Effectiveness of Corpus Consultation through Concordancing on the Formulaic Academic Language Use of Freshman ELT Students

Thesis Submitted to the

Instute for Graduate Studies in Social Sciences

in partial fulfilment of the requirements for the degree of

Master of Arts

in

English Language Education

by

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2006

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June 2006

ABSTRACT

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This study aims to examine the effectiveness of corpus consultation through concordancing on non-native English speaker freshman ELT students' use of the formulaic language features characterizing the summary of a research article and the rhetorical moves of the research paper introduction (RPI) within a genre-specific perspective; the reported confidence levels of the learners with respect to these writing tasks and their opinions about concordancing. The experimental group using concordancing included 30 and the control group 28 participants. Quantitative data were analyzed via mixed design analyses of variance and independent samples t tests. Results showed that the means of the three measurements of summary writing for the experimental group did not differ significantly from those for the control group. However, a main effect of time was found for both groups from the first to the last measurement. Furthermore, the groups did not significantly differ in their use of formulaic sequences in an RPI and in productive and receptive knowledge of these sequences. A self-evaluation questionnaire and semi-structured interviews served as the qualitative data. The questionnaire data revealed no significant difference in the levels of reported confidence in summarizing a research article and writing an RPI. However, both groups reported higher level of confidence in writing an RPI. Inductive content analysis of the interview data revealed that while concordancing

helped learners gain awareness of the formulaic academic language used by expert writers, and act as researchers of language, such activity needed to be tailored to individual differences through challenging and motivating task design.

KISA ÖZET

‘Concordance’ Adlı Sorgu Yazılımı ile Derlem İncelemenin İngilizce Öğretmenliği Birinci Sınıf Öğrencilerinin Akademik Dile Özgü Kalıp Kullanımları Üzerindeki Etkililiği

Fatma Anğ

Bu çalışmanın amacı ‘concordance’ adlı sorgu yazılımı aracılığıyla derlem (corpus) üzerinde inceleme yapmanın, İngilizce Öğretmenliği bölümünde okumakta olan birinci sınıf öğrencilerin akademik dil kalıplarını kullanmayı öğrenmekteki etkililiğini incelemektir. Söz konusu inceleme üç noktada odaklanmaktadır: Bir araştırma makelesinin özetini çıkartmakta ve bir araştırma yazısının giriş bölümünde geçen belirli retorik adımlara özgü dilin kullanımı; bu tarz metinleri yazmaya duyulan güven ve ‘concordance’ kullanımı ile ilgili görüşler. ‘Concordance’ kullanan denek grubu 30 öğrenciden, kontrol grup ise 28 öğrenciden oluşmaktadır. Araştırmanın nicel verileri karma değişke çözümlemeleri ve bağımsız örneklem t-sınaması ile incelenmiştir. Kalıp kullanımının özet çıkartmada sınandığı üç ayrı ölçümde de iki grup arasında istatistik açıdan anlamlı bir fark bulunmamıştır. Ancak birinci ve üçüncü ölçümler arasında her iki grupta da istatistiksel açıdan anlamlı bir artış görülmüştür. Ayrıca bir araştırma yazısının giriş bölümünde geçen dil kalıplarının kullanımında ve bu tarz kullanıma ilişkin bilgi düzeyini ölçme sınavında gruplar arasında anlamlı bir fark bulunmamıştır. Öğrencilerin kendilerini değerlendirdikleri anket ve yarı yapılı soruların yönlendirildiği görüşmeler çalışmanın nitel verilerini sağlamıştır. Anket sonuçlarına göre iki grup arasında söz

konusu metinleri yazmaya duyulan güvende bir farklılık görülmemiştir; ancak her iki grup da bir araştırma yazısının giriş bölümünü yazmakta daha fazla güven dile getirmiştir. Görüşme dökümlerinin tümevarımlı içerik çözümlemelerinden çıkan sonuca göre, derlem üzerinde 'concordance' ile çalışmak, öğrencilerin uzman yazarlarca kullanılan akademik dil kalıplarının farkına varmalarını ve dil araştırmacısı rolünü üstlenmelerini sağlamıştır. Bu tarz bir çalışmanın bireysel farklılıkları gözeterek öğrencileri iyi yönde zorlayan ve motive eden ders etkinlikleri çerçevesinde sunulması gereği saptanmıştır.

ACKNOWLEDGEMENTS

I would like to express my warmest thanks to my thesis advisor Assistant Professor Dr. Gülcan Erçetin above all for the initial encouragement she has given me in pursuing my interest in the relatively unexplored field of applied corpus linguistics. Apart from greatly guiding me in the research design and analyses of my research, she has offered invaluable assistance in the operation of the study. Her constructive criticisms during the writing of my thesis have enabled me to put many pedagogical issues into perspective. I am also thankful to her for being so approachable and helpful at the most hectic of times.

Besides my advisor, I would also like to thank the members of my thesis committee, Associate Professor Dr. Arif Altun and Assistant Professor Dr. Senem Yıldız for the time they have dedicated to the reading of my thesis and all the valuable comments they have made. My very special thanks go to Dr. Senem Yıldız, who generously allowed me to exploit the follow up sessions of her Study and Research Skills course, convened with me on several occasions during the preparatory stages of the study and kindly agreed to collaborate in evaluating the research papers used for the purposes of the study. She was always welcoming and supportive during the course of this work.

I am also grateful to Neslihan Arslan, the teaching assistant of the follow up sessions, who made every effort to ensure smooth operation of the study. She spared her valuable time not only for being trained on concordancing but also the marking of the many summary writing tests. I would also like to thank all the subjects who

participated in this study and especially those who contributed with their comments during the interviews.

I received the kind support of two other teaching assistants at the Department of Foreign Language Education. I would like to take this opportunity to thank Nazik Dinçtopal, and especially Yavuz Gösterişli for the technical support he has given in the computer laboratory.

I am also greatly indebted to several colleagues at Boğaziçi University, School of Foreign Languages. Deniz Atlı, Kerban Hanöz, Şirin Mesbah, Pınar Pekel and Dr. Aylin Ünaldı offered their expert opinion and feedback during the development of the formulaic sequences test. Dr. Ünaldı's contributions are not limited to such feedback only; she has always supported me by providing resources, a sound academic perspective as well as encouragement. I am also especially grateful to Meltem Gürle, Pınar Pekel and Ülker Bilgin who not only generously allowed me to use their valuable class hours for the piloting of the test but also provided me with highly insightful comments during the validation of the test.

Last but not least, I would like to thank Serdar Katipoğlu of Bilgi University and above all Müçteba Anğ for the assistance they have given in locating and reaching various sources to be used in this study.

TABLE OF CONTENTS

ABSTRACT.....iii
KISA ÖZET.....v
ACKNOWLEDGEMENTS.....vii
TABLE OF CONTENTS.....ix
LIST OF FIGURES.....xi
LIST OF TABLES.....xii

Chapter

1.
INTRODUCTION.....1
Corpus Data as a Source of Information……4
Corpus Related Issues……5

2. REVIEW OF LITERATURE.....20
Pedagogical Applications of Corpus Linguistics in Applied Linguistics……..20
Methodological Framework for Corpus Consultation by Learners……...37
Studies Involving Corpus Consultation through Concordancing……..44
Conclusion……56

3. METHODS AND PROCEDURES.....60
Introduction……...60
Research Questions……...60
Definitions and Measurements of Variables……62
Subjects……63
The Experiment Setup……..64
Data Collection Instruments……78
Procedures……92
Data Analysis……96
Summary……...99

4. RESULTS.....102
Introduction……102
Results……103
Conclusion……..130

5. DISCUSSION AND CONCLUSION.....132
Discussion.....133
Pedagogical Implications.....137
Limitations of the Study.....138
Suggestions for further Research.....141

APPENDICES

A. List of Articles Included in the Corpus……..144
B. FLED Laboratory Syllabus…….....146
C.01 Lesson Plans for the Control Group for Weeks 1-7……147
C.02. Lesson Plans for the Experimental Group for Weeks 1-7…….155
D.01. Formulaic Sequences Test…….162
D.02. Formulaic Sequences Test Answer Key……166
D.03. Language Features Corresponding to the Moves……..167
D.04. Task Familiarity Worksheet 1……...169
D.05. Task Familiarity Worksheet 2……...171
D.06. Task Familiarity Worksheet 3……...172
E.01. Summary Writing Test 1……174
E.02. Summary Writing Test 2……175
E.03. Summary Writing Test 3…….....176
F. Mark Scheme Used for the Summary Writing Tests……..177
G. Grading Rubric Used for the Research Paper Proposal…….....178
H. Self-evaluation Questionnaire……....179
I. Semi-structured Interview Questions……...180
J. Feedback on the Second Summary Writing Exam……..181

REFERENCES.....182

LIST OF FIGURES

Figure 1.1 Screenshot of a sample concordance output

Figure 3.1 Screenshot for the concordance function

Figure 3.2 Screenshot for the citation mode

Figure 3.3 Screenshot for the word forms mode

Figure 4.1 Estimated marginal means of formulaic language scores on the summary writing exams

Figure 4.2 Estimated marginal means of reported confidence levels for the writing of the summary of a research article and the writing of a research paper introduction

LIST OF TABLES

Table 1.1 Tognini-Bonelli's Contrastive Outline of Text and Corpus

Table 3.1 General Overview of the Laboratory Sessions

Table 3.2 Composition of the FLED Corpus

Table 3.3 Create a Research Space (CARS) Model for Research Article

Table 3.4 Summary of the Research Questions and the Corresponding Procedures

Table 4.1 Descriptive Statistics for the Use of Formulaic Sequences in Summary Writings across Groups

Table 4.2 ANOVA Summary Table of Scores in the Use of Formulaic Sequences in the Summary Writing Exams

Table 4.3 Pairwise Comparisons among the Three Main Effect Means for the Time Factor

Table 4.4 Descriptive Statistics for Scores Obtained on the Language Component of the Research Paper Proposal

Table 4.5 Descriptive Statistics for Scores Obtained on the Formulaic Sequences Test

Table 4.6 Descriptive Statistics for the Level of Reported Confidence in Writing the Summary of a Research Article and in Writing a Research Paper Introduction

Table 4.7 ANOVA Summary Table of Level of Confidence in the Writing of the Summary of a Research Article and a Research Paper Introduction as Reported in the Self-evaluation Questionnaire

Table 4.8 Reported Advantages of the Tool Used by Each Group

CHAPTER 1

INTRODUCTION

During the course of the past four decades and with the acceleration in the development of computer technology in terms of the processing speed and storage capacity of electronic data, structured compilation of written or transcribed speech texts in electronic form; that is, the collection of texts as corpora for linguistic analysis and description has led to the emergence of a presently well-established field of research called corpus linguistics. This field of research or rather 'methodology', as suggested by several scholars (Granger, 2002; Meyer, 2002; McEnery & Wilson, 2004), has served various research agendas in theoretical, descriptive and applied language studies by providing primary language data as evidence that can be used to complement other sources of data in a machine-retrievable form which enables quantification of the distribution of language items for empirical support or falsification. Almost two decades ago, in his general introduction to a corpus-based approach, Leech (1987) listed orthographic, acoustic, morphological, syntactic, semantic and pragmatic analyses of language as the kinds of research endeavours made possible by corpora. More recently, the methodology of

corpus linguistics has been reported to have benefited a wider variety of areas such as lexicography, translation, stylistics, grammar, gender studies, forensic linguistics, computational linguistics as well as language teaching. As the scope of corpus linguistics has been determined by the research agendas of its users from such diverse fields of study for a multitude of purposes, the term corpus has been operationalized in different ways depending primarily on its intended use. Notwithstanding the fact that there is no single clear-cut definition of the term, one common denominator that can be identified in differing, yet at times, intersecting research agendas is the exploitation of either 'complete texts' or 'excerpts of texts' compiled from written or spoken discourse.

Within the framework of second language pedagogy, corpus-based research has had varying degrees of repercussions in the areas of syllabus design, materials development, teaching methodology, as well as language testing. As a very recent development, corpora have been suggested as reliable and valid bases for second language testing (Read and Nation, 2004), and others have conducted preliminary investigations into the psycholinguistic validity of recurrent lexical clusters derived from corpora for possible use in applied linguistic applications (Schmitt, Grandage and Adolphs, 2004). Furthermore, Coxhead (2000) used a corpus of 3.5 million running words of written academic text to develop the new *Academic Word List* to help learners with academic goals focus on the academic vocabulary encountered in a wide range of texts from several disciplines of study. The very recent development of the use of the *World Wide Web* as the ultimate corpus for the study of, for example, grammatical constructions in various online resources can be exemplified by the "Grammar Safari" methodology developed at the University of Illinois.

Finally, there have been suggestions for teaching strategies (e.g. Meyer, 2002), while data-driven learning (Johns, 1991a; 1991b; 1994) and discovery or serendipitous learning (Bernardini, 2002) approaches have advocated language learners' studying corpora by means of a data retrieval software programme called concordancer, which is one of the most widely used search tools in approaching corpora, especially in the field of applied linguistics, and an implementation considered to be an extremely powerful hypothesis testing device for second language learners (Kennedy, 1998).

In line with such research endeavours that have exploited corpora and concordancers in applied linguistics, the purpose of the present study is to examine the effectiveness of concordancing on non-native English speaker freshman ELT students' use of the formulaic language features typically characterizing the summary of a research article and the specific rhetorical moves of the research paper introduction within a genre-specific perspective, and the opinions of these students about corpus consultation through concordancing.

The next section presents an overview of the areas in which corpus data have been used as a source of information, corpus related issues such as different definitions of what a corpus is, the search tools in general and concordancer in particular available for the retrieval and organization of data from a corpus as well as the three major issues of representativeness, type and size. Through an overview of these issues, this introductory chapter attempts to establish the basics of the second chapter which presents a literature review of the pedagogical applications of corpora in applied linguistics. The second chapter includes a discussion of corpus-based analyses and the actual use of corpora for pedagogical purposes within a methodological framework as well as an overview of the studies involving corpus

consultation through concordancing, followed by a statement of the purpose of the present study.

Corpus Data as a Source of Information

A recent and comprehensive account of the various research agendas that have found corpora to be very insightful is provided by Meyer (2002), who reports that there is a wealth of studies exploring specific linguistic constructions. Among the well known corpus-based reference grammars cited are Quirk, Greenbaum, Leech, and Svartvik's *A Grammar of Contemporary English* and *A Comprehensive Grammar of the English Language*; and Biber et al.'s *Longman Grammar of Spoken and Written English* that provides information on the form, frequency and usage of structures in various genres of spoken and written English. Work in the field of lexicography has also been prolific with, among others, *Collins COBUILD English Dictionary, BBC English Dictionary, Cambridge International Dictionary of English, Longman Dictionary of Contemporary English,* and *Oxford Collocations Dictionary for Students of English*. A highly inspirational contribution in the area of language variation has been made in 1988 by Biber (as cited in Meyer, 2002), who, following extensive analyses on the linguistic differences between speech and writing, found that a continuum exists between the two rather than a strict distinction. The Child Language Data Exchange (CHILDES) System has helped generate extensive research on language acquisition as well as inspire the compilation of second language learners' corpora, such as the Longman's Learner Corpus and the Hong Kong University of Science and Technology (HKUST) Learner Corpus. Contrastive

interlanguage analysis of the use of, for example, lexicalized phrases in native and non-native speakers' data has constituted yet another research agenda (e.g. Altenberg and Tapper or Foster in Meyer, 2002). Furthermore, studies in historical linguistics, contrastive analysis and translation theory and natural language processing have been seen to add to the rich nature of the research agendas benefiting from corpora**.** More specifically, descriptive linguists have made use of computerized corpora to give an empirically reliable description of the language together with the frequency of use information by means of lexical studies with a primary focus on collocations, indicating to an interconnectedness of lexis and grammar; grammatical studies centred on the morpheme or word as well as the sentence levels; works on pragmatics and spoken discourse; and studies of variation in spoken versus written discourse across different registers, genres or dialects (Kennedy, 1998; Mitchell and Myles, 2002; Biber, Conrad & Cortes, 2004). Last but not least, exploitation of corpus-based linguistic description for use in a variety of areas such as language learning and teaching has been found to be the most innovative area of activity (Kennedy, 1998).

Corpus Related Issues

Definitions

Sinclair (1991) defined corpus as a collection of texts of naturally-occurring language compiled to identify the characteristics of a state or variety of a language. According to Kennedy (1998), corpus linguistics is "based on bodies of text as the

domain of study and the source of evidence for linguistic description and argumentation" (p.7), and quantification of the distribution of linguistic items found in the corpus is part of its research activity. Partington (1998) draws attention to the fact that currently available corpora are far more heterogeneous as opposed to the definition made by W. Nelson Francis, co-compiler of the first computerized corpora created at Brown University back in 1982: "…a collection of texts assumed to be representative of a given language, dialect, or other subset of a language, to be used for linguistic analysis" (p.2). With a view to presenting a general contemporary description of corpora as they are used in linguistic description, Partington lists style and authorship, historical, translation, register, lexis, syntax, text, and spoken language studies as well as lexicography as some of the main uses to which corpora are put. Partington (1998) argues that the corpus serves as a resource against which intuitions about grammar can be tested and a motor which can help grammarians generate their intuitions, which opens up a new line of philosophy for language description. Conrad (2000) defines corpus linguistics as "the empirical study of language relying on computer-assisted techniques to analyze large, principled databases of naturally occurring language" (p.548). Tognini-Bonelli (2001) takes corpus as "a computerized collection of authentic texts, amenable to automatic or semi-automatic processing or analysis" (p.55). In her view, since the texts included in a corpus do not lose their textual identity and the original source of the given language is accessible upon demand, issues such as text typology and register can easily be studied. Tognini-Bonelli provides the following useful outline of the series of contrasts between her understanding of corpus and text:

Table 1.1 Tognini-Bonelli's Contrastive Outline of Text and Corpus

A TEXT	**A CORPUS**
Read whole	Read fragmented
Read horizontally	Read vertically
Read for content	Read for formal patterning
Read as a unique event	Read for repeated events
Read as an individual act of will	Read as a sample of social practice
Instance of *parole*	Gives insight into *langue*
Coherent communicative event	Not a coherent communicative event

Relating corpus linguistics to the fields of language teaching and translation, Tognini-Bonelli views corpus work as an empirical approach to the description of language use, operating within the framework of a contextual and functional theory of meaning and utilizing new technologies. The justification for her designation of this field of research as empirical is that, similar to all types of scientific enquiry, the starting point is actual authentic data, and the procedure used to describe the data is inductive in that observations of the actual instances of language result in theoretical statements.

Meyer (2002) refers to corpora of recent times as bodies of text made available in computer-readable form for purposes of linguistic analysis. Hunston (2002) argues that a corpus is different from a library or an electronic archive in that the idea behind the compilation of a corpus is not to preserve or access texts to read them for their intrinsic value, but to study them in a non-linear fashion, both quantitatively and qualitatively for a specific purpose. McEnery and Wilson (2004)

claim that, in principle, any collection of more than one text can be called a corpus, and that a corpus may be defined as any body of text, with the term simply being derived from the Latin for ‘body’. However, they add that within the context of modern linguistics this basic definition has acquired a different character, given the considerations of sampling and representativeness, finite size, machine-readable form and a standard reference. More specifically, they define corpus as a “finite-sized body of machine-readable text, sampled in order to be maximally representative of the language variety under consideration” (p.32). On the whole, they consider corpora to be important sources of data for empirical linguistic research mainly because they offer the possibility of making generalizations to larger populations based on representative samples; are easily accessible via retrieval software such as a concordance programme; provide enriched data thanks to part-of-speech annotation, grammatical parsing and prosodic transcription; and finally because they provide naturalistic data that are largely unmonitored and the product of real social contexts, reflecting language in use.

Corpus Search Tools

An overview

The grammatical analysis of a corpus can be performed by means of either a programming language such as *Python, Visual Basic*, or *Perl* used with scripts which are commonly available or which a researcher with the necessary programming skills

can write for himself to extract the required information, or alternatively by means of a general-purpose software application such as a concordancing programme. While the two techniques feature very similar functions, the former one has been considered to be more suitable for those researchers with programming experience as they can easily make modifications that would meet their specific needs rather than rely on the fixed properties of more often than not commercially available software (Meyer, 2002). In a corpus consisting of raw texts and no grammatical annotation, a search for strings of characters, a specific word or groups of words, or classes of words with specific prefixes and suffixes can be performed. In a corpus annotated for semantic or discourse units, not only strings of characters but also higher-level elements larger than the word, clause or sentence can be searched, which in turn allows for a wealthier and more specific range of information to be recovered from the data. Among the software programmes that require no programming skills are the *Linguistic Data Base* (LDB) for analyzing the Nijmegen Corpus and *Sara* for analyzing the British National Corpus (BNC) as well as numerous different concordancing programmes that can be run on PCs, Macintoshes, Unix work stations and the World Wide Web.

More recently, some text analysis programmes, such as *WordSmith* (Scott 1999, 2005), have been developed to include certain capabilities other than frequency count with a view to understanding whether the results of a given search are statistically significant and comparable with a given reference corpus or individually specified texts in terms of the ‘keyness’ of certain words or phrases as revealed by comparable wordlists, which can then be used in comparative text analyses across different genres. Furthermore, there are now various freely available corpus

interfaces that allow quick and easy search for a wide range of words and phrases of English (e.g. The *Variation in English Words and Phrase or the Web Concordancer,* made available on the Internet by the Virtual Language Centre of Hong Kong University*)* in a number of corpora. Some of these even allow for register-based search for words and phrases by exact matches, wildcards, and parts of speech or collocates. Such interfaces may even incorporate information from WordNet (a semantically-organized lexicon of the English language developed by Princeton University) directly into the search form, which further allows finding the frequency and distribution of words with similar, more general or specific meanings.

For the purposes of the present study, however, the next section focuses on one of these corpus search tools; namely concordancer, a tool that has been designated as "the most widely used corpus-based technique or activity associated with learner-controlled exploratory interaction" (Kennedy, 1998, p.293).

Concordancer

The frequency of use or patterning information presented by corpora is revealed most commonly by the simple information retrieval tool called concordancer. Concordances in the form of a reference book in which all the occurrences of a word were provided together with a list of its contexts were originally used in biblical scholarly work well before the invention of computers, as early as the 13th century, when a complete concordance of the Latin Bible was produced. However, it was only in the 1980s that concordancing software came to be used as a tool for language learning (Tribble and Jones, 1990; Stevens, 1995). What the state-of-the-art software

is capable of doing on texts in electronic form very quickly and reliably is basically the same task that was carried out manually by a great amount of human resources many centuries ago: i.e. retrieving the occurrences of a particular word or phrase and displaying it in its immediate context.

