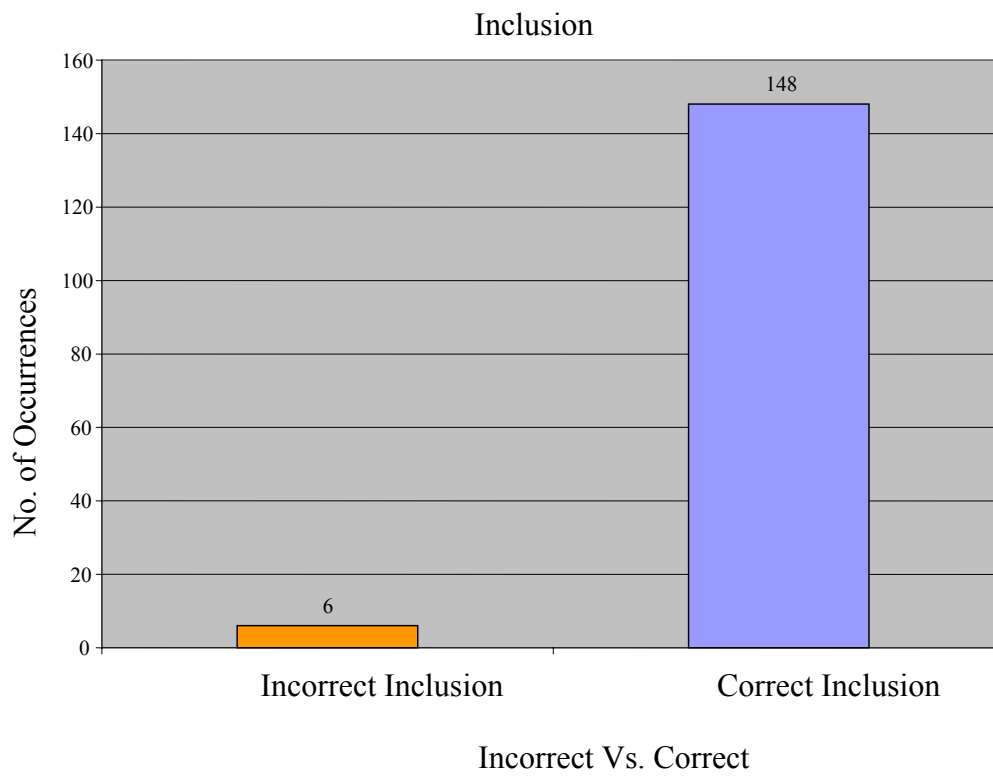

Reference

Figure G: Correct vs. Incorrect Usage of Inclusion

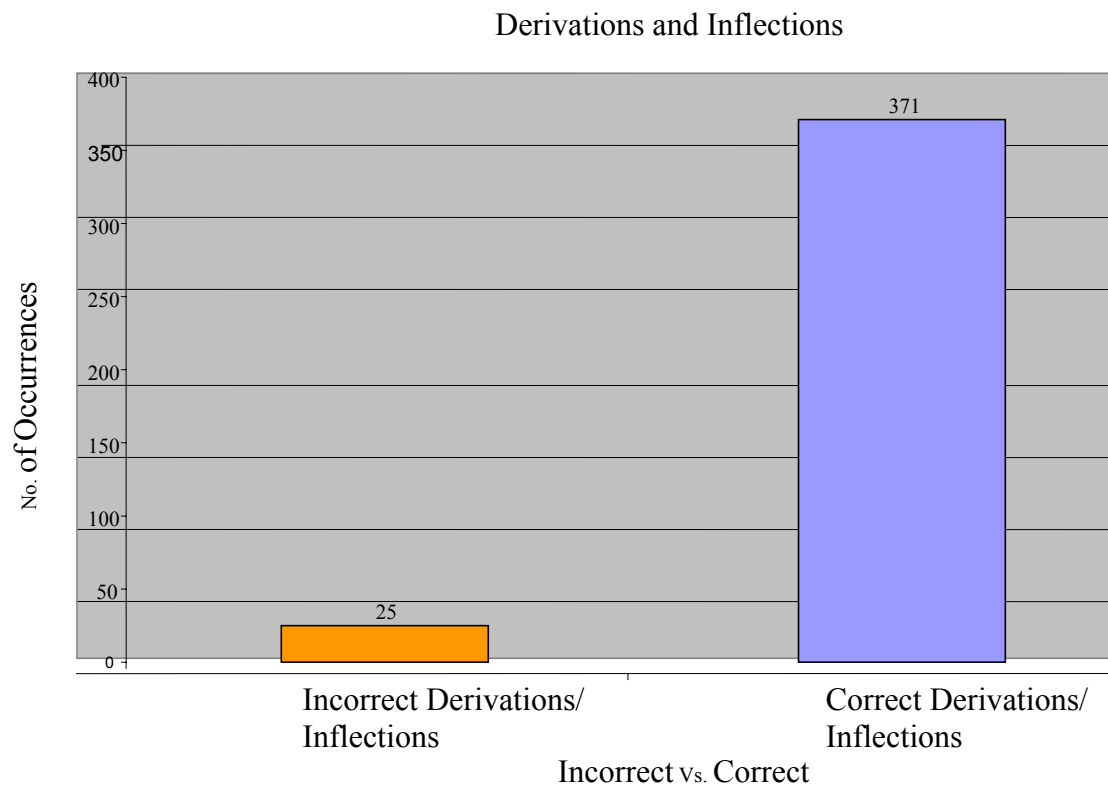Figure H: Correct vs. Incorrect Usage of Derivations and Inflections