Modern software helps reveal patterns in naturally occurring language via a conventional function known as KWIC (keyword in context) in which the keyword or the 'wildcard search' appears in a column in the middle of the screen with as much context (or immediate text) as is possible or required given to the immediate right and left of the search word. Figure 1.1 provides a typical and partial view of a concordance output for the search item 'research' from the mini-corpus compiled for the purposes of the present study.

ical evidence for this conclusion. Thus, further research is necessary before conclusions can be made rega
entered process. These findings call for further research examining the connections between learners' beli
the learner's production as problematic. Further research exploring the source of developmental benefits a
eems to corroborate this interpretation. Further research is required to investigate this area of belief in
cross and within different institutions. Further research within a tighter context may be desirable. Despi
word-for-word, paraphrased, and summary. Further research into the use of mental translation has shown its
ational context. It remains to be seen if future research will confirm our findings. Fifth, we found that
ful in conceptualizing and conducting such future research on L2 inferencing.
lty of the reading tasks or texts? Second, future research needs to investigate whether the findings of thi
roblems; this is a possible direction for future research. 3.5.5. The importance of conscious knowledge
haps an area of interest to be pursued in future research. Moreover, the effects and effectiveness of CMC-
at need to be considered. Other areas of future research on the roles of attention and awareness include
erious. This question can be addressed in future research using more in-depth case studies of individual l
termediated negotiated interaction. 6.1. Future research The further investigation of the role of verbali
issue related to methodological validity, future researchers might also want to empirically address the re

Figure 1.1 Screenshot of a sample concordance output

Depending on the search criteria or priorities of the user, the keywords or groups of words with all possible grammatical inflections may be sorted alphabetically, in ascending or descending frequencies, or according to left- and right-hand sorting. In most software, the number of words contained to the right or left of the search item

can be specified, and if need be, thanks to a further viewing function, it is now possible to access even the whole text from which the concordance line has been retrieved. Accompanying KWIC in almost all modern software is the wordlist function which serves as a list of all the word forms or types in a text or corpus listed alphabetically. The number of tokens, that is, the occurrences of each type, is also made available. Another powerful feature of some concordance programmes is the collocation generator which helps to identify strings of text repeated at a specified number of times and determined by the parameters set by the user (Meunier, 1998). On the whole, conducting simple searches for words or groups of words, displaying the results of a search in KWIC format and calculating the frequency of the item being searched in the corpus are the three most common features of any concordancing programme. Some programmes feature more sophisticated search options such as “lemmas” (e.g. all the forms of the verb *be*), provided that the corpus under investigation has been lemmatized; in other words, the corpus has been subjected to a procedure in which all instances of, for example, *be* have been linked together to yield *am, is, was,* etc. at a single search.

Hunston (2002) notes that a corpus does not offer us any new information about language but that the software which is used to access a corpus opens up a new perspective on the familiar. She lists the display of frequency, phraseology, and collocation as the three ways in which currently available software alternatives process electronic data. In explaining the search possibilities offered, Hunston emphasizes that “through concordance lines, the user is allowed to observe regularities in use that tend to remain unobserved when they are met in their normal contexts.” (p.9) However, Meyer (2002) warns that despite the feature of automated

extraction of information, any corpus analysis will necessitate manual sorting of the data to eliminate unwanted items and organize data in accordance with the objectives of the search.

Corpus Type

Types of written and/or spoken corpora have become diversified parallel to an increasing interest in the use of corpora promoted by the possibility of quick, reliable and systematic analyses of large amounts of data thanks to improvements in computer technology. While Sinclair (1991) discussed the benefits of mainly large corpora of general purpose more than a decade ago, he (2004) presently acknowledges that there are now a wide variety of corpora as well as corpora which vary within a single collection, making it possible for researchers, teachers, students or a combination of any of these to explore a particular use of language.

Stating that the purpose in building a corpus determines its type, Hunston (2002) classifies modern corpora in the electronic medium into eight discernible types: *specialized corpora* which contain texts that aim to be representative of a specific type of text such as newspaper editorials, lectures, academic articles in a particular subject, student essays or conversations [e.g. the Michigan Corpus of Academic Spoken English (MICASE) or Cambridge and Nottingham Corpus of Discourse in English (CANCODE)]; *general corpora* that contain a wide variety of texts, in often greater number of words than specialized corpora, and that are often exploited to produce reference materials for language learning or translation as well as reference purposes in comparative studies (e.g. the 400-million word Bank of

English or the 100-million word BNC); *comparable corpora* mainly used by translators and learners to identify differences and equivalences in two or more languages or varieties of the same language based on the same proportions of certain text types (e.g. the International Corpus of English); *parallel corpora* containing texts that have been rendered from one language into another (e.g. a collection of European Union regulations published in all the official languages of the Union); *historical* or *diachronic corpora* used to study the course of development a language has followed over time (e.g. the Helsinki Corpus); *learner corpora* containing any collection of texts produced by learners and used to identify the aspects in which their languages differ from each others' or native-speakers' as in the International Corpus of Learner English (ICLE) that can be studied in comparison to the Louvain Corpus of Native English Essays (LOCNESS); *pedagogic corpora* that contain the languages learners have been or will be exposed to in their programs to be used for language awareness. Willis (1998), for example, suggests using a manageable corpus of some or all of the texts learners are/will be exposed to for purposes of consciousness raising in grammar instruction.

Other than these eight types and of even more specific use are *monitor corpora* whose components are updated constantly on a proportional basis with the addition of new text samples. As opposed to the static types of corpora, these dynamic corpora of a growing and changing nature provide the means to observe evolving patterns of usage over time. Sinclair (1991) has referred to this special type of corpus as a collection of texts that remains as an open-ended entity for the constant addition of new samples, mainly to be used for lexicographic undertakings such as the COBUILD project.

Another term that has been associated with corpus type in the field is the notion of ‘balance’. For instance, the Brown corpus is considered to be a ‘balanced’ one, as it is made up of 2000-word samples representing different genres of written English, while the Penn Treebank of approximately 4.9 million words, consisting of a heterogeneous collection of texts aimed to make up a sizable body of text for tagging and parsing (the former refers to the automatic assignment of a part-of-speech designation to every word in a corpus and the latter to that of labels to grammatical structures such as phrases and clauses beyond the word level) to enable computational analysis of corpora for research purposes in the field of natural language processing, is an example of a corpus that is ‘not balanced’ (Meyer, 2002). It has been argued that while for the investigation of language in general, independent of the styles of particular types of text, a general corpus consisting of texts from a wide variety of types is required, for the investigation of the linguistic features that characterize a particular type of text, a specialist corpus consisting of several examples of texts of the suitable kind is more helpful (Tribble and Jones, 1990; Flowerdew, 1996). Aston (2000, 2001) is yet another scholar who finds use of specialized corpora consisting of relatively homogeneous texts retrieved from similar contexts a more appropriate choice in the effort to associate certain recurring lexico-grammatical features with specific pragmatic functions.

To sum up, a distinction exists between multi-purpose corpora intended to have wide uses and special-purpose corpora intended for more specific uses -such as the analysis of a particular genre like academic writing- and the planned uses of a corpus should determine its composition. If, for example, grammatical analysis is the

main goal, then the corpus can consist of excerpts rather than whole texts, while the study of discourse features would definitely necessitate use of complete texts.

Corpus Size

While the general principle, “the lengthier a corpus, the better” has been acknowledged in the field (Tribble and Jones 1990, Sinclair 1991, Flowerdew 1996, Meyer 2002), and in earlier stages of the use of corpora, Sinclair (1991) suggested that “a corpus needs to contain many million words” (p.19) for the study of collocation and phraseology in order for recurrent patterns to emerge, it is currently hard to speak of a standard size for corpora since they vary in the purpose of their compilation and hence, their size. Even well-known and widely exploited corpora vary from commercially available ones as large as the 100 million-word BNC and the Bank of English corpus compiled at the University of Birmingham consisting of more than 200 million words to the smaller yet influential ones such as the Lancaster, Oslo-Bergen corpus (LOB) and the first computer corpus, the Brown corpus, each containing one million words of written British and American English respectively, or the relatively smaller London-Lund spoken corpus, which has approximately 400,000 words.

Alongside very large corpora of multi-million words primarily used in the writing of more comprehensive undertakings as dictionaries or reference books, and at the other end of the scale are the mini-corpora designed for particular research studies or teaching purposes. More specifically, mini-corpora have been considered to be far more relevant to many sorts of language teaching as word and structure

frequencies in such have been shown to radically differ from those in larger general corpora (Flowerdew, 1993, Hunston 2002). For example, for his study investigating writer's stance features in 56 research articles from leading academic journals in eight different disciplines, Hyland (1999) compiled an electronic corpus of just over 330,000 words. Apart from differences in word and structure frequencies, the issue of pedagogic reality has been brought up by Aston (2001), who emphasizes that corpus linguists and teachers or students cannot be expected to draw on the same size of corpora and that "work with classroom concordancing is generally based on very small corpora, often carefully selected to facilitate interpretation by learners" (p.259), but also warning that such work would fall short of reaching the kind of descriptive reliability offered by research in corpus linguistics. Meyer (2002) claims that while there are several factors affecting the overall length of a corpus such as human resources and technical facilities available for its compilation, and while, for access to reliable information, the optimum size of a corpus may be statistically calculated, the ultimate size thereof is best determined upon consideration of its planned use as well as internal structure.

Representativeness

Tribble and Jones (1990) note that regardless of the sophisticatedness of the concordancing program or the retrieval software that is used, the results of a search on corpus will only be as interesting as the raw materials contained in the corpus. They state that as a general rule, "the bigger a corpus is the richer and more interesting the output from a concordancing program will be, and the more likely to

represent accurately features of the language." In other words, the size of a corpus has been considered to be a determining factor in its being representative of a given language. Biber (1994) argues that general language studies should be based on a diversified corpus representing different registers rather than one comprising of a large amount of data drawn from a limited number of registers since the latter carries the risk of misrepresenting a whole language as in a dictionary or grammar of English. His comparison of the mean frequencies of grammatical (e.g. distribution of dependent clauses across registers) and discrete lexical features indicates considerable variation across registers (e.g. newspapers, academic prose and fiction). He found, for example, that fiction as a register is characterized by the linguistic features of past tense, perfect aspect, 3rd person pronouns and speech act verbs within the narrative function. In other words, a corpus restricted to any one register can be thought to necessarily exclude significant linguistic and situational aspects of the English language as a whole. Partington (1998) also warns that since a corpus, regardless of its size and composition, is only representative of the texts or text types contained in it, any claims or generalizations made about the behaviour of linguistic items should be restrained to that specific corpus. Neither the frequent occurrence, nor, for that matter, the non-existence or infrequent occurrence of items in a given corpus should lead to overgeneralizations.

To sum up, given the wide range of uses to which an electronic compilation of texts from written and/or spoken discourse can be put, a single definition of corpus is impossible to make and in tandem to the different operationalizations of the term, there are a variety of types of corpora of sizes ranging from thousands to millions of running words. Since the degree to which any corpus is representative of a language

or specific registers or genres of that language will be predominantly determined by the choice of texts contained in it, the number and kind of theoretical, descriptive or applied generalizations to be made have to be limited. Finally, concordance software has been acknowledged as a corpus search tool in not only corpus-based research but also pedagogical applications in the field of applied linguistics, which is discussed in detail in the next chapter.

CHAPTER 2

REVIEW OF LITERATURE

Pedagogical Applications of Corpus Linguistics in Applied Linguistics

Two general approaches to the use of corpora in language pedagogy have been foreseen: either the teachers could analyze the corpora themselves for material design or alternatively introduce them to the students for use in the classroom (Partington, 1998). In a wider perspective, following Fligelstone, Leech listed teaching about corpora; using corpora to teach languages, linguistics, and other potential subjects; and teaching learners how to use corpora for their own purposes as the three ways in which corpora may be used in language pedagogy (as cited in Aston, 2000). The ways in which corpus linguistics has contributed to foreign language teaching in general and the teaching of English in particular as a foreign/second language will be presented in this chapter by initially discussing how descriptive work in corpus linguistics has revealed aspects of the English language with useful insights of pedagogic relevance; second, by reviewing how applied linguists have done their own service to the pedagogical applications of corpora through analyses based on

comparison of published teaching materials with general reference corpora or special purpose as well as learner corpora compiled for particular research objectives; third by looking at the evidence based on findings obtained from the examination of learner corpora; and finally by examining how corpora can be put at the disposal of learners (with teacher candidates included as learners).

Corpus-based Language Description with Pedagogical Implications

Many researchers have analyzed different kinds of corpora to arrive at a better description of language, suggesting that such a realistic extent of the content of language learning or the empowering of the learner as the observer or researcher of this information should help enhance the teaching of languages. Such descriptive studies based on corpus data with pedagogical implications have basically focused on variation across registers and genres, the central role played by lexico-grammatical features of language use, and the patterns of use empirically shown to emerge from the vast amount of electronic data.

One major contribution of those studies that have presented a corpus-based description of the English language has been a foregrounding of the variation that exists across registers or genres and a view of collocations as part of the mechanisms which enable specialist writing as science writing to be internally cohesive and hence acceptable within a certain discourse community. In his inspirational work on variation in language, Biber (as cited in Kennedy, 1998) identified the patterns of co-occurrence of 67 syntactic and lexical features in 481 texts to establish major linguistic dimensions on which texts could vary. Within a more specific scope,

Thompson (2000) ran a corpus-analysis to find that PhD dissertations by native writers from different sub-disciplines showed marked variation in their text length and citation practices, with significant differences in the frequency of the typical citation verbs used, suggesting that description of discourse practices in academic writing should not attempt to generalize across all fields. Gledhill (2000) compiled a corpus of cancer research articles in pharmaceutical sciences to analyze the introduction sections of these articles, focusing on the typical contexts of a limited number of grammatical words as useful indicators of the prototypical phraseology of the genre and concluded that a representative and specialized corpus of the research article would benefit the teaching of languages for specific purposes. Another corpus-based study focusing on variation has been conducted by Hyland (2002). His qualitative and quantitative analysis of a corpus of published articles points at a significant disciplinary variation in citation, suggesting a need for distinguishing the particular rhetorical features peculiar to specific disciplines for a better-informed academic writing pedagogy, given the ineffective use of citation among particularly non-native writers of academic papers, which calls for a need to urgently assist learners in this regard since selection of a certain reporting verb can be a crucial means of establishing one's identity in a discourse community.

A second important strand of research in descriptive analyses of the English language has focused on the interface between lexis and grammar as well as the concept of patterns of use readily observable in corpus data through frequency of use information (Hunston and Francis, 1998; Partington, 1998; Conrad 2000; Kennedy, 2003). Corpus-based research is thought to be substantially instructive on certain grammatical constructions in relation to lexical items as opposed to the information

provided in traditional grammar books since the presence of the corpora complements ‘intuition or anecdotal evidence’ by bringing actually occurring data into the learning experience. Moreover, such an approach to grammar has been considered valuable for learners since it takes as its focus the surface behaviour of individual words, which will eventually help learners gain confidence in using words both accurately and fluently.

Even those scholars sceptical of a reliance on the linguistic information provided by corpora have acknowledged that such information has pedagogical value. While critical of relying solely on a corpus-based grammar and placing lexis at the centre of language teaching, Owen (1993, 1996) acknowledges the significance of the opportunity of analysis offered to specialists through concordancing, which could then be used by learners for reference purposes. In answering Owen’s criticism on the use of corpora for descriptive grammar, Francis and Sinclair (1994) have argued that “corpus data provides us with incontrovertible evidence about how people use language” (p.191) and that the corpus data gives the opportunity to examine very quickly more language than one is likely to encounter in a lifetime and that the data should be regarded as constituting only a sample of the language use and nothing more than that. They draw attention to the pedagogical merits of analyzing and learning many instances of language use displaying a regular pattern and of presenting structures and lexis at the same time, either in the form of lists, or by means of concordances depending on the teaching situation.

To sum up, these corpus-based descriptive studies have suggested that the writers of pedagogic grammars need to be informed by the increasing number of electronically available corpora; and accordingly, have to base their language

description on large quantities of authentic data to so as to better inform those involved in English language teaching methodology and syllabus design. It has also been argued that the notion of the learner as a linguist conducting descriptive analysis will foster consciousness-raising.

Comparison of Published Teaching Materials with Corpora

Several other researchers working in the field of corpus linguistics have compared ESL/EFL grammar textbooks, dictionaries or standard reference grammars with reference or specialized corpora, in most cases via concordance software, to reveal a description of language with differences -that should be heeded by pedagogical publications and classroom materials- between the language found in the former and the authentic language in use offered in the latter. It has been found, for example, that the descriptions generally based on the written mode or on limited genres and registers of spoken English in some pedagogical grammars fail to reflect the common features of everyday informal grammar and usage (Carter and McCarthy, 1995; Frazier, 2003); the selection criteria for the idioms appearing in the textbooks were unprincipled and idiosyncratic to a significant extent (Simpson and Mendis, 2003); inadequacies existed in published materials in terms of selection, meaning and usage explanation as well as information on idiom variations (Liu , 2003).

In other words, comparative studies of published teaching materials with corpora have suggested that linguists, language teachers and textbook writers refer to corpora for the relative statistical frequency of grammatical and lexical structures based on authentic data before deciding on the content and sequencing of language

teaching, paying special attention to a functional analysis of language to study the behaviour of structures in different contexts. On the other hand, indirect consultation of corpora through concordance outputs prepared in advance by teachers, material writers or even learners themselves has long been suggested by many scholars (Johns 1991a, 1991b, 1994; Flowerdew, 1993, 1996; Willis, 1998; Fox, 1998; Thurstun and Candlin, 1998; Conrad, 1999; Aston, 2000; Seidlhofer, 2000; Swales, 2002) as an alternative or supplement to other sources of material development to help learners in their language related enquiries as researchers or discoverers of authentic data. Taking into consideration the striking discrepancies revealed by critical analyses of language teaching materials in reference to general or special purpose corpora, and the need to instil in learners a greater awareness of the target language in use, these researchers have seen pedagogical value in producing materials informed by the more accurate and empirical nature of corpus studies.

Evidence Based on Learner Corpora

Other researchers have suggested consulting learner corpora, preferably in conjunction with reference corpora as a means of obtaining relevant information that might be helpful in developing more specific teaching strategies or materials more precisely addressing the needs of individuals learning English as a second/foreign language or English for specific/academic purposes. A recent body of research has indeed indicated that comparisons based on learner corpora provide a rich and reliable source of data for possible use in better informed pedagogical decisions since the computerization of such data enables a more systematic and empirical account of

learner difficulties observed especially in written production (for a recent overview, see Cobb, 2003).

First, comparative studies have shown that essays written by non-native speakers are in some respects characterized by excessively simple syntactic and lexical constructions found to be characteristic of the conversational or informal discourse, rather than the academic one (e.g. Biber and Reppen, 1998; Hinkel, 2003) Such studies indicate to a need to focus on more advanced syntactic constructions and lexis typical of the written academic genre in seeking to improve learners' text production skills.

Other corpus-based studies have shown that non-native speakers fail to make effective use of rhetorical and pragmatic markers in written academic production (Flowerdew, 1998a; Flowerdew, 2003) or differ from their native speaker counterparts in terms of their lexical choices in the writing of journal abstracts (Altun and Rakıcıoğlu, 2004). For example, Hyland and Tse (2005) explored the use of 'evaluative *that*' -as an important means of conveying the author's subjective judgment in academic writing- in two corpora consisting of abstracts drawn from L2 masters and doctoral dissertations and published journal articles in six disciplines. Their analysis revealed that despite a certain level of sophistication in their use of the structure, novice writers included it in their abstracts half as frequently as the expert writers did and tended to be either very certain in their statements or avoided establishing their own personal voice.

Another major line of research has contributed to revealing non-native speakers' problems in the use of lexico-grammatical patterns mainly in academic discourse observed in survey reports, citations in theses or academic essays in

general. Flowerdew (2000a) found both referential and pragmatic errors in learners' writings within the general framework of lexico-grammatical patterning. Another corpus-based exploration of the differences between novice and expert writers has been carried out by Thompson and Tribble (2001), who focused on a comparison of the citation practices of expert writers as observed in doctoral theses in different disciplines as well as the different rhetorical practices within these disciplines with EAP student writings. Lack of variety of citation types within a text, lack of linguistic variety and inappropriate verb choice, avoidance of certain categories such as non-integral reference and overuse of non-citational references were among the major problems observed in a preliminary analysis of student writings.

Conducting an exploratory study on verb-object-noun collocations in a corpus of academic essays written by non-native speakers of English, Nesselhauf (2003) claimed that despite the discredit attributed to rote learning and behaviourism, a number of collocations need to be taught and learned explicitly; in which case, acceptability and frequency of collocations in both a neutral register and any special register of interest to the learner (e.g. in an academic writing course) can be used as the criteria for the selection of collocations to be taught.

Mudraya (2004) compared her ESP data with the BNC sampler to find that learners' writings were predominantly marked by a difficulty in the use of nontechnical and subtechnical vocabulary rather than technical vocabulary. Cortes (2004) compiled two representative corpora of published and student academic writing in history and biology to conduct a structural and functional investigation of three- or more word-lexical bundles (rather than the conventionally taught connectors and discourse markers of simple words or two-word collocations)

appearing frequently in academic prose with a view to adding to the description of writing in these fields. Having found that learners' writing was characterized by deviations from the proficient use of the lexical bundles identified in the corpus and avoidance or exaggeration of their use in certain circumstances, Cortes maintains that simple exposure to such expressions that contribute to fluency and accuracy in academic writing through extensive reading does not ensure expert-like use of these items by novice undergraduate writers, and that language pedagogy should focus on raising learners' awareness of the functional use of lexical bundles beyond simplicity.

Finally, Schmitt (2004) reports a growing interest in using corpora and concordances to investigate the receptive and productive knowledge of formulaic language or prefabricated sequences comprised of idiomatic forms of expression such as idioms, collocations and sentence frames (Wray, 2000) in several registers including academic texts with a view to enhancing proficient and expert-like usage of these structures insofar as non-natives have been shown to possess limited mastery of the kind of formulaic sequences dominating expert or native written and spoken discourse to a far greater extent than known to do so prior to the extensive research made possible by corpus linguistics (Wray, 1999; Wray & Perkins, 2000).

On the whole, studies based on evidence from learner corpora of written texts suggest that such evidence can better equip teachers with a more accurate depiction of learners' interlanguage (Meyer, 2002) and material writers with authentic data that is not limited to intuitive or anecdotal evidence for language use. Such information can be capitalized on either through incorporation of it into textbooks and lesson plans or through developing new teaching strategies that emphasize a higher

awareness of lexico-grammatical patterning beyond simplicity. Thanks to increased depth of processing, learners can approximate the structural and collocational complexity of native-like collocates that are believed to constitute an important part of not only accuracy but also fluency in language use. Most of these studies (Flowerdew, 2003; Thompson and Tribble, 2001; Altenberg and Granger, 2001; Mudraya 2004; Schmitt, 2004; Hyland and Tse, 2005) have indeed suggested use of concordance software as a helpful tool in consciousness raising tasks as such software allows advanced learners to conduct inductive explorations on real life data with enough co-text to help them gain insight into the patterns of use for a given structure across a range of texts that are geared towards their specific needs and that such an endeavour may even provide the basis for group discussions with repercussions for learners' future rhetorical decisions in the writing process (Hyland and Tse , 2005).

Actual Use of Corpora for Pedagogical Purposes

This section first presents an overview of the two fundamental concerns regarding the nature of the data revealed or presented through concordancing: pedagogical concerns related to the value of the frequency of use information and the sufficiency of the context contained in the concordance line. This presentation is followed by a literature review of the actual use of corpora by learners and studies involving corpus consultation through concordancing.

Frequency of Use Information

Despite criticisms as to whether it is language produced by native-speakers that is primarily required by second language learners (Cook 1998; Carter 1998; Widdowson, 2000), frequency of use information based on written or spoken language produced by native-speakers has been valued for its ability to reflect linguistic reality or language in use, if not the ideal. Sinclair (1991) argues that identification of the typical and central items in the language is one of the principle uses of a corpus. Partington (1998) claims that most of the linguistic analysis performed using computerized corpora originates from a statistical methodological philosophy based on the "search for and belief in the significance of recurring patterns" (p.147). While acknowledging Widdowson's argument that pedagogic description should not necessarily be determined by descriptive fact and that the idea of the potential of an item to generate further learning should be adopted instead of basing syllabus design on the frequency of use information, Partington emphasizes that the frequency of a structure or word sense is indeed an important component of this potential. Kennedy (1998) also maintains that frequency of occurrence of language items should be only one of the criteria used in determining the content of teaching since even less frequent items may deserve more attention depending on the goals of learners. Aston (2000) is yet another scholar acknowledging the validity of Widdowson's claim that frequency may be a less important issue than productivity and learnability in determining what to teach. Notwithstanding this acknowledgement, he claims that with regard to especially reading and listening

skills frequency remains a significant factor, given various studies on large corpora that have revealed striking discrepancies between rules and generalizations provided in syllabuses and actual language use.

Noting that the analysis of native-speaker language based on frequency of use information alone may not be sufficient for syllabus design since learnability and relative difficulty of items to be taught are important concerns upon which frequency information does not shed any light, Aston (2000, 2001) suggests using a combination of learner and native-speaker corpus data for effective syllabus design. Gavioli and Aston (2001) suggest that while corpora in themselves are unable to advise what to teach, based on the frequency of use information teachers and material designers can make better-informed decisions and justifications, or learners subjectively interpret instances of language to create models of their own; this being a potential which should not be overshadowed by discussions of the extent to which ELT syllabuses and materials should be shaped by corpus information for a better reflection of linguistic reality. Giving a detailed corpus-based account of the collocational information associated with the words ‘cause’ and ‘provide’, Stubbs (2001a) notes that such reliable facts about frequency and typicality can only be thoroughly ‘documented’ by means of a corpus rather than a reliance on native speaker intuition, and that descriptive methods and findings based on corpus data have many implications for language teaching, the scope of which requires long-term experimentation on the integration of semantic, pragmatic, and cultural information into language teaching materials.

Despite the importance credited to it, however, a total reliance on the frequency of use information may be problematic in that, as warned by Foster (2001) among

others, certain items that would normally be part of the language used by any native speaker may not appear even once, even in a corpus as large as the Bank of English.

Authenticity and Context

A major criticism directed at corpus research has been that language studied through the medium of concordancing is deprived of its original context of communication. Information retrieved from texts coming from a variety of sources and authors is claimed to be decontextualized since it is deprived of the circumstantial phenomena of its communicative event such as speaker intention, pressures of time or message planning. One such fundamental criticism has come from Widdowson (2000), who is sceptical of the pedagogical claims based on the extension of linguistics into 'real or authentic' language in use, arguing that despite its well established descriptive merits in revealing facts about language at the text, yet not discourse, level that were not previously evident to its users, corpus linguistics fails to address the contextual conditions that the classroom situation necessitates to make language a reality for learners. At the core of his argument lies a pedagogic concern for the extent to which learners can make corpus evidence real for themselves rather than the pseudo-reality associated with the textual but decontextualized nature of the language contained in a corpus.

Aston (2001) also agrees that concordancing analysis cannot be said to address learners' need to be involved in the negotiation of meaning in its pragmatic aspects, which are deemed by Widdowson to be of vital importance to language acquisition, since instances of language are indeed decontextualized from their

original communicative settings. However, Aston insists that corpora can nevertheless contribute to enriching the pedagogic environment, provided that teachers and learners are well informed of their potentials and limits. Basing his argument on a schematic view of language competence and use, Aston (2000, 2001) suggests that through observation of partial regularities and variations by means of concordancing, learners are given the opportunity to synthesize larger, context-specific schemata in addition to the rules presented in traditional grammars and textbooks. On the other hand, the relatively short contexts provided in most concordances may not be adequate to reveal the ongoing discourse and the role of a specific clause in its development while they may suffice to help the semantic interpretation of that clause. To solve this problem, Aston suggests that the rhetorical and informational structures of relatively small corpora consisting of texts of the same genre or topic may be compared by inspection, following the addition of simple annotation before running a concordancing. Higher-level regularities may become apparent through concordancing, provided that a few structurally similar texts are used. In other words, the growing amount of machine-readable texts coupled with the sophistication of retrieval software has been regarded as an opportunity for teachers and learners to create a hypertextual environment in which they can assume the roles of both participant and analyst. Availing of such an opportunity can be seen in line with Widdowson's suggestion of using activities that will bring linguistic features to the conscious awareness of learners (Aston, 2001).

Johns (1991b; 1994) has also suggested that a far more extensive use of authentic, unmodified data than has been traditionally suggested in language teaching is an inevitable outcome of a focus on language function as well as language form.

The presence of evidence that a specific language feature has actually been used in certain contexts is more likely to lead to a genuine examination of the reasons underlying a choice made in the use of that language feature, provided that the linguistic and learning resources of the students are not overloaded by the way such data are presented to them. In addition, Stevens (1991) sees the fragmented, truncated nature of concordance lines as an opportunity to develop the ability to extrapolate holistically from fragmentary evidence rather than a handicap that deprives the learner of real context.

According to Partington (1998), the corpus supersedes the distinction traditionally made between competence and performance. He claims that in methodological terms, the significance of a particular linguistic event should be interpreted upon comparison of it with other similar events and it is this "background information against which particular events can be seen" (p.146) that the corpus provides. Partington refers to display of KWIC concordances as a list enabling the analyst to search for eventual language patterns in the surrounding co-text (i.e. the short span of a few words within a single text), an advantageous property which reveals information that may not be accessible upon simple introspection.

A similar view is also shared by Stubbs (2001b), who asserts that 'co-text' can be systematically used as observational evidence of 'meaning in use'. Gavioli and Aston (2001) also claim that corpora present many opportunities for the independent or collective authentication of discourse by learners who can as observers adopt a critical and analytic perspective in interacting with texts through concordances, actually problematizing and exploring the language contained in them. One example they provide is that of a learner's reconsideration of a vocabulary item marked to be

inappropriately used by the teacher, following concordance search of the item in a couple of reference corpora. They report that concordances of the item allowed the learner to question data, notice recurrent patterns, and finally come up with a model which he could implement and authenticate in his own context as a discourse participant producing an essay.

Several other researchers have seen added value in the use of corpora especially for the context offered by them. Meyer (2002) argues that corpora easily lend themselves to functionally based discussions of language since they consist of texts, which in turn enables analyses to be contextualized. Guillot (2002) claims that by virtue of the way data are presented in corpus-based study, for example, recognizable patterns in the use of pronouns corresponding to rhetorical motifs emerge and such presentation of data urges learners to do focused scanning in a non-linear fashion to detect discourse organization at the inter-sentence or groups-of-sentences levels, reconsider familiar or taken-for-granted features of language, raise questions about their function, and become sensitive towards their interactions with other elements in discourse (e.g. the interaction between tense and modality). The possibility of all this points at a contextualization of grammar enabled by the learners' experience of and control over language, rather than the reference grammars put at their disposal.

In their paper on a corpus-based study of idioms in academic speech, Simpson and Mendis (2003) claim that using authentic speech samples from contexts learners will be exposed to is far more advantageous than trying to exploit specially contrived examples. They suggest awareness raising exercises to be followed by examination of contextual extracts of speech samples rich in discourse markers

signalling, along with the use of audio recordings of selected excerpts to better orient learners towards native speaker interactions. In other words, corpora cannot be said to lack the context constituting the learners' target language domain, but rather, depending on the teaching objective of the language learning situation, means of retrieving data from corpora should be modified, which in the case of the Simpson and Mendis study necessitated avoidance of single, unedited concordance lines. Mishan (2004) argues that while in the transition from source to electronic data an inevitable loss of context or the obscuration of authenticity attributes like communicative intent does occur, such loss can be compensated by the authentication of the text by the learner via data-driven learning tasks that are in line with the genuine purpose of language research, a purpose for which corpora have originally been designed.

To conclude, discussions related to the sufficiency of the context in the authentic data displayed in the concordance line have drawn attention to the role of the teacher or the learner as the direct observer or analyst of texts, the information revealed by such observations as an alternative to a reliance on pure introspection or intuition, the opportunity to think critically and analytically in trying to make sense of the at times mutilated input given or notice recurrent patterns of language use. In this respect, what is expected to provide authenticity of the learning experience in accordance with Widdowson's notion of it is the involvement of the learner with the corpus material via data-driven learning tasks.

Methodological Framework for Corpus Consultation by Learners

Language description based on authentic spoken or written discourse through analysis of wordlists or statistical information on the relative frequency of items in or across certain genres has led to an accumulation of facts about lexis, grammar and discourse. Internalization of such facts as the recurrent and pervasive phrases or collocations often found in the form of prefabricated chunks has been considered to be among the major tasks of learners attempting to become fluent and proficient speakers of the language. According to Kennedy (1998), it was especially a renewal of interest in the place of vocabulary with major contributions from the works of Nation and Nattinger and De Carrico that gave computerized corpus-based research the opportunity to influence language teaching methodology as could be observed in the undertakings of researchers such as Sinclair, Renouf and Willis, who in the late 1980s advocated corpus-based lexical syllabuses for language learning. In other words, the most frequent words in the language as well as those of special use in specific domains, the central patterns of usage and the collocations of these as empirically identified by the methods of corpus analysis started to receive particular emphasis in language pedagogy. The need for this emphasis was further inspired by the findings of comparative studies conducted on learner and reference corpora as well as a comparison of conventional teaching materials with reference or special purpose corpora discussed in the sections above. However, the growth in corpus linguistics, as best exemplified by important undertakings as the COBUILD, CANCODE and MICASE projects, has not only inspired a reassessment of the content of instruction but also given rise to a new language teaching methodology

known as data-driven learning (DDL), which initially envisaged learners' consulting corpora by means of materials based on data retrieved through concordancers, which then came to be viewed as tools that could be effectively put at the disposal of learners themselves. The purpose of the following section is to provide a framework for this methodological approach that has advocated pedagogical application of corpus data and to present the extensive research that has been inspired by it.

Data-driven Learning

The originator of the methodology of DDL, Johns (1991a, 1991b, 1994) maintains that for effective learning that has high transferability in the sense of preparing students to become better learners outside the classroom, the language learner needs to have access to the facts of authentic linguistic data or performance and act as the language researcher of corpora by means of the concordance output for abundant examples of such authentic data in the form of spoken or written texts, upon which the teacher, rather than acting as the expert, will necessarily assume the role of the facilitator of language study, offering a context conducive to the discovery of strategies by learners themselves rather than a reliance on materials often dominated by contrived examples. In this approach, the computer is seen as a passive and silent type of informant that is activated upon the learner-generated questions, and the extensive data that is provided by it as the evidence required to respond to these questions, a relationship which involves the attempt to rely on the learner's intelligence to make sense of the concordance output. Based on his teaching experience with overseas postgraduates learning English for instrumental purposes,

Johns (1991a) has concluded that the use of the concordancer as a computing tool implemented in the exploration of corpora within the framework of DDL approach contributes to the language pedagogy in three major ways. First, the use of the concordancer stimulates the learner to make enquiries and speculations, which then help develop the ability to observe patterns in language use and form generalizations to explain or discuss with peers such patterning. While this property may characterize other inductive approaches as well, DDL is distinct in the sense that the data offered to the learner is authentic and the exact rules or patterns to be discovered by the learner are unknown to the teacher in advance. The second contribution involves the role of the teacher, who has to become the coordinator or advisor of the student-initiated research and let students take charge of their own learning. The third major influence of DDL is observable in its paving the way for a new type of grammatical consciousness-raising by actively engaging the learner in the grammar description phase of language learning and placing him/her at the centre of language learning through the task of discovery based on authentic evidence.

Use of Concordancing by Learners within the Framework of DDL

The view of the learner as the investigator of language based on the assumption that "effective language learning is itself a form of linguistic research" (Johns, 1994) has also been welcomed by many other researchers who have advocated learners' exploiting -either learner, pedagogical, special or general purpose reference- corpora as direct input of language or materials developed by using corpora or concordance outputs to examine and note recurrences of written or spoken language use in a

variety of registers or to make inductive or deductive explorations as language researchers or analysts.

In their pioneering resource book geared towards the teaching of grammar, vocabulary, literature and English for special purposes by teachers interested in complementing investigation of language in use by both beginning and advanced learners, Tribble and Jones (1990) claim that concordance-based exercises promote learning by discovery, turning the study of language into language research rather than spoon-feeding learners or encouraging them to rote-learn rules.

Stevens (1995) views concordancers as the type of software that would urge learners to utilize their cognitive and analytic skills to manipulate texts in the form of comprehensive databases in solving real-language problems, provided that they are well guided in the familiarization with the formulation of productive queries. He highlights the challenging part of the pedagogical use of such software by pointing to the fact that freed from a total reliance on intuition or reference grammars, teachers as well are likely to gain further insight into the language, which in turn would create a common ground for both parties to discuss language problems. He argues that the widespread use of concordancing could be achieved only upon teachers and learners' acceptance of the idea that language learning can indeed benefit from materials based on authenticity (of text, purpose and activity), inductive learning and learners' taking responsibility for learning.

According to Flowerdew (1996), a good activity to initiate interest among learners towards concordancing is to have them -after proper training in the mechanics and inquiry techniques of concordancing- analyze and correct errors in writing indicated by their teachers with the help of corpus exploration. The author

maintains that such serendipity learning is beneficial to learners in that they gain autonomy and responsibility for their own learning, their needs and/or wants are met as corpus search is self-initiated, and they can develop language awareness by taking control of language research. Several scholars such as Honeyfield, Pickard, and Levy have also suggested (as cited in Flowerdew, 1996) that learners can use a concordancer to aid in their writing just in the same way they make use of a dictionary, a spell- or grammar checker, or a thesaurus. Flowerdew reports Levy's proposal of the ways in which a concordancer may be used by learners: checking meaning, general syntax or usage, derived forms, or collocations; exploring the lexis of especially ESP texts; and exploring set pieces such as phrasal verbs or clichés. It is the inherently inductive data-driven nature of concordance-based learning that the learners are expected to capitalize on.

Granger and Tribble (1998) view classroom concordancing or data-driven learning, which they consider to be grounded in the wider methodological approaches of 'language awareness' and 'consciousness-raising', as a particularly attractive way of providing form-focused instruction with an inductive approach to language learning. Basing their argument on SLA studies attesting to the importance of form-focused instruction as well as corrective feedback, they propose a combination of DDL with learner data, the electronic storage of which has ever-increasingly become easy. In line with Granger and Tribble, Kennedy (1998) has also argued that flexibility in sorting and formatting a concordance can stimulate motivated learners towards inductive learning. Milton (1999) and Chapelle (2003) discuss the potential benefits of concordancer activities as an example of form-

focused tasks requiring learners to search for examples of structures and lexical patterns in texts.

The tool of concordancer has also been seen as a linguistic informant that can be used by native speaker teachers to reinforce or test their intuitive knowledge of grammaticality and vocabulary usage, as well as by non-native speaker teachers who might lack the confidence to rely on their intuitions to access reliable and objective data. Frequency information, objectivity, the presence of large quantities of data, non-native access, availability of style and register range, no risk of hesitation or fatigue, and the possible availability of diachronic information and authenticity have been regarded as the merits of corpus-based data at the disposal of teachers (Flowerdew, 1996).

More recently, a number of researchers (e.g. Conrad, 2000; O'Keeffee and Farr, 2003) have suggested teachers-in-training as the most important audience to address in ensuring practical applications of current corpus work, suggesting introduction of ESL teachers to corpus-based research in training programmes through hands-on investigations as well as materials design based on corpus research. Involving teachers in the process of re-contextualizing corpora and findings from corpus-based description is believed to be necessary since many instructional materials ranging from software and dictionaries to grammars have been corpus-based recently, and since teachers are the ones to mediate between the reality of the corpus-based content and the needs of the learners. In fact, in a survey study conducted with a group of English language teachers in Germany following workshops on corpus linguistics, Mukherjee (2004) found that while most of the teachers who took part in the survey reported making use of corpus-based

dictionaries, they also reported being uninformed of their corpus-linguistics background. Mukherjee suggests that the gap between the rapid developments in applied corpus linguistics and its influence on modern classroom resources on the one hand, and the average English teacher's knowledge on the other can only be bridged, provided that English language teachers themselves are systematically familiarized with the basic foundations, implications and applications of corpus linguistics.

Finally, and in conjunction with Mukherjee's survey results, Sinclair (2004) has reported corpora to be part of the resources that more and more teachers expect to have access to, emphasizing that in order to make good use of corpus resource a teacher needs not only a modest orientation to the routines involved in retrieving information from the corpus, but most importantly training and experience in how to evaluate that information.

To sum up, scholars suggesting the use of corpus consultation through concordancing within the framework of the data-driven learning approach have seen merit in it for a number of learner-oriented reasons. First of all, concordance-based exercises have been considered to promote learning by discovery with the learner in the role of the researcher actually utilizing a tool that has long been in the hands of the language researcher. Such discovery-based learning which stipulates independent manipulation of texts has been regarded as conducive to the utilization of learners' cognitive and analytic skills, which in turn is expected to result in learners' gaining autonomy and responsibility for their own learning experience. Corpus consultation through concordancing has been thought to serve as a helpful tool in raising language awareness through form-focused instruction, which can be practiced in a variety of

ways such as self correction of or feedback for written production, confirmation or disconfirmation of intuitive and acquired knowledge about language use, focus on grammatical, lexical, collocational or discourse features of genre or register specific primary data, observation or induction of recurrent patterns of use based on multiple examples in context, and finally the instigation of research skills and language awareness among ELT students as language learners or inquirers.

Studies Involving Corpus Consultation through Concordancing

Despite the enthusiasm expressed for hands-on/on-line as well as off-line concordancing in the form of activities drawing on concordance based materials discussed in the previous sections, there have been few studies aiming to actually demonstrate whether, to what extent or under what conditions this instrument contributes to particular degrees and kinds of second/foreign language learning. It has been emphasized that despite the influence of corpus linguistics on many branches of language research, the theoretical intellectual climate current in applied linguistics at a time when the first electronic corpora were being compiled was not ready for the empirical methods offered by corpus linguistics since in the nineteen-sixties, the work of most linguists were predominantly shaped by a shift from the study of empirical data to the study of the mental processes involved in the acquisition of language (Leech, 1998; Sinclair, 2004). Some have argued that it was only when lexical and phraseological structures started to receive more emphasis than before that the language teaching profession found corpus studies to be of interest (e.g. Kennedy, 1998). Indeed, a relatively more recent body of research has

attempted to fill the pedagogical part of the gap by investigating the effectiveness of concordancing activities with language learners, including the strategies and learning outcomes involved. The next section presents a review of the limited number of previous studies or endeavours that have incorporated use of the concordance tool.

Pioneering work in this line of research focused on the contribution of the tool to vocabulary learning by means of having learners depict or induce patterns in teaching material based on concordance outputs. What these studies have in common is the idea that concordance-based exercises derived from a suitable text database are a better means of reinforcing vocabulary insofar as such exercises provide learners with authentic and relevant items in multiple contexts despite the mutilated and hence fragmented nature of the concordance line.

In one of the preliminary papers suggesting pedagogical applications of concordances, Stevens (1991) reports a small-scale study with 25 undergraduate science students who received training on working with concordance-based material only one or two hours before the treatment. The experiment was conducted in two subsequent sessions of single class periods with two groups, which were in turn divided into halves to work alternately with concordance-based and gap-filler exercises testing the same vocabulary items appearing in a corpus that consisted of the six chapters that were covered in the course textbook. Results showed a significantly better performance on the concordance-based exercises, especially in the second session of the treatment, the time of which Stevens does not specify. Stevens' study deserves merit for being one of the pioneering studies of its kind on the off-line use of corpus and concordancing for pedagogical purposes in the format of concordance-based exercises, but is limited in scope as it involved testing

performance only with a very little amount of practice in advance and did not feature a true experimental design. Moreover, the study did not require learners to act as researchers. While, within the framework of this study, teachers preparing concordance-based exercises might be regarded as facilitators of information, the role of the learner (other than the receiver of the material prepared by the teacher) in such endeavour remains unclear and unaccounted for in the experiment design.

Another study focusing on the learning of vocabulary was conducted by Cobb (1997), who aimed to see whether presentation of items in several contexts with the help of on-line concordancing would facilitate transfer of word knowledge to novel contexts. To this effect, Cobb developed an experimental lexical tutor to introduce new words to 100 first-year Arabic-speaking tertiary level students taking intensive English for study in the English-medium commerce subjects, either through concordances or through other sources of lexical information. The lexical tutor, embedded with a tracking routine that recorded all interactions, presented a set of familiar CALL-type activities which provided access to a 10,000-word corpus consisting of texts compiled from the students' own reading materials. Cobb built two versions of the programme and had all students use both in alternate weeks for 12 weeks. A small but consistent gain was observed for words introduced through concordances. However, what Cobb designates as on-line concordancing in opposition to the off-line version in Stevens' study involves 'on-screen' integration of a limited number of concordance lines into the set of the lexical tutor activities, but not concordance lines actually retrieved by learner initiated questions and hence his study should rather be evaluated as part of the contributions made by concordance-based materials.