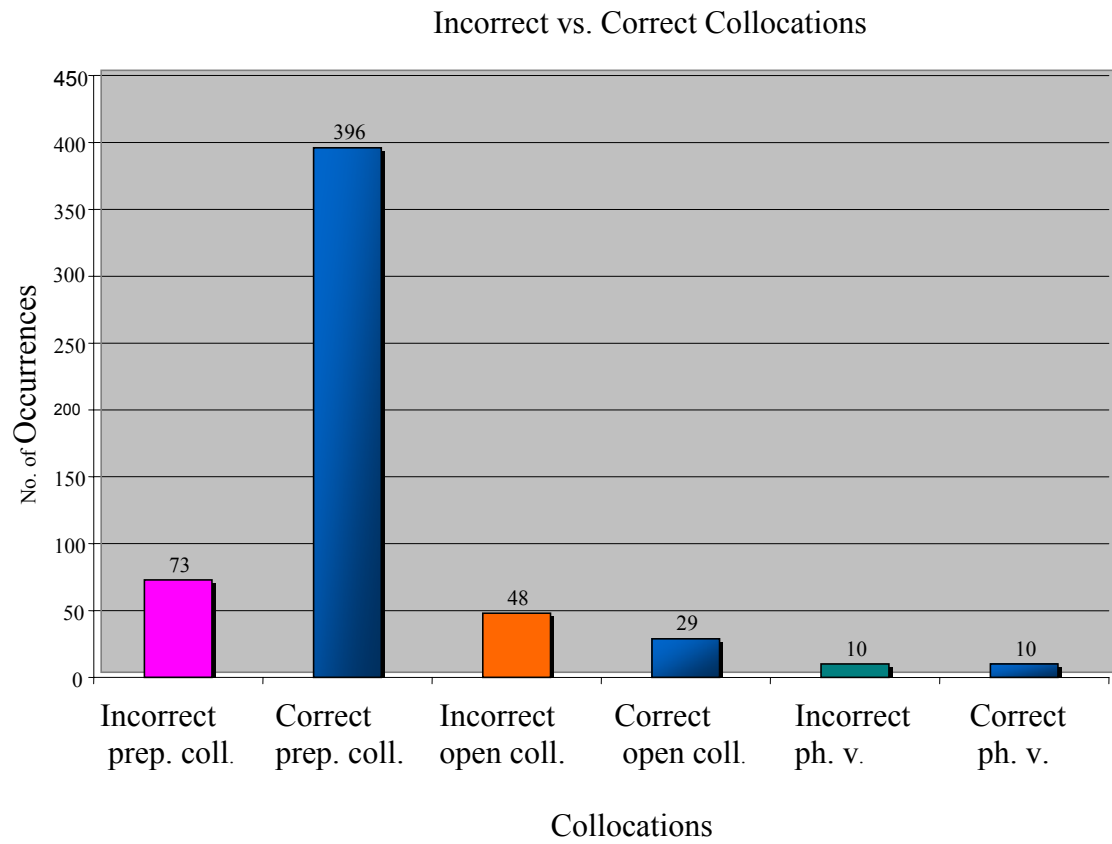
Derivations and Inflections

Figure I: Percentage of Correct vs. Incorrect Collocations

VITA

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