In an effort to help resolve the paradox in lexical acquisition of learning vocabulary from lists and through extensive reading, Cobb (1999a) conducted a similar study with commerce students who were provided with a corpus of their own reading materials and a modified concordance interface written to access this corpus, with a frequency list of vocabulary items built into it. The study involved making use of computerized concordances integrated into the lexical tutor interface. In order to fulfil the assignment of learning 200 words a week for a period of twelve weeks, the control groups used a wordlist and dictionary while the experimental groups created their own dictionaries with the help of concordance and database software. Results revealed that the experimental group scored higher on both definitional knowledge and transfer of comprehension to novel contexts in the short and long term. In sum, at the centre of both of Cobb's studies (1997, 1999a) was an effort to integrate concordancing into software that aimed to expand academic vocabulary through multiple contextual encounters moderated, if not by the teacher, the software programme itself since he viewed direct examination of corpora through commercially available concordancers to be too much confusing and overwhelming for learners who would possibly be unequipped with the skill to formulate well-focused search questions. In another paper proposing a constructivist framework for the second language learner-as-researcher and reporting the detailed results of the same study, Cobb (1999b) concludes that a concordancer with its data-aggregating ability can considerably shorten the amount of time needed for several contextualisations in vocabulary learning.

While Stevens (1991) had learners analyze concordance-based exercises and Cobb (1997, 1999a) provided access to a limited number of concordance lines built

into a lexical tutor interface for vocabulary learning, Sun and Wang (2003) conducted a study which allowed subjects (81 second-year students from a senior high school in Taiwan) more autonomy in acting like language researchers by using web-based concordancers following either an inductive or deductive approach. The inductive approach included a three-stage process: the students were asked to search for five occurrences of a keyword, induce the underlying patterns and note what they perceived, and finally to correct the sentences given according to the rules they induced from a web-based concordancer. In the deductive approach, the students were initially taught the necessary grammatical rules, asked to make corrections by studying the rules and the examples presented on the web-concordancer. All subjects were pretested for 20 minutes, trained for one hour, and post-tested for another 20 minutes. Sun and Wang found that the group employing an inductive approach to the learning of collocations by means of a concordancer showed a significantly better improvement than the group employing a deductive approach; and that the two approaches yielded a significant difference in the learning of only easy collocations.

In another line of research, studies on corpus consultation have attempted to investigate the effectiveness of concordancing on helping learners gain language awareness and improve their use of especially lexico-grammatical features in their written production of academic texts by means of independent queries conducted on or comparisons made with written discourse produced by native speakers or expert writers.

Weber (2001) reports a relatively small-scale project involving a concordance- and genre-based approach to essay writing with a group of some 20 law students with a view to raising awareness of the generic and structural features of legal essays.

Weber asked students to identify some structural characteristics of legal essays, use concordances to investigate the relationship with generic structures and particular lexical items, and finally to write very short essays incorporating the structural elements they had identified. Weber observed that the whole experience made essay writing more accessible to non-native students and that the approach gave students a firm foundation in essay writing as well as legal reasoning, suggesting that exploration of some structural characteristics of academic essays and their possible lexical correlates through concordances might prove to be of great help to language learners.

In his paper investigating the process of applying inductions made by learners themselves through the use of concordances in self-correction of problematic lexical items found by their teachers in their written reports, Todd (2001) reports that students generally managed to induce valid patterns from their self-selected concordances from the Internet as the corpus and make valid corrections of the highlighted errors, indicating to a strong correlation between the two abilities. The participants in this small-scale study were 25 science and engineering postgraduate students of lower intermediate to intermediate level enrolled in an English language support course. Todd argues that although no significant relationship was found between the ability to induce valid patterns from the concordances and the ability to apply these patterns by using them accurately in their writing, the very strong positive correlation ($r_{pbi} = 0.76$; $p<0.001$) between the former and the ability to self-correct can be regarded as a valuable application of the ability to induce valid patterns which learners were able to make through concordancing.

Kennedy and Miceli (2002) provide a qualitative account of the dynamics involved in the corpus investigation of intermediate level undergraduate students learning Italian. The introduction of corpora into the programme aimed to provide a reliable reference resource to assist learners primarily in the revision of their writings within 7 class hours. Students' interrogation of the corpus focused on problem-solving and treasure-hunting as the two major types of activities. In the video records and interviews, Kennedy and Miceli observed that learners were more satisfied with their explorations in the treasure-hunting activity, which involved free browsing to find models of ways to express certain functions by either skimming the corpus sequentially or searching on words predicted to exist in the data. Insufficient attentiveness in observation of the data and flawed reasoning were found to be the major reasons for unsuccessful investigations. When observing examples students tended to ignore prefabricated chunks apart from the well known idiomatic expressions and discarded items that were inconsistent with their assumptions; they came up with search strategies that were not reasonably congruent with the question at hand. Kennedy and Miceli advise putting more emphasis on observation and reasoning skills rather than possible types of problems and their outcomes, and employing concordances for addressing specific questions about word use in activities that require finding a correct answer.

Sun's (2003) pilot case study is yet another qualitative work that aimed to identify the learning process EFL students follow and the strategies they use in a concordancer setting as well as examine the factors that affect learner behaviour. The participants were one graduate and two senior undergraduate students enrolled in an applied foreign languages programme. Following some tutorial sessions about

concordancing, the students were asked to proofread an eight-question list with different types of grammatical errors, decide on the correctness of the sentences, and consult the web-based concordancer to verify and confirm their predictions. Analyses of think-aloud protocols showed that four factors impacted the learning process and strategies in use: prior knowledge, teacher intervention, cognitive skills, and concordancing skills. Limited prior knowledge of a specific linguistic form or usage led to confusion about the search words used in the concordance query and hence caused difficulty in the interpretation of the retrieved data. In such cases, teacher intervention was deemed necessary to assist learners in their investigations. The process of analyzing concordance lines involved distinct use of the cognitive skills of comparing, grouping, differentiating and making inferences. Concordancing skills such as choosing the effective search strings and sorting options to explore an item in the appropriate corpus determined success in retrieving more relevant and organized concordances, which in turn facilitated searching, analysing and making inferences. Sun concludes that since learners tend to retrieve irrelevant or indirect outputs as a result of ineffective search skills, modelling of search functions by either the teacher or the software becomes a vital issue in making analyses less complex and frustrating.

Interested in developing a principled feedback resource via concordances, Gaskell and Cobb (2004) conducted a study with 20 computer-literate adult Chinese L2 writers registered in a lower intermediate writing course at a Canadian university. The students met for one three-hour class per week for a period of 15 weeks, and were obliged to submit 10 assignments in two-week cycles. For the first two weeks, they received in-class training in retrieving and interpreting concordances. As part of

the feedback to their assignments, students received URL links (a technological tool enabling teachers to create and embed concordances in learners' texts) for five typical errors upon which they were expected to revise their texts for final copies and submit forms in which they matched each correction with the corresponding concordance information. The materials used in the study were pre- and post-writing samples on the same topic and under the same conditions, week-by-week error analysis forms, survey results and network records of issuing IP addresses for concordance searches. Gaskell and Cobb report that all the participants were pleased with the improvement in their English writing skills; however, only 40% thought this was due to the concordance searches, believing they would continue to use concordancing as a learning device. Most of the students were able to use concordance searches for error correction. At the end of the course, while there was a slightly significant decrease in three error types out of the ten depicted in the pre-writing samples, this was not the case for the overall number of errors. Gaskell and Cobb draw attention to the need for, among others, a longer training period, a longer time frame, better instruments improving on the simple use of IP numbers for a tracking system that can precisely follow up learners and their behaviours.

Aiming to examine learners' corpus use behaviour and their perceptions of the strengths and weaknesses of corpora as a second language writing tool, Yoon and Hirvela (2004) conducted a study involving 23 students from different majors enrolled in one intermediate and one advanced level writing course already geared towards rhetorical issues and topics. The students were first taught, and then asked to construct prototype strings which they could further decide to make use of to improve their writings. After exploring the database on their own to improve self- or

teacher-identified word-related problems or concerns in their written work, the students submitted their search results to their teacher via e-mail, which he then used to share in class in the form of handouts. The majority of students in both groups found corpus use to be most helpful for learning the usage of vocabulary and phrases, with a smaller number agreeing on its advantage in acquiring the meaning of words. Both groups agreed that corpus use helped improve writing skill, academic writing ability and increased confidence about L2 writing. Time consuming data analysis, limited number of sentences, cut-off sentences, unfamiliar vocabulary or too many sentences in the concordance outputs, speed of Internet connection or search techniques were among the several problems or difficulties reported. With respect to corpus use in writing instruction, the intermediate group responded much more favourably to most of the items listed. The authors report that the activity was found to be particularly helpful for learning common usage patterns, for learning how and where to put words in context, which in the end helped increase confidence about L2 writing.

With a view to researching a possible approach to the teaching of formulaic sequences frequently used in academic discourse, Jones and Haywood (2004) conducted an exploratory study among 21 intermediate level students enrolled in an intensive pre-sessional EAP course. Ten students in the treatment group and eleven students in the control group basically followed the same syllabus for two hours per week for ten weeks, the only major difference being the training the former group received in a specific number of formulaic sequences. The treatment the experimental group received involved raising awareness of formulaic sequences, increasing their accurate and appropriate production and developing students'

learning strategies. Apart from reading and writing activities designed to this end, students in the experimental group were asked to use concordance lines and corpus extracts to encounter in several different contexts the sequences they had selected in their reading classes, which enabled them to analyze formulaic patterns by focusing on grammar as well as meaning. The students were then urged to move beyond the word level and make use of formulaic sequences in the creation of their written work, produce four cause-effect and problem-solution type of essays, analyze the functions of formulaic sequences in context, produce concordance texts, investigate the frequency of occurrences and information on collocates. Jones and Haywood report that the pre- and posttest results yielded that most students in the experimental group were able to gain awareness of a set of formulaic sequences typically used in the academic discourse. On the other hand, the C-test and essay scores showed that only a few students were able to use formulaic sequences both accurately and appropriately. The interview data with three students indicated that students found use of concordances in the teaching methodology useful. However, although the authors used as their syllabus content results derived from corpus-based research and incorporated concordancing activities in their treatment, neither their assessment battery nor their discussion focuses on the specific contribution of concordancing as an isolated tool. Moreover, given the few number of participants and hence lack of statistical analyses in comparison to the control group, Jones and Haywood' study is limited in terms of research design.

Chambers (2005) reports a qualitative study involving 14 undergraduate students enrolled in several language degree programs, all taking a second-year course on language and technology that included among its aims to encourage the

learners to consult in 9 hours a 150,000-word training corpora as a resource in their language learning alongside conventional resources. Chambers concludes that there is considerable variation in the amount of learning resulting from the corpus consultation, as well as the strategies students used and their evaluations of the activity. The negative feedback given by students showed that certain aspects of the activity were found to be tedious, tiring and laborious, especially when counting frequencies and eliminating the irrelevant concordances and reading from a screen; the truncated concordance line was thought to be frustrating and not helpful in establishing rules as the full context was not given. On the other hand, the inductive approach was found to be suitable when using corpus data for analysis and the majority noted that the grammar was useful for explaining rules whereas the corpus complemented it by providing many more examples and at times information lacking in the grammar. Among the positive feedback students gave on the activities were that the concordance results not only yielded more examples than the grammar but also served as an extension of it; the students took pride in discovering examples of a category not covered in the book; it was rewarding to work out lexical or grammatical patterns rather than being 'spoon-fed' with the rules; the authenticity and familiarity of the content in the corpus enabled 'easy memorizing' and provided a richer and highly motivating learning environment.

Apart from studies involving corpus consultation through concordancing for the learning of vocabulary as well as the improvement of written production, there has been a recent attempt to combine corpus based language study with data-driven learning. Cheng, Warren and Xun-feng (2003) merged the teaching of the subjects of Information Technology and Discourse Analysis for second year undergraduate

English language major students. Twenty-nine students enrolled in the courses received an intensive (12 hours in 2 weeks) introduction to corpus issues, and were assigned to conduct individual mini-research projects on an interesting and/or problematical aspect of the English language. Students' research areas covered a wide variety of topics such as single lexical items, pairs of words, taboo words, discourse markers, comparison of spoken and written discourses, comparison of female and male speakers, and comparison of native and non-native speakers of English. Analyses of students' written reflections about the learning experience revealed that lack of knowledge and skill in using the software and some concern about the lack of sufficient context in the corpus-generated databases were among the major difficulties encountered. On the whole, however, students reported enjoying systematic study of authentic language, learned many different functions and features of corpora, had a better understanding and increased knowledge of the specific aspects of the English language in use, and felt that the mini-project would benefit their future research.

Conclusion

DDL has envisaged different roles for teachers and learners. Provided that the appropriate contextualization of the learning experience is made possible through meaningful tasks, the teacher might become a learning expert rather than a language expert; and stop assuming the role of the holder of absolute and limitless knowledge regarding acceptability and appropriateness of language features. On the other hand, given the opportunity to browse, analyze, and choose data and transfer self-initiated

search results to novel contexts, the learner might assume the role of the ‘researcher’ or ‘discoverer’ of language as an active participant in the learning experience, which is expected to help establish autonomy and trigger self-motivation. The focus of previous studies investigating various different aspects of corpus consultation through concordancing within the framework of DDL has shifted from learners’ exploitation of concordance-based materials for mainly multiple exposure to vocabulary in context to a far more independent and central role given to learner-initiated research conducted mainly through the skill of inductive reasoning for a study of the lexico-grammatical features characterizing academic discourse, the observation of such features for self, in other words, autonomous correction of written production, as well as the general instigation of language awareness through investigation of authentic language data obtained from written or spoken discourse.

While the free browsing of corpora for discovery learning has been welcomed, a certain amount of teacher intervention –in the form of modelling tasks and helping to formulate corpus search queries, and above all, an initial training on the use of corpora and concordancing- has been deemed a prerequisite to the avoidance of learners’ possible frustration in dealing with the at times mutilated nature of concordance lines along with the immense amount of data available.

Notwithstanding the valuable insight they have contributed to the field, especially in terms of the qualitative account of learners’ attitudes or problems, and the possible ways of designing activities, existing studies on the use of concordancing by second or foreign language learners ranging from beginning level students to advanced learners, including non-native speaker ELT students, have been limited in the variety of research methods, the number of participants, the time of

exposure to the tool as well as the type and size of corpora used. The research agenda of those working on the pedagogical applications of corpus-based language enquiry through concordances has concentrated predominantly on vocabulary, with a special focus on collocations and fixed phrases; grammatical structures as part of isolated activities; or on writing in the form of assistance in making language improvements particularly related to vocabulary usage.

On the other hand, certain tasks that fall within the domain of a discourse community's expectations, such as the writing of research article introductions at the tertiary level, require strategies that involve an awareness of the considerations related to the situation, context and stimulus in the writing process, all necessitating generation of different types of language. Yet, corpus linguistics has focused to a greater degree on mainly lexico-grammatical patterning and a lesser degree on functional and rhetorical aspects of texts. Several researchers have claimed that a shift towards the latter may better help establish the foundations of the pedagogical merits of the use of corpora and concordancing (see Flowerdew, 1998b; in press). Several other researchers have proposed a genre analysis approach to teaching the organizational structure in academic texts so that learners can be provided with attainable models of academic writing within a contextualized framework that allows for exposure to the variety of key lexical phrases or language features that are representative of the move structures corresponding to the conventional discourse functions in the genre (e.g. Swales, 1990; Mustafa, 1995; Dudley-Evans & StJohn, 1998; Flowerdew, 2000b; Tribble, 2002; Johns, 2002). The main reason for an emphasis on the functional and rhetorical aspects of certain language features within

the framework of genre moves is to equip learners with the kind of knowledge they require as novice writers to become part of the target discourse community.

Furthermore, more recently, there has been a growing interest in incorporating corpus consultation in ELT programmes for the attainment of not only language awareness but also inquisitive skills in using a research tool that has become an indispensable part of language teaching pedagogy (Conrad, 2000; O'Keeffee and Farr, 2003; Sinclair, 2004). However, no experimental study involving a hands-on concordancing setting has yet attempted to assess such pedagogical value of this tool for non-native speaker ELT students.

Contextualizing the use of the concordancer as a corpus search tool based on freshman ELT students' needs, the present study aims to contribute to the current line of research investigating the pedagogical merits of concordancing by means of incorporating corpus data consultation through concordancing and the learning of the genre-specific language of the research article introduction. More specifically, the purpose of this study is to examine the effectiveness of concordancing on non-native English speaker freshman ELT students' use of the language features typically characterizing the specific rhetorical moves of the research article introduction within the framework of Swales' Create a Research Space (CARS) Model; the confidence levels of these students in writing the summary of a research article and a research paper introduction; and their overall opinions about corpus consultation through concordancing as a reference tool in general and as a facilitator in the acquisition of the formulaic language correlating with the rhetorical moves.

CHAPTER 3

METHODS AND PROCEDURES

Introduction

This chapter gives an account of the methods and procedures of the study. Statement of the research questions and the hypotheses is followed by the operational definitions of the variables. In the ensuing sections, the subjects, treatment materials, data collection instruments, procedures and analysis are described in detail.

Research Questions

The present study examines the effects of concordancing on non-native English speaker freshman ELT students' learning of the language features typically characterizing the specific rhetorical moves of the research article introduction; the confidence levels of these students in writing the summary of a research article and a research paper introduction; and their overall opinions about corpus consultation through concordancing. These effects, confidence levels and opinions are investigated via the following research questions:

1. Are there any differences between non-native English speaker freshman ELT students employing concordancing (C-group) versus not employing concordancing (NC-group) in their use and knowledge of the formulaic language features corresponding to the rhetorical move structures of establishing a research territory, establishing a niche and occupying the niche (the Moves) within the framework of the CARS Model offered by Swales (1990)?

a) Are there any differences over time between the C-group and NC-group in their use of such formulaic language features in the writing of a research article summary?

b) Are there any differences between the C-group and NC-group in the use of the formulaic language features correlating with the Moves in the writing of a research proposal?

c) Are there any differences between the C-group and NC-group in their knowledge of the formulaic language features correlating with the Moves?

2. Are there any differences between the C-group and NC-group in the level of their reported confidence in writing the summary of a research article and a research paper introduction?

3. What are the opinions of the C-group about the use of concordancing as a research or reference tool in general and as a facilitator in the learning of the formulaic language features correlating with the summary writing of a research article as well as the Moves?

With respect to the first question, it was hypothesized that, given the rich and multiple contexts provided by concordance data, the scores obtained in a) the language and vocabulary use in the writing of three research article summaries; b)

the use of formulaic language features correlating with the Moves in the writing of a research paper proposal; and c) the Formulaic Sequences Test measuring knowledge of the formulaic language features correlating with the Moves would be higher for the C-group as opposed to the NC-group. Second, it was hypothesized that, as opposed to the NC-group, the C-group would report higher levels of confidence in writing the summary of a research article and a research paper introduction. Third, since data-driven learning has been acknowledged to give learners the opportunity to act as researchers pursuing their own needs, and since teacher education students were expected to be highly motivated for serendipitous learning focusing on language study, it was hypothesized that opinions about using concordancing exercises would be positive in general.

Definitions and Measurements of Variables

Independent variable:

Corpus consultation through concordancing

This is a categorical variable designating two levels to which subjects were randomly assigned: a) concordancing and b) non-concordancing.

Dependent variables:

Use of the formulaic language features characterizing the summary of a research article

This is a continuous variable measured over time by three summary writing tests developed by the researcher.

Use of the formulaic language features characterizing the Moves

This is a continuous variable measured by a research paper proposal students were required to submit to their course instructor.

Knowledge of the formulaic language features characterizing the Moves

This is a continuous variable measured by the Formulaic Sequences Test developed by the researcher.

The level of confidence in writing the summary of a research article

This is a continuous variable measured by a self-evaluation questionnaire developed by the researcher.

The level of confidence in writing a research paper introduction

This is a continuous variable measured by the same self-evaluation questionnaire.

Subjects

The subjects of the study were 45 female and 13 male non-native speakers of English enrolled in the second-term freshman course *Study and Research Skills* (SRS) offered by the Department of Foreign Language Education (FLED) at Boğaziçi University, where the medium of instruction is English. Boğaziçi University requires its freshman students to present proof of their proficiency in English either with a minimum score of 213 on the computer-based TOEFL with 4.5 in the writing section; a minimum score of 7 on the IELTS; or a minimum grade of C on the institutionally administered Boğaziçi University English Proficiency Test (BUEPT). Having passed BUEPT or TOEFL (one student who submitted a score of 627 on the pen-and-paper TOEFL) at different times, all subjects in the study can be considered advanced level students. Out of the 57 students who took BUEPT, 33 (58%) passed

with the letter grade B, while 24 (42%) with C. There were no students who passed with the highest possible grade A. The total scores of those students who passed with B ranged from 71 to 84, and those with C from 59 to 70. In terms of the writing component, the scores of the subjects ranged from 56-68 out of a possible 100. The distribution of the students according to the dates on which they took the test is as follows: 9 students took BUEPT in January 2005, 25 in September 2004, 1 in August 2004, 20 students in June 2004, 1 in January 2004, and 1 in June 2002. To sum up, by the time of the study, conducted between March-May 2004, all subjects, except for the 9 students who had passed BUEPT in January 2005, had taken at least one term of departmental courses in English. Except for the 9 students who had passed BUEPT in January 2005, all had taken a first-term laboratory course which provided them with basic computer skills as well as the skills required in doing web and library searches. Having relatively little topical knowledge of applied linguistics as well as the academic writing conventions of research articles published in the field, all students followed the same *SRS* course in a single section that met for three class hours per week for a period of 12 weeks. For the follow-up laboratory sessions which were used for the purposes of this study, the students were randomly divided into two sections. There were 30 students in the experimental group and 28 in the control group.

The Experiment Setup

This section gives a detailed account of the elements involved in the treatment given to the experimental group subjects as well as the lessons followed by the control

group subjects in the laboratory sessions. TextSTAT (Simple Text Analysis Tool) was used as the concordancer software; FLED Corpus served as the compilation of texts on which this concordancer could be run; PDF Files was the name designating the individually saved PDF files of the same articles contained in the corpus; and finally the adjunct syllabus and the corresponding lesson plans with two different versions provided the scope of the tasks performed in the laboratory sessions.

TextSTAT 2.5 Concordancer

TextSTAT 2.5, made freely available for download by Mattias Huning on the Internet (http://www.niederlandistik.fu-berlin.de/textstat/software-en.html) for the operating systems of Windows (95/98/NT/2000/XP), Linux, and Mac OS-X, is a text analysis programme with an English and Dutch interface that also generates concordance lines. Although it features no online manual or help menu, except for brief explanations and a few screenshots provided in the software's Web site, it offers a user-friendly interface with straightforward options. TextSTAT has to be downloaded and installed in a computer, upon which users can upload their own corpus in numerous files. While being compatible with text files (.txt) and Internet files (.html), TextSTAT can also read Word files (.doc). Moreover, it contains a Web access tool that can capture texts directly from the Internet. The users can type the Web address and choose the number of pages they want to include in the corpus. TextSTAT generates concordance lines based on the uploaded texts, allowing users to sort the concordance lines in several forms; either alphabetically by the search word or by the left side and right side of the search word, with the number of words

to be displayed on either side adjustable in advance. TextSTAT also contains a feature named ‘query editor’, which permits retrieval of collocates (i.e., two words that have a high likelihood of occurring together in the same sentence). Figure 3.1 provides a screenshot for the concordance function of the programme.

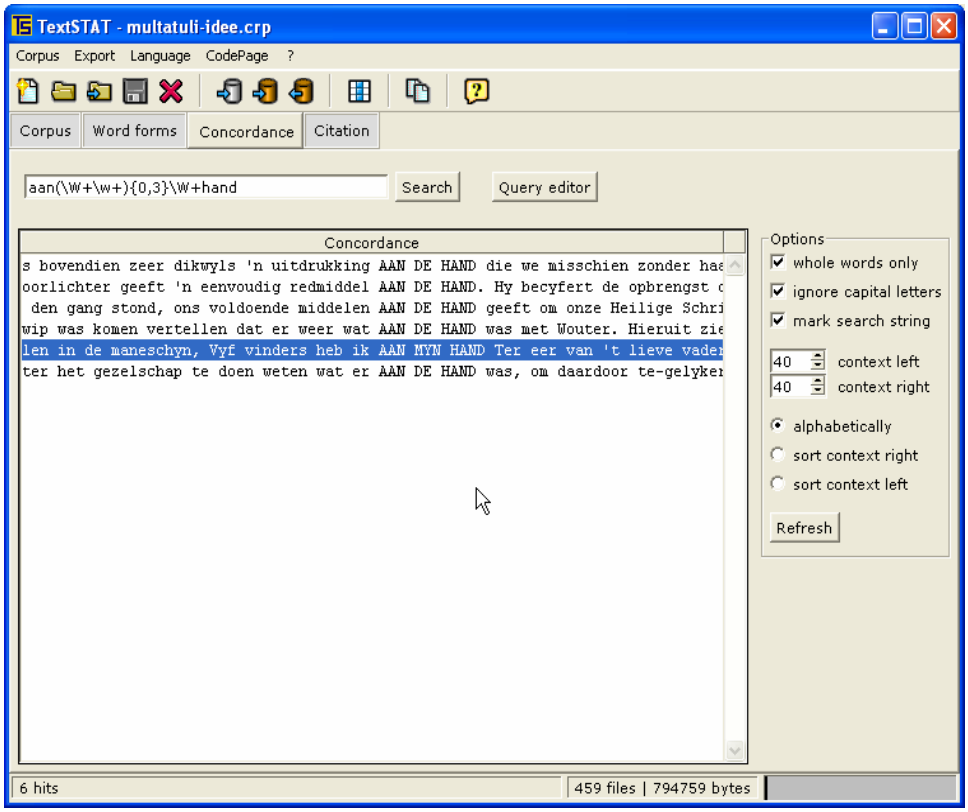


Figure 3.1 Screenshot for the concordance function

By double clicking on the search word in a concordance line, users can access the expanded context via the Citation Mode, which can then be further expanded to reach to whole text. Figure 3.2 provides a screenshot for this citation mode.

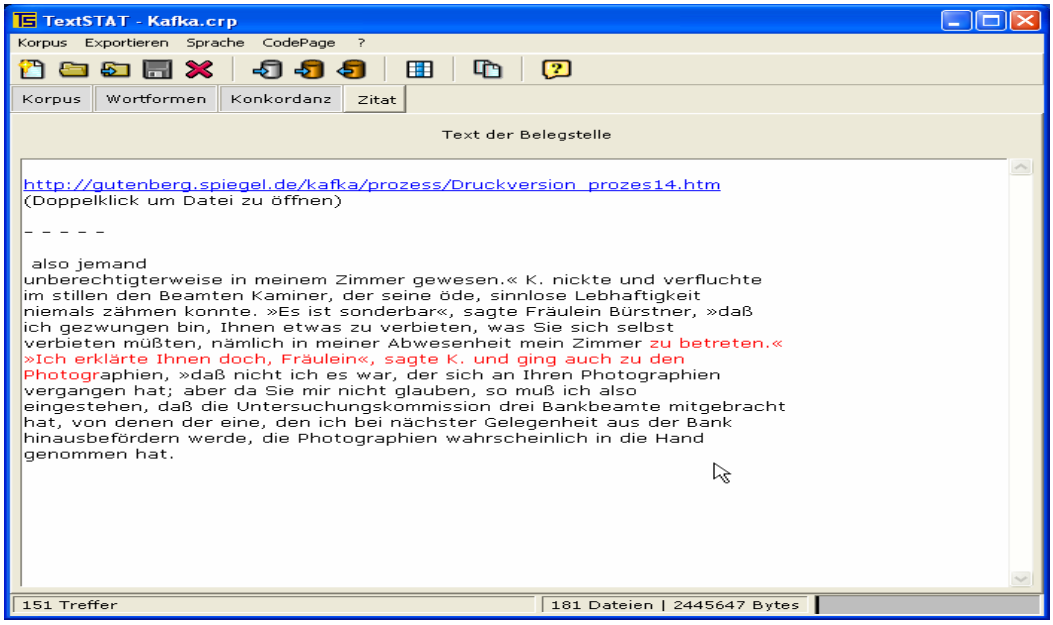


Figure 3.2 Screenshot for the citation mode

TextSTAT also provides word lists, sorting by frequency, alphabetically, and retrograde (a feature that sorts the word list alphabetically, but backwards). It is possible to run frequency lists either by specifying the minimum and the maximum number of appearances in the corpus or by searching for a specific word. A screenshot for the word forms mode is presented in Figure 3.3.

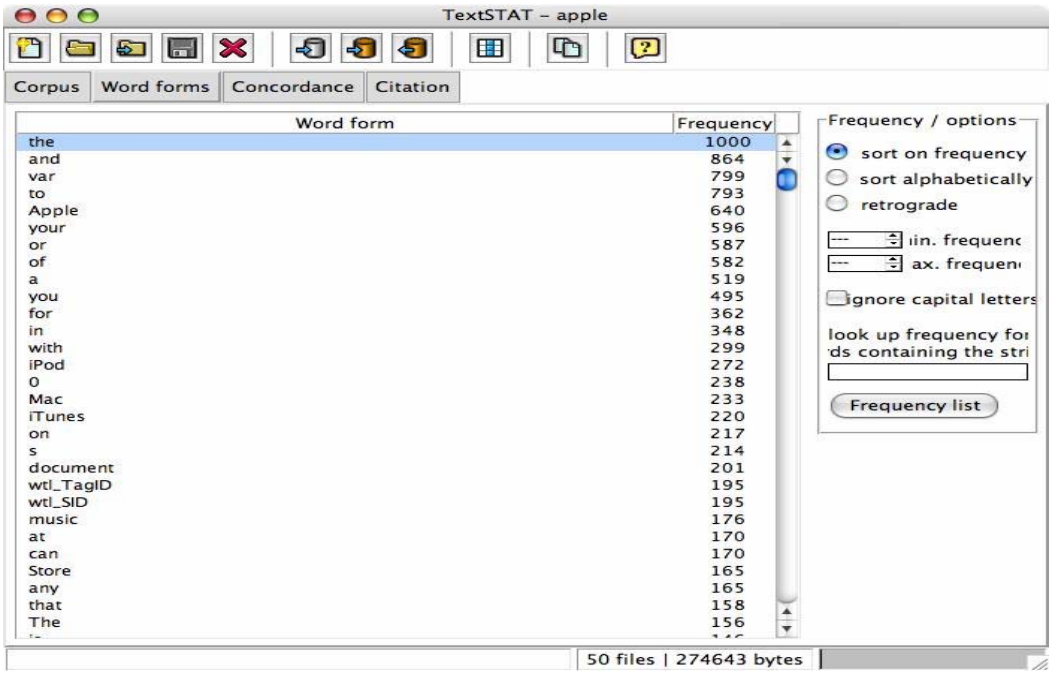


Figure 3.3 Screenshot for the word forms mode

Users can save concordance outputs into separate files as well as word lists in CSV (comma-separated values format) or Excel files and concordances on text or word files. The programme allows individual results to be displayed on separate windows, so that several sources of information can be compared on the screen. Unlike some commercially available software such as WordSmith Tools (Scott 1999, 2005), it does not provide any tool for statistical analysis.

TextSTAT was chosen to be used in this study for three main reasons. First and foremost, it was freely available for download on the World Wide Web; secondly, it featured a concordancer that was not only very easy to operate on as many text files as desired, without any restriction on the number of concordance lines displayed, but also, and thirdly, thanks to its citation function, enabled users to

expand the node word beyond the mutilated line, in case students felt the need to access the full sentence or the full text of the article containing the search node.

A lesson incorporating the use of concordancing activities typically included the following five components:

1. As a lead-in, the language feature pertaining to the objective of the lesson, as introduced by Swales and Feak (1997), was discussed for 5 minutes by emphasizing or questioning how a specific feature was able to fulfil a certain rhetorical function. For instance, in the chapter on summary writing, “this+noun” structure (e.g. this+paper/study) or the use of formal negative forms such as “no/little/few” (e.g. few studies, little research, etc.) are presented as typical language features.
2. Students were asked to scan for approximately 15 minutes the PDF versions of two to three articles on the desktop and locate sections corresponding to the objective of the lesson, and make a note of the typical instances.
3. The teaching assistant modelled in a few minutes a sample search which was projected on a screen for all to see and comment on.
4. In the remaining time of approximately 25 minutes students were asked to run concordances for the items they had identified and/or for those search items suggested by the researcher in the lesson plan and/or the teaching assistant during the lesson itself. The students were allowed to be flexible in their corpus searches. They could define their own wildcard searches, set the number of words they

desired to see to the right and left of the searched items, expand the context through the citation mode, and should they need to do so, access the full text of each article through the concordance tool. Students were encouraged to depict, if possible, any emerging patterns in conventional academic language use, and contemplate on how the elements contributed to the rhetorical function examined. They were asked to further explore any lexical or grammatical structures they found to be particularly relevant for the items under study. In the meanwhile, pair discussions or consultation with the teaching assistant were welcomed. During this exploration stage students were asked to take note of the frequent or typical instances of language features or compare their findings either with the samples given in Swales and Feak (1997), suggested by the teaching assistant in accordance with the lesson plan or the findings of their classmates.

5. At the end of each session time was allotted to holding a class discussion of the important findings.

To sum up, the treatment incorporating corpus consultation through concordancing was rather unstructured in terms of allowing for flexibility in the possible directions the searches could take. However, such course of action was a desired outcome in accordance with the theoretical framework suggested by Johns in his data-driven learning approach (1991a, 1991b, 1994) and Bernardini in her serendipitious learning approach (2000, 2002), both aiming to predispose the learner to assuming the role of the language researcher and the teacher that of the guide or

facilitator of this research endeavour. Table 3.1 provides a general overview of the typical sessions conducted in the laboratory.

Table 3.1 General overview of the laboratory sessions

Time allotment	Control Group	Experimental Group
c. 5 minutes	Brief discussion on the rhetorical move under study	Brief discussion on the rhetorical move under study
c. 15 minutes	Students scan selected articles from the PDF Files for identification of the Moves	Students scan selected articles from the PDF Files for identification of the Moves
c. 2 minutes	The teaching assistant models a typical language feature	The teaching assistant models a typical language feature
c. 25 minutes	Students further scan one or two full- text articles they locate on the Internet or via the main library access to identify and note typical language features/ or alternatively do subject (move)- related language assignments from Swales&Feak (2004)	Students search the complete FLED Corpus via TextSTAT Concordancer to identify and note typical language features
c. 5 minutes	Class discussion of findings	Class discussion of findings

FLED Corpus

For the purposes of this study, a pedagogical mini-corpus (FLED Corpus) of 103,701 tokens or running words was compiled by the researcher to be uploaded in TextSTAT. The texts contained in the corpus were chosen so as to represent a cross-section of exemplar research articles published in acknowledged applied linguistics

journals the students were expected to follow and exploit as part of their course requirements throughout their undergraduate study. In fact, on its departmental web page, the Department of Foreign Language Education suggests and provides links to a number of prominent journals in the field, among which *TESOL Quarterly, Studies in Second Language Acquisition, Second Language Research,* and *System* are included. As the first step in the compilation of the corpus, randomly selected 14 research articles from current issues of these four journals were electronically saved via the local area network provided by Boğaziçi University's Main Library, which, through an institutional protocol enables its users to access the full texts of articles from these journals. Using this on-line facility and following Meyer (2002), who suggests that it is best to save texts in ASCII (or text) format for computerizing written texts for inclusion in a corpus since this is the standard format used for texts included in corpora, the PDF versions of the articles were saved as plain texts in separate files, excluding texts associated with tables, graphics, notes, and references. The plain text versions of all the articles were further proofread to retrieve certain letters and characters lost or modified during their electronic transfer. Table 3.2 provides summary information on the composition of the corpus. The inclusion of uneven numbers of articles from each of the four journals was a result of the emerging number of tokens that could be included in the electronic transfer of data in the compilation proces following the exclusion of the elements mentioned above. As noted by Hunston (2002), a balanced corpus consisting of an equal number of words from each category contained in it is necessary only in cases where the corpus is assumed to be representative of one language or a variety of it for linguistic analysis, rather than for pedagogical purposes. Furthermore, in a pilot study, Biber (as cited in

McEnery and Wilson, 2004) found that frequent items display stability in their distributions and that identification of rarer elements requires larger and more even samples for their full representation in the corpus. Since the FLED Corpus was to be used in the exploration of typical language items in research article introductions, an attempt at balancing the number of articles was not made. On the other hand, articles were chosen from four different journals so as to ensure stylistic variety and avoid possible under-representations that might have originated from editorial language preferences. The full references for the articles and the number of tokens contained in each text file can be found in Appendix (A). With the help of the computer laboratory supervisor, the researcher uploaded the FLED Corpus in the TextSTAT programme which had been downloaded on each of the 22 computers in the laboratory.

Table 3.2 Composition of the FLED Corpus

Name of journal	Number of articles	Number of tokens
TESOL Quarterly	5	45,483
Studies in Second Language Acquisition	4	26,967
Second Language Research	1	9,047
System	4	22,204
TOTAL	14	103,701

PDF Files

All of the 14 articles contained in the FLED Corpus were separately saved as PDF Files in their original formats in a separate folder on the desktop of each computer in the laboratory. These texts were scrolled by both groups every week to identify the rhetorical moves in their original contexts. The texts were saved on the desktops so as to avoid time loss due to possible technical problems related to logging on to the main library's online services. All students in both groups were able to access these files via the 5.0. version of Adobe Acrobat Reader, which included a basic search option somewhat similar to TextSTAT concordancer. The search option of this earlier version of Adobe Acrobat Reader allows users to locate and list all instances of a word or a case sensitive form of the word within the document on display, alongside the full text version. However, since the full version of the text is available right next to the search screen, the visual display of the instances is limited to only a few words to the right and left of the node. In other words, the major function of the search option in this version of Acrobat Reader is more to help users easily locate items within a text document, rather than to list all occurrences of those items alligned in the centre for analysis in context, as in the case of the concordancer.

The SRS Course and the Adjunct Syllabus

For the first four weeks of the SRS course, the students were introduced to the basics, nature and classification of educational research and the activities involved in the research process. In the next three weeks, they were taught how to summarize

research articles, review the literature, cite correctly and write up references in the APA style. Two further weeks were dedicated to the conventions of data sampling and instrumentation. Finally, in the remaining three weeks the students were introduced to the conventions of constructing a research paper, writing critiques, and writing research proposals. One major purpose of the *SRS* course, as defined by its instructor in the syllabus, was "to provide its participants with a framework within which they will be able to apply their knowledge and skills to read, synthesize, and critique educational research and prepare a literature review, using conventions of academic writing." For the purposes of this research, the conventions of academic writing falling within the scope of the course were planned to be explored in the supplementary language focus sessions held in the departmental computer laboratory.

The marks students obtained on the tests administered as part of the laboratory sessions comprised 20%, and the final project, for which the laboratory sessions aimed to assist in terms of academic language use, 40% of the overall grade they received for the course. In order to prevent the loss of subjects, the students were advised at the beginning of the term that failure to atttend any of the sessions without presenting any excuse would result in not being awarded any credit for the laboratory sessions, and to this effect, attendance in the lab sessions constituted 10% of the overall course grade.

Since the present study involved using the laboratory sessions of the *SRS* course, with the consent of the course instructor, an adjunct syllabus for these sessions was developed by the researcher to familiarize students with the conventional language used by expert writers of research articles produced in the

field of applied linguistics. More specifically, and in parallel to the syllabus of the *SRS* course, the adjunct syllabus objectives were defined as having students focus on the linguistic features of research articles corresponding to the macro-organization presented by the CARS model (Swales, 1990). The course instructor had already assigned related chapters from Swales and Feak (1997) as part of the reading package for the course.

The CARS model views the rhetorical structure of the research article as consisting of three major moves -establishing a territory, establishing a niche and occupying a niche, which are further divided into componential steps. Table 3.3 provides a complete version of this model.

Table 3.3. Create a Research Space (CARS) Model for Research Article Introductions (Swales, 1990)

Move 1: Establishing a Territory
Step 1: Claiming centrality, and/or
Step 2: Making topic generalizations, and/or
Step 3: Reviewing items of previous research
Move 2: Establishing a Niche
Step 1a: Counter-claiming, or
Step 1b: Indicating a gap, or
Step 1c: Question-raising, or
Step 1d: Continuing a tradition
Move 3: Occupying the Niche
Step 1a: Outlining purposes, or
Step 1b: Announcing present research
Step 2: Announcing principal findings
Step 3: Indicating RA structure

For the final project constituting 40% of the assessment battery of the *SRS* course, students were required to write a research paper proposal. In other words, for this final project, students were expected to follow Move 1 and Move 2 with their componential steps, and finally Move 3, except for its second and third steps.

Aiming to supplement the language focus pertaining to these moves with an initial emphasis on the language used in summarizing research articles, the adjunct syllabus was designed so as to dwell on one major move each week. Following the

single session held outside the computer laboratory, in which all students were introduced to the CARS Model and lectured on ways of summarizing research articles, all the other sessions adhered to the following schedule: focus on a number of language features involved in summary writing, claiming centrality, literature review, establishing a niche and occupying the niche. For each week's subject, students were required to come to the session having read the relevant sections assigned from Swales and Feak (1997). Appendix B provides a copy of the weekly schedule distributed to the students prior to the beginning of the sessions. For each language focus session, the teaching assistant for the computer laboratory was provided with two different lesson plans including the objectives and an outline of the tasks to be conducted. Both versions of these plans for seven weeks, outlining the language issues to be explored can be found in Appendixes C.01 and C.02. Modelling of the conventional academic language for each move in the lesson plans or the search tips offered to the students were predominantly based on the language focus sections in Swales and Feak (1997, 2004) and the prefabricated chunks offered in Swales (1990) as well as the preliminary findings obtained from the researcher's concordance-based search on the FLED Corpus.

Data Collection Instruments

To address the research questions of the study, a set of instruments was used, including a test battery consisting of one 'Formulaic Sequences Test', three 'Summary Writing' tests and one 'Research Paper Proposal'; semi-structured interviews; and a self-evaluation questionnaire. The test battery aimed to assess

whether there were any differences between the C-group and the NC-group in their use and knowledge of the language features corresponding to the rhetorical structures of a given set of research articles within the framework of the CARS Model offered by Swales (1990), and whether there were any changes over time concerning such knowledge. The semi-structured interviews aimed to examine the opinions of these students about the use of concordancing as a research/reference tool in general and as a facilitator in the learning of the formulaic sequences correlating with the rhetorical moves. Finally, the self-evaluation questionnaire was included among the instruments to understand how students felt about summarizing and reading research articles as well as writing a research paper introduction at the end of the treatment.

Formulaic Sequences Test

The Formulaic Sequences Test (see Appendix D.01 for the test, and Appendix D.02 for the answer key) was developed by the researcher to measure the extent to which students had learned the language features corresponding to the specific rhetorical patterns in the research article. (Each student's score constituted 5% of the laboratory evaluation grade out of a total of 20% as part of the battery for overall course evaluation.) This test was based on a pioneering one developed by Schmitt, Dörnyei, Adolphs and Durow (2004). Following Schmitt et al., and attempting to ensure triangulation in the identification of formulaic sequences as also suggested by Read and Nation (2004), targeted language features were chosen according to three main criteria. First, all the target features had to have frequent occurrences in the target language use domain. Such occurrence was confirmed by using the following

reference materials: the 163,000- word academic sub-corpus of the Brown Corpus, the 100 million-word British National Corpus as well as the 100,000-word FLED Corpus for the purposes of better representation of the field of applied linguistics through randomly selected research articles published in prominent journals. Second, the target features would have been incorporated into an EAP teaching environment as part of the academic discourse. Third, the target language features would have been deemed significant and worthwhile to teach by the course book used in class (Academic Writing for Graduate Students by Swales and Feak, 1997) as well as research in EAP (Hyland, 2004). Finally, the target language use domain was the same as the language use in the test tasks as the test drew upon the mini-corpus of 14 articles, while the passages in the test items were chosen so as to correspond to the major moves included in the CARS Model.

The test consisted of two main task types that attempted to test knowledge of the language features at both the receptive and productive levels. Task Type I, aiming to test receptive knowledge of the language features, used the objective question format of multiple choice, with one correct answer out of four grammatically correct options. The test taker was expected to choose the correct option based on the genre-specific preferences of academic research articles, bearing in mind the language features peculiar to the moves of the CARS model. The criterion for the incorrectness of a distractor was its non-existence or infrequent appearance in the two major reference corpora stated above and the FLED Corpus. In this way, the intution or general knowledge of the test writer or any native speaker was expected to be ruled out as the only dependable source since knowledge of the

language features in question covered that domain shared by a specific discourse community.

Example Task Type I

One characteristic afforded to online communication is increased message permanence, which allows a reader to scroll up to reread a previous passage or to recheck the spelling of a new or known word used earlier. (1)_____ argued that such permanence helps explain the lack of learner uptake (compared with F2F communication) that is present in online communication among language learners (Smith, 2004).

1. a. It has been
   b. A researcher has
   c. In 2004, Smith
   d. Smith has

In the above item, the test taker was expected to choose the option deemed appropriate in the academic discourse community as part of Move 1a, which corresponds to establishing a research territory by reviewing items of previous work. While option 'a' is the original and correct use as it appears in the corpus, option "b" is an informal and unacceptable way of citing a researcher's work. Options 'c' and 'd' would be non-standard uses, considering that the name and year reference have already been given in the parenthesis.

Task Type II, aiming to test productive knowledge of the language features, used a blend of C-test and Cloze-test, in which skeletal structures in original passages were left incomplete by the deletion of varying numbers of letters in one or several words. The initial letter/s of each word was/were given in order to constrain the choice of possible words. Since test takers were expected to produce the language

that is appropriate for the surrounding context, underneath each passage, clue words or phrases were given in parentheses to help guide them towards the targeted item in terms of meaning. The blanks were highlighted together with other words so that test takers would pay attention to the whole sequence.

Example Task Type II

For an over_____ of such research, the reader is directed to Adamson (1988), Beebe (1988), Ellis (1999), and Tarone (1988, 1990).

(To learn about the major issues regarding such research)

This item was written so as to display a typical example of the formulaic language used in referring to items of previous research. While the expression given in the parenthesis may be an accurate paraphrase, the introductory phrase of 'for an overview of such research' is considered to be a laconic and genre-specific example of academic language use.

In terms of language ability, the test attempted to measure knowledge of the typical language features corresponding to the above mentioned components of the CARS Model appearing in the 14 research articles previously studied by the subjects for the purposes of focusing on academic writing conventions. Following Flowerdew (2000b), knowledge of the formulaic sequences was defined to include knowledge of lexical collocations (e.g. to *conduct* a survey); grammatical collocations (e.g. we recommend *that* X *should*); polywords, that is, fixed collocations or skeletal structures (e.g. the purpose of this study is to...); word classes (e.g. noun forms preferred to verb forms); metalanguage (for different sections of the article) typically used in the academic discourse community by expert writers in the field of applied linguistics.

Topical information included in the task input was familiar to all subjects as they had previously studied the collection of articles. However, as test takers had read or scanned the relevant articles at varying degrees of locality and only to analyze specific language features, such incidental topic familiarity was not expected to contribute to facilitating optimum performance by contextualizing the task for all.

The test included a total of 20 items, with 10 items in each part. As this was a 'power test' in which enough time was allowed to permit every test taker to attempt every task, 3 minutes per question was allotted for the completion of each question. As the construct to be measured required fine discrimination and involved multiple components of language ability, the best answer type (Bachman and Palmer, 1997) was used in the multiple choice part and participants received composite scores. Attention was given to including an approximately even distribution of moves and the corresponding language features in the items.

Validity and Reliability of the Test

As the test drew on an authentic corpus of the target language use domain, the task language use can be said to have content validity. The course book used in class, research findings in the field and expert opinion of language instructors provided guidance in the selection of the passages that included the relevant moves of the research articles. Draft items for the receptive task type were first piloted in fifteen short passages from the FLED Corpus on three English language instructors working at Boğaziçi University. In order to identify the cognitive processes involved in doing the task, verbal protocol analysis (Green, 1998), which suggests analyzing

individuals' verbalisations as they conduct a particular task, was used. The information gathered from this initial piloting done in February 2005 was used to improve both the content and the format of the second draft test, which was then piloted in March 2005 on a group of twenty-three freshman students who had not received similar instruction as the subjects of the present study but were taking the expository writing course offered by the Department of History at the same university. One of the teachers who contributed to the initial piloting was also the instructor of this expository writing course. The same version of this second draft of the test was piloted on five English language instructors whose retrospective verbalizations (Green, 1998) were used to improve the test items. Three of these instructors had contributed to the piloting of the previous version of the test. Item facility and item discrimination analyses were conducted to develop the third draft of the test. Further pilotings of this final version of the test in May 2005 involved 63 students from the following four groups at the same university: two sections of 30 students and one section of 27 students taking freshman Advanced English courses from two different instructors respectively, and a group of six students from a second-year Advanced English course taught by the former group instructor. This relatively small fourth group of students had been introduced to the CARS Model as part of their coursework and were already familiar with academic writing conventions. The researcher attended, as an observer, the instructor's feedback session on the pilot test the students had taken so as to gain insight into their retrospective reactions to their own answers. These students could easily identify the moves that were supposed to correspond to the characteristic language features included in the test items. Appendix D.03 presents words, phrases or skeletal

formulaic structures as they correspond to each move included in the final version of the test items.

In order to improve the reliability of the test a number of analyses were conducted. The item facility (IF) and item discrimination (ID) values were calculated for each item. Judgements were based on Ebel's (as cited in Bachman and Palmer) criteria. For the first part of the test, the distractor efficiency analysis (DEA) was also used to eliminate the distractors that were never or rarely chosen by the upper and lower bands of the piloting subjects. The Coranbach alpha for this final piloting of the test was 0.5211. Based on this value, as well as the IF and ID values obtained, the feedback from the instructors, and the objectives of the laboratory sessions, some major improvements were made on the items. For example, the questions were sequenced according to the obtained item facility values from the least to the most diffciult ones, the number of letters and the context clues in the blank completion task as well as the distractors in the multiple choice part were revised. More specifically, from the first part of the test, six items (with IF values ranging from 0.29 to 0.73) were kept the same and one excluded. For the revised test, one new item was written and three passages that were excluded from part two (with ID values ranging from 0 to 0.19) were transformed into the question format of part one and included here. From the second part of the piloted test three items were excluded, four items (with ID values ranging from 0.24 to 0.38) revised and six items kept the same. To sum up, the final version of the revised test included ten items based on seven passages for the multiple choice part and ten items for the fill in the blank task type in the second part. The Cronbach alpha obtained from the results of the 54 test takers in the study group was 0.3244.

Since target test takers were not expected to be familiar with the infrequent format of the second task type, one worksheet (Appendix D.04) developed by the researcher from the FLED Corpus and a part of the formulaic sequences test developed by Schmitt et al. (Appendix D.05) were used in class and another worksheet (Appendix D.06) again developed by the researcher from a research article not included in the corpus was assigned as homework with a view to increasing students' test familiarity.

Summary Writing Test

The summary writing tests (Appendix E.01, E.02, E.03) were developed by the researcher to address the first sub-question of the first research question of the study: Are there any differences over time between the C-group and NC-group in their use of the formulaic language features in the writing of a research article summary? Test takers were asked to bear in mind the following three principal requirements presented in *Academic Writing for Graduate Students* by Swales & Feak (1997): offering a balanced coverage of the original, presenting the source material in a neutral fashion, and condensing the source material and writing in one's own words. The test involved reading an article carefully, and following academic conventions, writing a summary of at least 250 words in 120 minutes. In the writing part of BUEPT, test-takers are required to write two one-page essays in 80 minutes, and in the careful reading part, read a 3-4 page text and answer the relevant comprehension questions in approximately 30 minutes. Therefore, having passed BUEPT, these students were expected to be able to read 7-8 pages of text in approximately 20

minutes and a write a summary of the same text in the remaining approximately 100 minutes. In other words, ample time was given for the completion of the test and relatively short articles were chosen so as not to pressurize students to write in a restricted period of time. Test takers were allowed to take notes or annotate the text as they wished, and were informed that their summary would be graded on content (30 %), organization (20%), vocabulary (20%), language use (25%) and mechanics (5%). This grading was based on the scoring profile (Appendix F) developed by Jacobs, Zingraf, Wormuth, Hartfiel & Hughey (1981) for ESL composition writing, which was preferred for its componential structure as well as analytical scoring that ensured objectivity, and the fact that it is reported to be one of the well-exploited and reliable writing assessment tools in the field of applied linguistics (Weigle, 2002). The tests were read by the researcher and the teaching assistant for the laboratory. The Pearson's inter-rater reliability correlation coefficients were found to be 0.908 and 0.912 for the first and second summary writing examinations respectively. As these inter-rater reliabilities were high, the marking of the third exam was done by the researcher only.

The following three articles, with the abstracts removed, were used in each of the summary writing tests administered in the order presented here:

1) Gray, J. (1998). The language learner as teacher: the use of interactive diaries in teacher training. *ELT Journal* 52/1: 29-57.

2) Cabrera, M. P and Martinez, P.B. (2001). The effects of repetition, comprehension checks, and gestures, on primary school children in an EFL situation. *ELT Journal* 55/3: 281-288.

3) Creswell, A. (2000). Self-monitoring in student writing: developing learner responsibility. *ELT Journal* 54/3: 235-244.

Research Paper Proposal

The Research Paper Proposal (RPP) was in fact a course requirement constituting 40% of the SRS assessment. For this end-of-term project, students were required to choose a topic of their own interest in the field to conduct research on, and submit a paper that contained the relevant research questions, a literature review including at least five articles, and an outline of the *planned* methodology, with a reference list for the literature review attached. RPP was included among the data collection instruments in order to examine the extent to which the subjects could accurately and appropriately used the language features peculiar to the CARS Model moves which they were expected to follow for a contextualized purpose. The researcher and the course instructor collaborated in developing a grading rubric (Appendix G) that would assess performance in the actualization of the moves, use of academic language and vocabulary as well as mechanics. The breakdown of the components was as follows: literature review (50 points), Methodology (10 points), use of academic language and vocabulary (30 points), and mechanics (10 points). For the purposes of this study and in tandem with the overall course objectives, the use of academic language and vocabulary component aimed to assess (with 20 out of 30 points) whether students competently used in their own words, with proper paraphrasing, formulaic sequences marking rhetorical patterns; in other words, whether the paper was characterized by written academic style. The remaining 10

points were credited for basic language use displayed by effective use of complex constructions with few errors of agreement, tense, number, word order/functions, articles, pronouns and prepositions. The papers were read by the researcher and the main course instructor. The Pearson's inter-rater reliability correlation coefficient was found to be 0.954.

Self-evaluation questionnaire

A sixteen-item self-evaluation questionnaire (Appendix H) consisting of three parts was designed to gain insight into the levels of confidence the subjects felt about writing a summary of a research article following the academic writing conventions taught, reading a research article by following the relevant moves, and writing a research paper introduction by establishing the same moves. Bailey (1998) suggests that self-assessment as an evaluative procedure has pedagogical merit especially in terms of the consciousness-raising effect it creates. It was based on this suggestion that subjects were asked to respond to the questionnaire before handing in their final projects. Each statement in the questionnaire was rated on a five-point Likert scale format ranked from '1 (strongly disagree)' to '5 (strongly agree). The questionnaire instructions and the wording of the statements were based on the samples provided in Bailey (1998). At the end of the questionnaire, students were given the opportunity to add any comments they deemed necessary. The Cronbach alpha for the total of 16 items was found to be 0.79, while individual alphas for the sections focusing on the writing of a summary of a journal article, reading a research article and writing a research paper introduction were 0.61, 0.78 and 0.74 respectively.

Semi-structured Interviews

Semi-structured interviews (Appendix I) were used to address the third research question; that is, to explore the articulated opinions of these students about the use of concordancing as a research/reference tool in general and as a facilitator in the learning of the language features correlating with the rhetorical moves. There were two basic reasons for the inclusion of qualitative data in the research design. First of all, this study involved use of the concordance tool as part of a number of tasks performed by students positioned as language researchers within a context that required learning of the formulaic language sequences employed by expert writers in research article introductions, and given the diversity of such formulaic sequences, there was, to the best of the researcher's knowledge, no existing standardized assessment tool that had been developed to account for how formulaic sequences are acquired by non-native as well as native speakers of English and in what ways, if any, such acquisition or learning could be measured to assess the amount of learning outcome. Second, in line with the learner's role as the researcher envisaged by the data-driven learning approach, the tasks designed to incorporate concordancing activities were rather unstructured in that they allowed the tool to be manipulated in the hands of the learners according to their own queries, albeit following the instruction of or guidance on ways to explore formulaic language features. This unstructured and explorative nature of the tool could result in a learning outcome that could not be completely accounted for by the assessment tools used. For these two reasons, qualitative data obtained from the semi-structured interviews conducted

with six subjects from the C-group and five from the NC-group were expected to provide insight into a number of aspects related to corpus consultation through concordancing.

In the light of the interviewing techniques suggested by Weir and Roberts (1994) and Krathwohl (1998) the questions were sequenced from more general ones about the laboratory sessions to more specific ones that aimed to probe into the actual use of the concordancer; and were posed using rapport builders to help establish a comfortable relationship with the respondents, employing a nondirective approach. The questions were designed by the researcher so as to stimulate retrospective thinking on the use and awareness of academic language conventions, the goals of the language sessions, the extent to which the sessions helped to serve those goals, the tool itself, the assistance students received, and their perceived learning styles. Apart from this retrospective look, questions aiming to probe students' perception of the prospective uses of the tool were also included. The subjects to be interviewed were randomly chosen, either phoned or approached during the lab hours, and individual appointments were made with six students from the experimental and five from the control group depending on their availability at times other than class hours. All interviews were randomly scheduled between May 10-12, 2005.

Procedures

There were three components to the procedures of this study: the preparation component which involved syllabus design, materials, and test development; the treatment component and finally in parallel to this the data collection component.

First, in the preparation component, upon having taken the SRS course instructor's consent for use of the laboratory sesions for the purposes of this study, the researcher compiled the c. 100,000-word FLED Corpus in the fall of 2004. The SRS course instructor and the researcher then convened to draw a timeline for the weekly tasks to be conducted in the laboratory sessions as a supplement to the focus on language parts of the SRS course. Following this, the researcher developed tasks as part of the adjunct syllabus, identified relevant readings and exercise assignments from Swales & Feak (1997, 2004), the choice of which was further approved by the course instructor. Three summary writing tests, the formulaic sequences test which was piloted on a relatively similar population of students in terms of language proficiency, as well as the self-evaluation questionnaire and questions for the semi-structured interviews were prepared. Before the start of the spring term of the 2005 academic year, the teaching assistant who was assigned by the Department of Foreign Language Education to instruct in the laboratory sessions was briefed by the researcher on the use of corpora and concordancing in general and the use of the TextSTAT programme in particular in two two-hour sessions.

At the beginning of the second stage, which involved the treatment itself, all students taking the *SRS* course were randomly divided into two sections by the course instructor, one to serve as the experimental (N=30) and the other as the

control group (N=28). These groups were taught for 7 weeks by the same teaching assistant in two consecutive class hours. Apart from the laboratory sessions in which the treatment was given, all students received from an instructor other than the course instructor a two-hour introductory lecture on Swales' Create a Research Space Model (see p.77 for an overview of the model) as well as a general presentation of the techniques used to summarize research articles at the beginning of the term. This introductory lecture was found necessary because the adjunct syllabus developed for the laboratory sessions had to deal with the language features of the subject matter that was addressed by the SRS course instructor in later weeks towards the end of the term. While both groups of students followed the same syllabus objectives and worked on the same collection of research articles to reach those objectives, they differed only in the tasks they were expected to perform in the computer laboratory. More specifically, the experimental group worked with the concordancer programme given as the treatment, while the control group did not. An in-class poll taken at the beginning of the term revealed that none of the subjects had prior knowledge about or experience with neither concordancing nor corpora. The total amount of exposure to the treatment was an approximate of 25 minutes in each of the fifty-minute laboratory sessions for a period of seven weeks. Due to the insufficient number of computers (22) and technical problems in the running of either the programme or the available computers some of the students were not able to work indiviually at different times.

Data collection using the instruments described above involved seven steps that were spread out in the treatment period between March 7, 2005 and May 27, 2005. Following an initial three-week instruction including the treatment, the first

summary writing test was administered on April 1, 2005 outside the computer laboratory in a room large enough to accomodate both sections. The exam papers were marked by two readers using Jacob et al.'s ESL composition profile. One of the readers was the teaching assistant with no prior experience in the marking of writing, and the other, the researcher, who, having taught ESL composition at the university level, was a trained writing marker and a writing marker trainer for the institutionally administered proficiency exam BUEPT. Since both readers were to use the scoring profile for the first time, they came together for a standardization session in which 10 papers were randomly selected and scored, and agreed on what the scoring criteria would correspond to for the summary writing task at hand. For each writing evaluated, the readers' totals on the composition profile sheet were not allowed to differ by more than 7 points. If an 8-point or greater discrepancy was present, the writing was read again, and in each incidence, the readers converged to dissolve the discrepancy by referring back to the scoring profile. Following the standardization session in which the Pearson's inter-rater reliability was found to be 0.89, all 58 papers were read by both readers. The Pearson's inter-rater reliability correlation coefficient for this reading was calculated to be 0.908. On April 11, 2005, during the lab session students were given feedback on their performance on this first test, and asked to identify and improve problematic parts in a collection of extracts drawn from their own papers (see lesson plan for Week 5 in Appendix C.01). The second summary writing test was administered on April 18, 2005, after another two weeks of instruction following the first test. On May 2, 2005, students were again given feedback on their performance with regards to general issues about summary writing, problems in basic and academic language and vocabulary use (Appendix J). Since

Pearson's coefficient was significantly high in the first marking, the papers for this second test were divided randomly between the two readers. Of the 57 papers (subject 40 from the experimental group was absent), 28 were read by both readers to yield a Pearson's coefficient of 0.912. Following the last treatment session in the computer laboratory on May 9, 2005, semi-structured interviews were held (May 10-12, 2005) with 6 subjects from the experimental group of 30 students, and 5 from the control group of 28 students. Each interview lasted approximately 30 minutes and was tape-recorded. The third summary writing test was administered on May 16, 2005, again after two weeks of instruction following the second test, with a one-week spring break intervention. Due to the school's administrative arrangements, this last test was given in two different rooms to which test takers were admitted on a random basis. All 57 papers (subject 40 from the experimental group was absent) for this last test were read by the researcher only. On May 20, 2005, the Formulaic Sequences Test was administered in a single sitting that lasted 60 minutes. Due to low attendance, a total of 48 students, twenty-four from each group responded to the self-evaluation questionnaire which was handed out during normal class hour for the SRS course at the very end of the term on May 27, 2005. Finally, during the first week of June 2005, the Research Paper Proposals were submitted to the course instructor, who then met with the researcher for a standardization session for the marking. Seven papers were randomly chosen and scored at the same time. This initial reading served to orient the readers towards the scheme upon discussion on each paper and establish additional criteria for the grading rubric such as the marks to be given in case of little paraphrasing, or other unfulfilled requirements of the project. Pearson's inter-rater reliability coefficient for this initial reading was found to be an

undesirable low of 0.683; therefore, another set of randomly chosen seven papers were read to arrive at a much higher inter-rater reliability correlation coefficient of 0.954. In addition to these, out of the 57 papers that were submitted, the instructor read 29 and the researcher 21 papers individually. By mid-June 2005, all procedures of the study were completed.

Data Analysis

In order to ensure equality between the two groups before the treatment, subjects were randomly assigned to two levels of the independent variable. Moreover, to ensure that the subjects did not statistically differ in terms of English language proficiency in general and writing in particular, their total and writing scores on the BUEPT were compared by means of independent samples *t* tests. The analyses conducted to address each research question of the study can be found below.

Research Question 1

Are there any differences between non-native English speaker freshman ELT students employing concordancing (C-group) versus not employing concordancing (NC-group) in their use and knowledge of the formulaic language features corresponding to the rhetorical move structures of establishing a research territory, establishing a niche and occupying the niche (the Moves) within the framework of the CARS Model offered by Swales (1990)?

Research Question 1 a

Are there any differences over time between the C-group and NC-group in their use of formulaic language features in the writing of a research article summary?

In order to investigate whether there were any differences over time between the two groups a 2X3 mixed design analysis of variance (ANOVA) was conducted with 'use of the formulaic language features characterizing the summary of a research article' as the dependent variable.

Research Question 1 b

Are there any differences between the C-group and NC-group in the use of the formulaic language features correlating with the Moves in the writing of a research paper proposal?

In order to investigate whether there was a significant difference in the use of the formulaic sequences characterizing the three moves in a researh article introduction, the two group means on the language part of the *RPP* were compared using an independent samples t test with 'use of the formulaic language features characterizing the Moves' as the dependent variable.

Research Question 1 c

Are there any differences between the C-group and NC-group in their knowledge of the formulaic language features correlating with the Moves?

The data used to address this third sub-question was also analyzed by using an independent samples t test with 'knowledge of the formulaic language features characterizing the Moves' as the dependent variable. The group means were based on the scores obtained in the Formulaic Sequences Test.

Research Question 2

Are there any differences between the C-group and NC-group in the level of their reported confidence in writing the summary of a research article and a research paper introduction?

The students' responses on the self-evaluation questionnaire based on the 5-point likert-scale were analyzed by a 2x2 mixed design ANOVA with the level of reported confidence in writing the summary of a research article and writing a research paper introduction as the dependent variables.

Research Question 3

What are the opinions of the C-group about the use of concordancing as a research or reference tool in general and as a facilitator in the learning of the formulaic language features correlating with the summary writing of a research article as well as the Moves?

The responses to the questions in the semi-structured interviews were audio-taped and transcribed to be analyzed via inductive content analysis for the identification of core consistencies and meanings (Strauss & Corbin, 1990; Miles & Huberman, 1994; Patton, 2002). The major purpose of the analysis was to organize responses in a way so as to enable depiction of overall patterns. Following review of each statement in the data, the emerging patterns and themes were noted along with the number of occurrence of certain key terms or examples.

Summary

A summary of the research questions, the instruments used to address these questions, data analysis and the relevant hypotheses is presented in Table 3.4.

Table 3.4 Summary of the Research Questions and the Corresponding Procedures

Research Questions	**Instruments**	**Data Analysis**
1. Are there any differences between non-native English speaker freshman ELT students employing concordancing (C-group) versus not employing concordancing (NC-group) in their use and knowledge of the formulaic language features corresponding to the rhetorical move structures of establishing a research territory, establishing a niche and occupying the niche (the Moves) within the framework of the CARS Model offered by Swales (1990)?		
a) Are there any differences over time between the C-group and NC-group in their use of formulaic language features in the writing of a research article summary?	a)Three summary writing tests, each given after two-weeks of treatment	a) 3x2 mixed design ANOVA
b) Are there any differences between the C-group and NC-group in the use of the formulaic language features correlating with the Moves in the writing of a research paper proposal?	b) Research Paper Proposal	b) Independent samples t test
c) Are there any differences between the C-group and NC-group in their knowledge of the formulaic language features correlating with the Moves?	c)Formulaic Sequences Test focusing on the language features corresponding to the moves of the CARS Model (given ten days after the last treatment)	c) Independent samples t test

Table 3.4 Summary of the Research Questions and the Corresponding Procedures (continued)

Research Questions	**Instruments**	**Data Analysis**
2. Are there any differences between the C-group and NC-group in the level of their reported confidence in writing the summary of a research article and a research paper introduction?	Self-evaluation questionnaire	2x2 mixed design ANOVA
3. What are the opinions of the C-group about the use of concordancing as a research or reference tool in general and as a facilitator in the learning of the formulaic language features correlating with the summary writing of a research article as well as the Moves?	Semi-structured interviews with 6 subjects from the C-group and 5 from the NC-group	Inductive content analysis

CHAPTER 4

RESULTS

Introduction

This chapter reports the results of the quantitative and qualitative analyses conducted on the data obtained during the procedures described in the previous chapter to address the research questions of the study. Before the treatment was given, subjects had been randomly assigned to two levels of the independent variable, theoretically ensuring equality between the groups before the treatment. Moreover, comparison of the BUEPT total and writing scores yielded that the two groups did not statistically differ in terms of English language proficiency in general and writing in particular. The independent samples *t* test for language proficiency did not yield a significant difference: $t(55)=-.169$, $p>.05$; neither did the scores on the writing component of this exam: $t(55) = -1.215$, $p>.05$. The first research question aimed to investigate whether there were any differences over time between the C-group and the NC-group in terms of their use of the formulaic language features in summarizing a research article and in their use and knowledge of the formulaic sequences characterizing the three moves of the research article introduction as measured by the research proposal as well as the formulaic sequences test. This first question was addressed by a 2x3 mixed design analysis of variance (ANOVA) and two independent-samples *t* tests

respectively. The second research question sought to understand whether there was any difference between the two groups in terms of the level of reported confidence in writing the summary of a research article and writing a research paper introduction. This confidence level was measured by a self-evaluation questionnaire, the results of which were analyzed by a 2x2 mixed design ANOVA. Moreover, the third research question that aimed to investigate the opinions of the subjects about the use of concordancing as a tool was addressed by analyzing the semi-structured interviews conducted with a total of six subjects from the C-group. The presentation of the results in the next sections follows the order of these research questions.

Results

Use of Formulaic Sequences in Summarizing a Research Article

The first research question investigated whether there were any differences between the C-group and the NC-group in their use of formulaic sequences characterizing the summary of a research article and contributing to the writing of a research proposal as well as the use and knowledge of the formulaic language features corresponding to the rhetorical structures of a given set of research articles within the framework of the CARS Model. The first sub-question of this research question sought to examine whether the C-group and NC-group showed a significant difference over time in their use of the formulaic language features corresponding to the summary writing of a research article. To this effect, both groups were asked to write the summary of a research article on three occasions, with two weeks of treatment between the

examination sittings. In the summary writing exam, a total of 45 points of credit was given to the effective use of vocabulary and language. Table 4.1 provides the descriptive statistics for the use of formulaic sequences in these summary writings across groups, with the week numbers referring to the time at which the exams were administered.

Table 4.1 Descriptive Statistics for the Use of Formulaic Sequences in Summary Writings across Groups

	Week 3		Week 6		Week 9	
Group	M	SD	M	SD	M	SD
Concordance	27.82	4.78	30.25	4.30	30.93	2.68
No-concordance	30.04	4.36	30.21	4.95	32.32	3.96

As can be seen in Table 4.1, the two groups' means were similar. In order to see whether these means obtained from the use of vocabulary and language scores in the three summary writing examinations were statistically significant, a 2 (concordance versus no-concordance) x 3 (Time: Week3, Week6, Week9) mixed design ANOVA was used. One of the major statistical assumptions underlying the ANOVA is sphericity. This assumption was sustained as Mauchly's Test of Sphericity (W=.941, p>.05) indicated that population variances and correlations were not significantly different across groups. The assumption of homogeneity of variance was sustained too as Levene's Test of Equality of Error Variances showed that the variances of the groups did not significantly differ for each summary writing exam (Week3, F=.798,

p>.376; Week6, F=.587, p>.447; Week9, F=3.882, p>.054). Table 3.2 presents the results of the two-way mixed design ANOVA, the assumptions of which had thus been met.

Table 4.2 ANOVA Summary Table of Scores in the Use of Formulaic Sequences in the Summary Writing Exams

Source	df	SS	MS	F
Between Subjects				
Group	55			
Error (between)	1	59.52	59.52	2.20
Within Subjects	54	1460.29	27.04	
Time	112			
Group x time	2	203.66	101.83	7.59*
Error (within)	2	36.30	18.15	1.35
Total	108	1448.71	13.41	
	167	3208.48		

*p<.05

As can be seen in Table 4.2, the main effect of group and interaction of group by time were not found to be significant. In other words, the means of the three measurements for the C-group did not differ significantly from the means of the three measurements for the NC-group. Moreover, performance at each measurement for both groups did not depend on whether or not subjects used concordance as a tool in their supplementary laboratory sessions. However, the results yielded a significant main effect of time ($F_{2, 108} = 7.59$, $p < .05$, $\eta^2 = 0.12$), indicating that over time both groups showed improvement in their use of formulaic language features in summarizing a research article. Figure 4.1 presents this improvement via the

estimated marginal means of the formulaic language scores (i.e. combined vocabulary and language scores) of the subjects for the main effect of time.

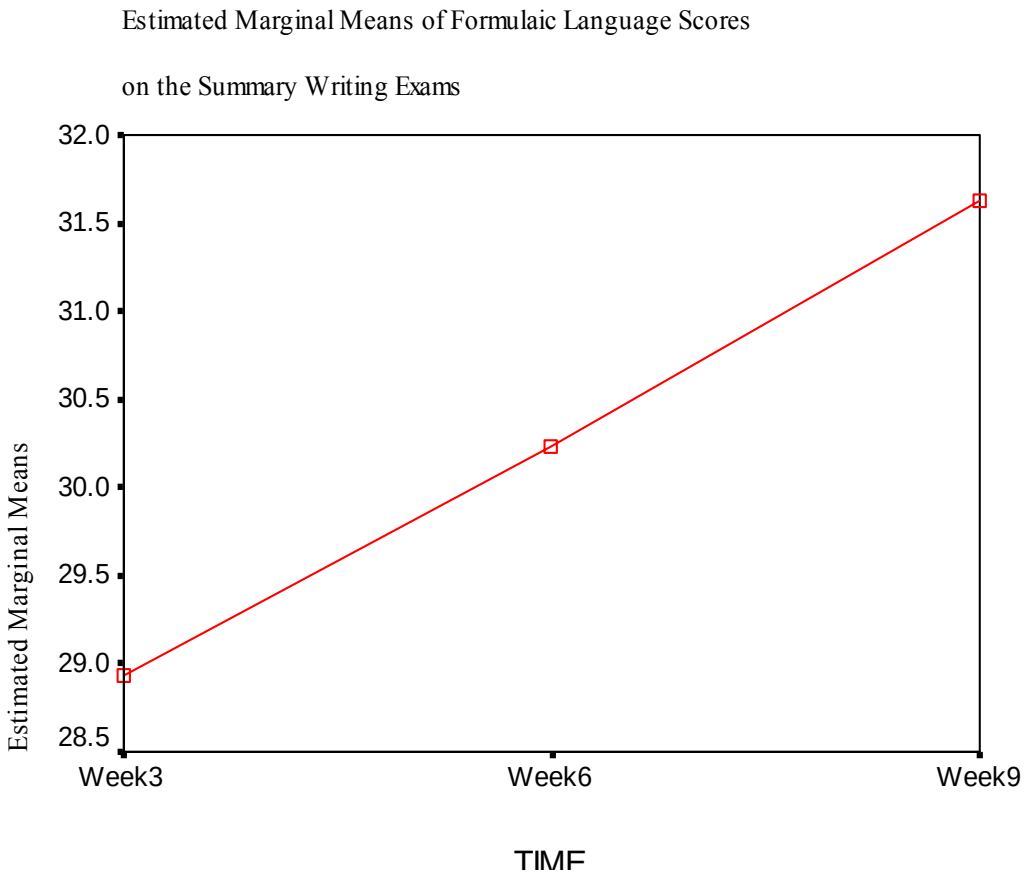


Figure 4.1 Estimated marginal means of formulaic language scores on the summary writing exams

The main effect of time was further investigated by using the post-hoc comparison technique of Bonferroni adjustment. This comparison was regardless of the group factor since group by time interaction did not exist. Table 4.3 shows the pairwise comparisons among the three main effect means for the time factor.

Table 4.3 Pairwise Comparisons among the Three Main Effect Means for the Time Factor

Week	A	B	C
Week 3 (A)	-	-1.3	-2.7**
Week 6 (B)		-	-1.39
Week 9 (C)			-

**p<0.01

As can be seen in Table 4.3, subjects performed significantly better on the third examination compared to the first one in terms of their formulaic language use (use of vocabulary and language) in summarizing a research article. However, differences between the first and second as well as the second and third measurements were not statistically significant.

To conclude, these results showed that, the hypothesis that, compared to the NC-group, the C-group would obtain higher scores in the use of the formulaic language features correlating with the written summary of a research article was not confirmed. Thus no differences were observed based on the use of concordancing as a tool. On the other hand, both groups demonstrated improvement in using the formulaic language features characterizing the written summary of a research article from the first to the last measurement.

Use of Formulaic Sequences in Writing a Research Paper Proposal

The second sub-question of the first research question sought to examine whether there were any differences between the C-group and NC-group in the use of the formulaic language features correlating with the moves of establishing a research territory, establishing a niche and occupying the niche in the writing of a research paper proposal. In the research paper proposal submitted as the final project in partial fulfilment of the *SRS* course, a total of 30 points was credited for effective use of the formulaic language features. Table 4.4 presents the descriptive statistics for the subjects' scores on the language component of the research paper proposal.

Table 4.4 Descriptive Statistics for Scores Obtained on the Language Component of the Research Paper Proposal (N = 57)

	M	SD
C-group (n = 30)	19.07	4.97
NC-group (n = 27)	19.19	4.68

As Table 4.4 shows, the groups had similar means and standard deviations. An independent samples *t* test was used to see whether the experimental group using the concordance software performed differently from the control group in the formulaic language features characterizing the rhetorical moves in the research paper introduction. The Kolmogorov-Smirnov test and Levene's Test for Equality of Variances were used to check normal distribution and homogeneity of variance

respectively. In order to reduce the degree of nonnormality and heterogeneity of variance the absolute values of the raw scores were taken. The *t* test performed on these transformed data yielded a non-significant difference: $t(55) = -.092$, $p > 0.05$. In other words, the hypothesis that, compared to the NC-group, the C-group would display more proficient use of the formulaic language features correlating with the move structures of a research article was not confirmed.

Knowledge of Formulaic Sequences

The third sub-question of the first research question aimed to investigate whether there were any differences between the C-group and NC-group in their productive and receptive knowledge of the formulaic language features correlating with the moves of establishing a research territory, establishing a niche and occupying the niche. The 20-item Formulaic Sequences Test was part of the assessment battery that aimed to assess such knowledge of the lexico-grammatical items or phrases corresponding to the move structures. Means and standard deviations for scores obtained on this exam out of a total of 20 points are presented in Table 4.5.

Table 4.5 Descriptive Statistics for Scores Obtained on the Formulaic Sequences Test

	M	SD
C-group (n = 27)	14.15	2.25
NC-group (n = 27)	13.93	2.22

An independent samples *t* test was used to see whether the experimental group using the concordance software performed differently from the control group in their knowledge of the formulaic sequences. The Kolmogorov-Smirnov test and Levene's Test for Equality of Variances were used to check normal distribution and homogeneity of variance respectively. In order to reduce the degree of nonnormality and heterogeneity of variance the observed raw scores were "square" transformed. The *t* test was performed on these transformed data to yield a non-significant difference: $t(52) = 0.377$, $p > 0.05$. In other words, the hypothesis that, compared to the NC-group, the C-group would display more proficient knowledge of the formulaic language features correlating with the move structures of a research article in the Formulaic Sequences Test was not confirmed.

Level of Reported Confidence in Writing the Summary of a Research Article and in Writing a Research Paper Introduction

The second research question sought to examine whether there were any differences between the C-group and NC-group in the level of their reported confidence in

writing the summary of a research article and a research paper introduction. To this effect, the sixteen-item self-evaluation questionnaire consisting of three parts was used. However, for the purposes of this study, only the first part, aiming to gain insight into the levels of confidence the subjects felt about writing a summary of a research article following the academic writing conventions taught, and the third part, aiming to examine the confidence level in writing a research paper introduction by establishing the Moves, were analyzed. Since each statement in the questionnaire was rated on a five-point Likert scale format ranked from '1 (strongly disagree)' to '5 (strongly agree), a full confidence level in the first part would result in 40 points for the eight statements, while that in the second part would result in 20 points for the four statements. Table 4.6 presents the descriptive statistics for the level of reported confidence in the first and third parts of the self-evaluation questionnaire out of a possible maximum of 100 points each.

Table 4.6 Descriptive Statistics for the Level of Reported Confidence in Writing the Summary of a Research Article and in Writing a Research Paper Introduction

	Summary Writing		Research Paper Introduction	
Group	M	SD	M	SD
C-group (n = 24)	69.79	7.93	74.58	11.87
NC-group (n = 24)	70.00	9.17	78.75	12.53

In order to examine whether there was a statistically significant difference in the means presented in Table 4.6 for the level of reported confidence in parts one and three of the self-evaluation questionnaire, a 2 (concordance versus no-concordance) x 2 (Confidence: Summary Writing, Research Paper Introduction) mixed design ANOVA was used. Levene's Test for Equality of Error Variances revealed that the variances of the groups did not statistically differ (Summary Writing, $F = 0.279$, $p>0.600$; Research Paper Proposal, $F = 0.317$, $p>0.576$). However, Mauchly's Test of Sphericity revealed that the assumption of sphericity was not met ($W = 1.00$, $p <0.05$). As a result, the Greenhouse-Geisser values were used to adjust for departures from sphericity. Table 4.7 provides the results of the 2x2 mixed design ANOVA for the level of confidence reported in parts one and three of the self-evaluation questionnaire.

Table 4.7 ANOVA Summary Table of Level of Confidence in the Writing of the Summary of a Research Article and a Research Paper Introduction as Reported in the Self-evaluation Questionnaire

Source	df	SS	MS	F
Between Subjects	47			
Group	1	114.844	114.844	0.700
Error (between)	46	7545.312	164.029	
Within Subjects	95			
Confidence	1	1100.260	1100.260	18.749*
Group x confidence	1	94.010	94.010	1.602
Error (within)	46	2699.479	58.684	
Total	142	11553.905		

*$p<0.05$

As can be seen in Table 4.7, the main effect of group and interaction of group by confidence were not found to be significant. In other words, the means of the level of reported confidence in writing a summary and research paper introduction for the C-group did not differ significantly from those means for the NC-group. Moreover, levels of confidence reported in the first and third parts of the questionnaire for both groups did not depend on whether or not subjects used concordance as a tool in their supplementary laboratory sessions. However, the results yielded a significant main effect of confidence ($F_{2, 48} = 18.749$, $p < .05$, $\eta^2 = 0.290$), indicating that in both groups, subjects displayed a lower level of confidence in summarizing a research article than in writing a research paper introduction by establishing the Moves. Figure 4.2 presents this difference via the estimated marginal means of the reported levels of the subjects for the main effect of confidence.

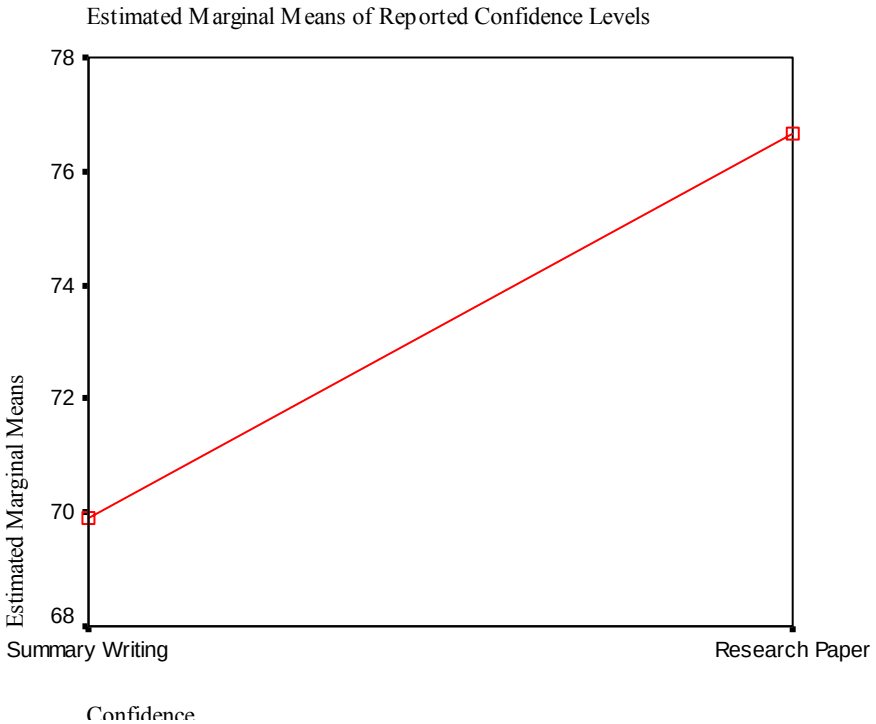


Figure 4.2 Estimated marginal means of reported confidence levels for the writing of the summary of a research article and the writing of a research paper introduction

To conclude, these results showed that the hypothesis that, as opposed to the NC-group, the C-group would report higher levels of confidence in writing the summary of a research article and a research paper introduction was not confirmed. In other words, no differences in confidence levels were observed based on the use of concordancing as a tool. On the other hand, both groups displayed a higher level of confidence in writing a research paper introduction than in writing the summary of a research article.

Opinions about Corpus Consultation through Concordancing

Content analysis of the semi-structured interviews with six students from the C-group (corresponding to 20% of the whole group) revealed information on three central issues: 1) motivation 2) language awareness and 3) autonomy. In the section that follows, the students' opinions about corpus consultation through concordancing are reported within the framework of these three major themes. In the meanwhile, the qualitative data from the semi-structured interviews with five students from the NC-group will be referred to wherever there is a relevant case in point; otherwise, the following analysis is intended for a deeper understanding of the factors and their corresponding interplay that might have contributed to the shaping of the opinions about concordancing and hence might help explain its effectiveness in language pedagogy. In other words, unless otherwise indicated, all references made in this section to 'students' correspond to those students interviewed from the C-group.

Motivation

Some of the students' responses yielded a clustering round the central theme of motivation, the intensity of which differed depending on its source. On the whole, such motivation corresponds to the articulated willingness of the subjects to fulfil the requirements of the corpus consultation sessions. The readily discernible categories under this theme were self-motivation, along with motivation induced by the learning environment, the tasks and the concordancer itself.

Self-motivation

The theme of self-motivation emerged as a result of the patterns observed among the statements made by the students regarding their interest in the subject matter of academic language conventions, as to whether they came to the sessions having done their reading assignments and their remarks on the compatibility of the laboratory sessions with their own learning styles. While five of the students in the C-group remained neutral to focusing on the conventional language of research articles, there was one extreme case of total rejection. When asked to comment on the negative aspects of the laboratory sessions in general, Subject 37 stated that he was bored and found the activities meaningless. When asked further on to identify the goals of the lessons, he explained why he had such a determinedly negative opinion: "The lab sessions were related to the SRS course, which is highly specific. I mean, not everyone could benefit from it. You had to be interested in research and research articles in the first place to benefit from the lessons. Our field of study is English language teaching. I don't think working on articles relates to it at all. Anyway, I'm not interested, but those who care to do research in the field must have learned a lot." Another reason stated by Subjects 21 and 43 for lack of self-motivation in the first place was a prejudice against lab sessions as "…they are known not to be taken too seriously by students in general." Even the day of the lesson in particular was of great concern for two students. Subject 21 stated: "I did not gain much from the lessons although TextSTAT was a very useful programme…but to tell the truth, to a certain extent, it was our own fault. We all were terribly angry that the lab hour had been scheduled to be held on our off-day and at such a late hour!" Among these

strong remarks signalling lack of self-motivation, the one about not taking the sessions seriously was attested to by the fact that two of the students reported being unaware of the reading assignments, one said that she did not have time for them and the rest indicated that they had glanced at the assigned pages only at the very beginning of the term to check some terms. The reading assignments of several pages per week from Swales and Feak (1997) were given so as to provide students with the theoretical foundation of each lesson and some examples of formulaic sequences corresponding to the rhetorical structures. To sum up, the prior knowledge that these students had with respect to what the tasks entailed was limited to the brief overview given at the beginning of each session by the teaching assistant.

A third source of self-motivation was seen to lie in the compatibility of the lessons with students' individual learning styles which showed 'intra- as well as inter-variation'. Subject 28 remarked, "I adore technical stuff, doing mechanic work, so in that sense, I can say the lessons addressed my learning style, but I'm more of a person who likes doing work that triggers creativity. I've got to create things myself rather than see things done." A similar dilemma was expressed by Subject 21: "I'm addicted to computers. It's like an illness. Even when I've nothing to do, I play around with things on the desktop, but when it comes to learning how to write the summary of an article, I prefer the good old classical style where the teacher shows you things step by step and you have your printed text in front of you. It's all so tangible that way." Three other students were glad that they worked with computers but emphasized that they definitely needed external assistance in learning. Subject 23, who was otherwise very content with the learning outcome gained from the programme and the idea of being in the laboratory, emphasized: "We were supposed

to note down our or the others' search findings, but I never take notes because I can't learn by listening. I learn better by writing things, I need to have the material in my hands …you know… pen and paper kind of learning. Using technology is good, but it's always better to see things on paper." In short, the extent of the interest in the subject matter, whether the reading assignments were done, or compatibility with the students' own learning styles were among the patterns that were observed to impact the pre-requisite of self-motivation towards the laboratory hours in general, regardless of the opinions about the use of corpus consultation through concordancing in particular. Similar comments thought to be indicative of the motivation factor were also observed in the interview data from the NC-group, with the exception of one student (Subject 58) who, planning to pursue an academic career, expressed a strong interest in the subject matter and the reading assignments, stating that the task objectives were geared for students like her. However, in terms of compatibility with learning style, the NC-group as well (four out of five students actually stated that they would have preferred to have printed texts when scanning the articles for the Moves) seemed to favour a closer kind of engagement with the texts through reading and more practice in writing prior to a focus on specific language features.

The learning environment

Lack of motivation, or concentration, for that matter, due to the conditions in the learning environment was another issue that was induced in the analysis. Students mostly complained about the fact that it was too crowded and dark in the laboratory,

and that with the seating arrangement and the acoustics as they were, they could not at times follow what the instructor was saying or showing on the projector screen. The general atmosphere under such conditions was seen to be conducive to too much off-task talking and distraction, coupled with the confusion caused by technical failures, which in turn led to loss of time, especially at the beginning of the term. Interestingly, however, half of the students saw computers themselves as a source of distraction which they found hard to resist given the internet connection to check their e-mail or get on line for any other purpose. In the NC-group, however, complaints about the learning environment were limited to the darkness and crowdedness of the sessions and that such an environment led to too much off-task talking and poor classroom management, while only one student stated internet connection as a source of distraction. In other words, in terms of the learning environment, there seems to have been more distracting factors for the C-group.

The Tasks

The students consistently complained about the nature of the tasks as another source of disinterest towards the lessons. All six students stated that while the programme itself and the corpus of articles were a good source to explore, the tasks they were asked to do lacked variety, involving searching for words or phrases, allowing no opportunity for application of what was learned or observed. While half of the students found the tasks to be following the same routine, two thought that they were not challenging enough and that more could be done after doing search on the corpus. Subject 39 stated: “For example, the other day we were asked to find

instances of purposive statements. Finding sentences with the words ‘aim’ or ‘purpose’ in them was obviously not challenging enough, it made everything look so easy. The tasks should have forced us to think. While the assistant was going round to give everyone feedback, we lost concentration waiting. We had this very useful programme which enabled us to do fast searches on a nice database of articles. The lessons could have proceeded at a much faster pace, allowing us to move beyond our observation of the academic phrases.” Moreover, half of the students associated the tasks with the summary writing examinations, complaining that they needed more guidance in how to write summaries in the first place along with the focus on language sessions, and that they were not really informed before the first exam, a situation which led them to learn by writing summaries in the exams and also in the feedbacks given following the exams. In terms of task variety, four of the students expressed that the worksheets and the feedback on the exams were very helpful. However, despite complaints about the tasks in general, five students (83%) emphasized that the lessons helped them improve their use of formulaic language in writing the summary of a research article, while two even ((33%) claimed that they were now able to read articles with more ease. For the NC-group, on the other hand, almost the reverse was observed: 80% stated that the lessons helped them become better readers of research articles and 40% reported that the lessons helped them in summary writing. This contrast seems to suggest that the concordancing tasks did engage learners with a focus on language, which was indeed the objective of the follow-up sessions held in the laboratory. Nevertheless, it is understood that being novice writers and new to the academic discourse community, students in both groups, required more time in reading and practice in actual writing before hands-on

exploration of peculiar language items, with this being more of a problem for the C-group as they were asked to explore more examples on a local level in the form of concordance lines.

Usefulness of the Concordancer

Notwithstanding the above mentioned problems with self-motivation, learning environment and the nature of the tasks, four of the students commented that they found the concordancer exciting, especially in the beginning because it was a new tool for them and simply because it involved using the computer, implying tool induced motivation. While Subject 43 attributed her initial difficulty in using the programme to her lack of computer skills in general, she later mentioned that it was not much of a problem since she got used to it. Furthermore, Subject 37 remarked that he found the display of information a bit too crowded to look at and that there could be more spacing between the concordance lines. Apart from these two reservations, there were no other negative statements about the concordancer itself. However, two students expressed that it was not useful in learning how to write the summary of a research article and one remained doubtful for the same reason, while the remaining half of the students found the concordancer to be a useful tool in the learning of academic writing conventions. This finding was in line with the responses given to the questions investigating whether the students could clearly define the goal of the sessions and hence establish a link between the sessions and their final project for the SRS course, namely the writing of a research paper introduction. The two students who found the tool not useful in learning how to write the summary of a

research article stressed that the goals of the sessions were not made clear to them. On the other hand, the students who found the tool useful clearly stated that the lessons aimed to teach key or fixed phrases or words used in referring to the different sections of the research article and one other student expressed that the focus was on academic writing in general. In other words, whether the tool was found useful and thus motivating depended to a certain extent on whether or not the goals of the laboratory sessions were clearly understood and the link between the final project and the focus on language sessions was established. The following sections will attempt to shed more light on the actual use of the tool.

Language awareness

A second major issue that was identified from the responses given to the questions about the tasks and the concordance tool was an awareness of the academic language conventions. The theme of language awareness emerged as a result of the patterns observed among the statements made by the students regarding prior knowledge of the writing conventions of the summary of a research article and the Moves of a research paper introduction as well as the knowledge gained thereof following the laboratory sessions; the exemplification of such conventions with reference to the activities done in the sessions; the stated advantages of the concordancer and references to the context provided in the concordance lines.

First of all, when asked to comment on their weaknesses and strengths in using academic writing conventions at the beginning and end of the semester, all six students replied that prior to these sessions they were unaware of the specific

properties of written academic English. Subject 39 stated, “Back in high school we were not taught how to write according to academic conventions. I now realize that what I knew to be formal back then is actually not so. It’s a matter of seeing those structures, fixed phrases used frequently in articles. In that sense, the lessons helped.” Another related remark came from Subject 23: “At the beginning of the term, I thought to myself academic writing must be something like a job application, something to do with pursuing a career…However, after coming to these sessions, I’ve understood that it wasn’t so. I’ve started using more formal words, those similar to the ones used in the articles. I’m aware that I should avoid words used in spoken, everyday English.”

The knowledge or awareness gained as a result of corpus consultation through concordancing was induced from the students’ statements about the academic language features they observed in the corpus. When asked to describe the ways in which academic English differs from general English, five students responded that different or more formal words and fixed phrases were used in the research articles. Reference to this property was followed by reference by three students to formal style in general, by three students to strict citation rules, by two students to use of collocations, by two other students to being unlike spoken language, by one student to different tense use, and finally by one student to the notion of objectivity or credibility. The same subject (Subject 23) who had admittedly no prior awareness of academic language use, explained: “There’re certain fixed phrases. Normally using such things would be seen as a weakness. However, in academic English, the more you use the known expressions, the higher your credibility becomes. If you change them, your intention may not be understood clearly by everyone.”

Apart from these attributes expressed by students with regard to the specific features of academic English conventions, another pattern that emerged was related to the mentioning of the different sections of a research article along with the Moves that had served as the basis of the language focus sessions in the laboratory. However, such references were limited to eight statements in total for the moves of finding a gap or niche in the literature and occupying the niche, with this being so probably because the terminology was newly acquired. On the other hand, the number of examples cited for the formulaic language use in research articles was far more in number with twenty-five statements. The NC-group, in contrast, made references to the Moves more than they did to specific examples of formulaic language use corresponding to the Moves. Furthermore, despite the previously mentioned incompatibility of the concordancer with the task of learning 'how to write' the summary of a research article, five students from the C-group clearly stated that the lessons helped them learn the 'appropriate language' used in writing one, and four students believed that the lessons taught them about academic writing in general. Subject 21 recalled how he would refuse to translate academic articles as a part-time job as he dared not to undertake the responsibility and was prejudiced against them, but added, "The other day, I was asked to help a graduate student at some other university. Now, I can follow all the moves, the different sections of the article, all those connectors, expressions…I can follow how the article proceeds. The articles we studied enabled us to become familiarized with all that language."

Moreover, out of the thirty-two statements uttered with respect to the advantages of the concordancer and apart from comments on its being an easy to use programme that involved the computer, twenty-two statements were related to a

language related issue, attesting to the compatibility of the concordancer with language awareness tasks in general. Table 4.8 presents a list of the frequency of all the stated advantages of the concordancer alongside the 'Adobe Reader' tool used by the NC-group.

Table 4.8 Reported Advantages of the Tool Used by Each Group

	C-group		NC-group	
Stated advantage	N	%	N	%
Language related advantages				
Seeing many examples	6	100%	-	-
Seeing how words are used	5	83%	2	40%
Seeing how sentences are used	-	-	1	20%
Learning academic words	4	66%	1	20%
Seeing frequency of use	3	50%	-	-
Making words more salient	2	33%	-	-
Seeing words in context	2	33%	2	40%
Other				
Easy to use	4	66%	-	-
Involved using the computer	4	66%	1	20%

As can be seen in Table 4.8, the nature of the activities incorporating use of the concordancer was different in a number of ways directly related to the objective of raising language awareness at the lexico-grammatical level, which might be attributed to the suitability of concordancing for the purpose in question.

Finally, when subjects were asked whether they found the concordancer helpful in providing sufficient context for the task requirement, all six subjects mentioned using the citation mode when searching for the part of the article in which the item was used or if in hesitation as to whether their finding matched the rhetorical move in question. One subject also admitted using this mode because of her lack of familiarity with academic writing, stating that reading a few lines before and after the search sentence containing the search item made the query more meaningful. However, none of the students felt the need to access the whole text for the focus on language tasks they were required to do. Finally, four of the students emphasized that when the query was limited to the word level, the immediate context of the search item was sufficient to proceed with the task. Subject 23 explained: "It all depended on what we were searching. If we were looking for a collocation of the word, say, 'experiment', then the context in the concordance line was enough. But sometimes the line ended in a meaningless way…For example, 'in this experiment we studied…' In such cases you had to go beyond and see if the expression was used in the introduction or the conclusion…On the other hand, there's no need to know what the article is talking about if you're interested in seeing how words are used."

To sum up, corpus consultation through concordancing seemed to help these ELT students with admittedly no prior knowledge of the writing conventions of the summary of a research article and the Moves of a research paper introduction gain, to varying degrees, a certain awareness of the academic writing conventions. While a similar kind of awareness may have been gained by the NC-group subjects as well, the emergence of a pattern in the C-group data with regards to more focused

attention to the lexico-grammatical level indicates that corpus consultation through concordancing did contribute to the realization of the task objectives.

Autonomy

Students' statements about the possible future uses of the concordancer, references to the frequency of use information as well as comments on inquiry-based tasks, the kind of external assistance provided and classroom management constituted the final major theme of autonomy. To start with, when asked whether in the future they would consider consulting corpora via concordancing, all students answered affirmatively by suggesting a variety of uses ranging from 'definitely to assist in writing', with the more specific purposes of 'as a supplement to the dictionary for examples' and 'to see how and where words are used typically'. However, when the NC-group was asked in what ways they would utilize the PDF files they worked on, three out of five students answered by saying "to assist in writing", one did not have any idea and yet another one made the general comment of "for reference". When the C-group was further asked to comment on 'who exactly' could make use of corpus consultation, five students answered by saying students only, with two mentioning that teachers as well could benefit from it. Subject 28, who was otherwise discontent with having failed to understand the goals of the sessions, commented: "Actually, I really enjoyed seeing how words were used. For instance, if I were to write something, I could easily consult it (the corpus). In a dictionary, you don't have so many examples of usage for everything. The sentences in the concordance lines are

short, so I don't need to do lengthy readings." In other words, this student did consider the concordancer as a tool that could be exploited for independent work.

Moreover, four of the students stated that they would search the corpus to observe frequency of use information, implying the instigation of an independent 'researcher's role' by the tool. Subject 28 commented: "When you learn things from books, it becomes boring, but in the lab we found things by ourselves…you click on something, do your own search and come up with a finding, which is exciting." Interestingly, the same student remarked that she nevertheless needed to be told what expressions are used to express a certain idea. A similar kind of predisposition to independent research was expressed by Subject 39, who while commenting on the display of information in the concordancer, stated: "Even a single-word query retrieved loads of sentences, but we had to choose the ones that suited our own purpose by thinking critically. I didn't look at all of them, it was enough to observe only the words to the right and left of the query. If we had done the same thing with the hard copy of an article, it would have taken us ages." Another example of a case in which the learner assumed responsibility came from Subject 43: "At first, I was overwhelmed by the sheer amount of data, but then I learned how to be selective in my queries." In short, when asked to comment on the concordancer specifically, all students expressed that it was a 'positive experience to be able to search things', suggesting a liking for the opportunity created for autonomous consultation of the corpus via concordancing. On the other hand, only one student in the NC-group associated the kind of activities with doing independent research.

When students were asked whether they required or received any external assistance during the concordancing sessions, all six replied that they made use of the

help of their friends in supplementing their own findings, with half of them remarking that they called on the teaching assistant only to confirm the appropriateness of their search results with the task requirements.

In contrast to the above mentioned references to research oriented independent work, however, three students were uncomfortable with classroom management due to an inherent lack of control that they claimed was part and parcel of computer assisted learning. Indeed, Subject 21 complained that in a computer laboratory there was a natural "lack of control, which made classroom management difficult". He continued: "I wouldn't want to be an instructor in such a setting. Either there's some problem with the computers or too much talking among students, which makes students lose their concentration easily. If I didn't make an effort not to, I'd get drifted away very easily." In addition to such lack of control originating from classroom management, two students keenly stated having felt lost, given the relatively unstructured nature of the lessons, expressing that a teacher-led modelling of the items to be learned was more preferable. In other words, while most of the students seem to have availed themselves of the autonomous language research possibility offered by the concordancer, the setting of the computer laboratory itself where such tool was made available as well as the relatively unstructured nature of the tasks led some of these students to feel insecure in their learning experience during the sessions. Since the same kind of comments were made by two students from the NC-group as well, it is hard to attribute such feelings of loss to the inherently unstructured nature of corpus data.

Conclusion

The quantitative analyses of the results obtained from the data gathered to address the first sub-question of the first research question of this study did not reveal a statistically significant difference over time between the C-group and the NC-group in their use of formulaic sequences characterizing the summary of a research article. However, a significant main effect of time was found for both groups, with the post-hoc investigation indicating that the subjects performed significantly better on the third summary writing examination given in Week 9 in comparison to the first one given in Week3. In terms of the second sub-question, the results did not yield a significant difference between the two groups in the accurate use of the formulaic language features correlating with the Moves in the writing of a research paper proposal. Furthermore, with respect to the third sub-question, again no significant difference was found between the groups in their productive and receptive knowledge of the formulaic sequences characterizing the Moves.

As for the second research question of the study, the means of the level of reported confidence in writing the summary of a research article and research paper introduction did not display any significant difference between the two groups. However, results for both groups yielded a significant main effect of confidence, indicating a higher level of reported confidence in writing a research paper introduction.

Finally, the analyses of the qualitative data obtained from the semi-structured interviews showed a clustering round the major themes of motivation, language awareness and autonomy in learning as the factors impacting opinions about corpus

consultation. Results indicated that students had reservations about the focus on language sessions mainly due to the lack of variety in the nature of the tasks which incorporated the use of the concordancer and the suitability of the computer laboratory in general for the targeted learning objectives. Since students from the NC-group as well expressed a need for more practice in reading and analyzing research articles prior to focusing on the rhetorical language, it can be concluded that the concordancer itself did not have a 'de-motivating' impact in this respect, but rather the time allocated and the task type envisaged for the lab sessions did. Indeed, aside from such reservations, students' opinions about concordancing per se were found to be positive in general, with all students reporting a gain in the awareness of the formulaic academic language used in research articles written by expert writers as well as an interest in the possibility offered by the concordancer of independent research on language use. Comparisons with the NC-group data with respect to the specific benefits of the tool used suggested that only the C-group had opportunity to concentrate on many examples of academic language features in use and observe frequency of such features in a salient kind of display. Moreover, it was observed that, in comparison to the NC-group, the C-group was not disadvantaged due to the nature of the concordance line as, thanks to the citation mode feature of the software, they had access to the full sentence from which the query entry was retrieved in case more context was required to make the search finding more meaningful in the identification of the Moves. Finally, autonomy in learning was established to a greater extent in the C-group, given that more students in this group actually described the search opportunity created by the tool as a positive experience, which they could exploit in their future academic writing tasks.

CHAPTER 5

DISCUSSION AND CONCLUSION

The present study aimed to investigate the effectiveness of corpus consultation through concordancing on the formulaic academic language use of freshman ELT students. The study had an experimental design supplemented with qualitative data from semi-structured interviews with the C-group. The subjects randomly assigned to two sections received training for seven weeks in a computer laboratory where focus on language sessions were held with or without the use of concordancing to supplement a common study and research skills course taken by all subjects. The quantitative assessment battery included summary writing tests that attempted to measure over time use of the formulaic sequences characterizing the summary of a research article; the research paper proposal that aimed to measure accurate use of the formulaic language features correlating with the rhetorical Moves within the CARS Model; the formulaic sequences test developed by the researcher to measure productive and receptive knowledge of the formulaic sequences characterizing the Moves; and finally the self-assessment questionnaire that aimed to understand the level of reported confidence in writing the summary of a research article and research paper introduction.

This chapter will first discuss the findings of the study reported in the previous chapter within a perspective that combines DDL with genre-specific language awareness of academic writing conventions. Second, the pedagogical implications of the study will be discussed. In the final section, a presentation of the limitations of the study will be followed by suggestions for further research.

Discussion

As has been discussed in the previous chapters, concordancing has long been regarded or suggested as an effective activity to be exploited by learners, and more specifically by ELT students, for better language use or awareness. However, there has been little research into the actual use of corpora in an experimental setting. This study can be said to contribute to the field in two major aspects. In the first place, to the best knowledge of the researcher, the present study is the first true experimental study aimed at assessing the pedagogical effectiveness of corpus consultation via concordancing in an EAP context that highlights the formulaic academic language characterizing the written discourse used by expert writers. Second, the qualitative data provides insight into a number of factors that seem to impact learners' opinions about concordancing, which might foster better informed task designs and hence more effective learning as a result of corpus consultation.

On the other hand, quantitative findings of the present study did not yield a statistically significant difference between the C-group and the NC-group in any of the measurements in the assessment battery described in the previous sections. These results do not seem to be supportive of the enthusiastic suggestions made for the

pedagogical uses based on the predicted beneficial effects of concordancing within the methodological framework of DDL (see Johns 1991a, 1991b, 1994; Tribble and Jones, 1990; Stevens, 1995; Flowerdew, 1996; Granger and Tribble, 1998; Chapelle ; 2003 among others). Nevertheless, it might be misleading to argue that they are not in actual fact in line with such extensive literature as well as the varied findings of the previously conducted studies (Stevens, 1991; Cobb, 1997; Weber, 2001; Todd, 2001; among others) since the latter have been of mixed and limited research designs that are not comparable to the primarily experimental nature of the present study.

While no statistically significant differences were found between the experimental and control groups, results showed a significant main effect of time for both groups in the use of the formulaic sequences characterizing the summary of a research article. This finding might be explained by three major reasons. First of all, the *SRS* course, which all students attended together, must have had a cumulative contribution to the engagement of learners with the conventions of academic discourse. Second, while the task objectives of the supplementary laboratory sessions concentrated more on familiarizing learners with the rhetorical language features pertaining to the Moves, due to the design of the assessment battery students had more opportunity for hands-on practice with summary writing, following each of which they were also able to receive feedback about their performance in the form of both worksheets and oral feedback in and outside of the class. Regular exposure to the collection of 14 research articles by both groups might be given as the third most likely reason for such common improvement. On the other hand, such improved performance on the final summary writing test by both groups was not paralleled with a corresponding level of reported confidence, as the questionnaire results

indicated for both groups a significantly higher level of reported confidence in writing a research paper introduction, which might paradoxically be accounted for by the amount of time dedicated to the identification of the Moves in the articles alongside a focus on the language properties. The fact that the self-assessment questionnaire was given out after the summary writing tests and before the submission of the research paper proposal might have led students to report a disappointment with their actualized performance in the former and a confidence in a task yet to be accomplished in the writing of the latter.

Results from the qualitative data obtained from the semi-structured interviews showed more congruence with the findings of the previous studies. In the present study, the general themes of motivation, language awareness and autonomy in learning were found to impact opinions about concordancing. Despite reservations about the lack of variety in the nature of the tasks, students' opinions about the concordancer itself was found to be positive in general. The finding that all students reported a gain in the awareness of the formulaic academic language used in research articles written by expert writers as well as an interest in the possibility offered by the concordancer of independent research on language use regardless of their performance in the assessment battery was in line with the role of the learner as the discoverer of language in use as envisaged by DDL. For instance, Jones and Haywood (2004) also concluded that through repeated exposure to and discussion on formulaic sequences, most students were able to gain a higher awareness of a set of formulaic sequences typically used in the academic discourse, while only a few students were able to make use of them in their essays accurately and appropriately. Among the highlighted advantages of the concordancer were the availability of many

examples of language in use and the enjoyment felt as a result of doing independent research. These positive findings support the qualitative findings reported by Cheng, Warren and Xun-feng (2003) and Chambers (2005). Sun's (2003) pilot case study had suggested prior knowledge, teacher intervention, cognitive skills, and concordancing skills as the four factors impacting the learning process and strategies in use. The present study, however, identified motivation, language awareness and autonomy as the three major themes influencing learners' opinions about concordancing, which is in line with the basic tenets of DDL. While Cheng, Warren and Xun-feng (2003) reported that lack of knowledge and skill in using the software and some concern about the lack of sufficient context in the corpus-generated databases were among the major difficulties encountered by learners, all of the interviewed subjects of the present study complained about the repetitive nature of the tasks and their having had to perform in the summary writing tests before receiving training on 'how to write' summaries according to the set standards rather than on how to use formulaic language conventions.

Chambers (2005) argued that since differences in the level of linguistic and analytical skills do not account for the variation in the students' reactions to the experience, differences in motivation or learning styles may help explain the considerable variation in the success of the activity. The findings of this study suggest more specifically that self-motivation of ELT students with respect to becoming members of the academic discourse community might be a prerequisite of motivation for deeper levels of research into language in use. This conclusion is in line with Yoon and Hirvela (2004) who suggest that the success of the approach may

be closely related to students' enthusiasm for improvement in L2 writing and learning preferences.

More importantly, however, Flowerdew (1998a), Aston (2001), Kennedy (2003), Yoon & Hirvela (2004) and Chambers (2005) have all argued that regardless of the valuable contribution of corpus-based study to a more realistic description of the language, designing tasks and activities that will motivate learners towards exploiting the potential benefits of the information stored in the corpus, allocating time –in addition to the time needed for learners' other course requirements- to inform students of the potential research opportunities made available by concordancers and giving them the necessary training remain to be a challenge facing research on the pedagogical effectiveness of corpus consultation through concordancing. Yet, the challenge is worth facing as the activity has positive features, being conducive to allowing for learner autonomy and discovery learning in the building up of language awareness as also attested by the qualitative data of the present study.

Pedagogical Implications

The findings of the present study present several pedagogical implications that adhere to the fundamental methodological framework provided by an integration of DDL with genre-specific language awareness. First of all, considering the restrictions on their language proficiency levels, non-native speaker freshman ELT students may need to be familiarized with the specific conventions of the academic language used by expert writers not only with respect to formulaic, prefabricated structures characterizing specific rhetorical features in discourse but also smaller units of

lexico-grammatical items such as basic collocations. Second, such language awareness acitivites based on concordancing definitely need to be contextualized within a syllabus design that provides space for pre-taining in the basic concepts and prospects of applied corpus linguistics as well as consolidation exercises that highlight correct and appropriate use of the items explored by learners. Third, as the novel effect of the corpus consultation activity, which is repetitive by nature (Flowerdew, 1998a), may lead students to lose interest, the task design should incorporate more interaction and discussion among students and be based on challenging problems that stimulate more use of cognitive skills. Finally, learners may benefit from use of concordancing for editing or self-correction tasks based on their own or peers' written production. In addition, for the purposes of enhancing learner autonomy and self-initiation, such production might even be incorporated into the teaching materials in the form of a learner corpus compiled by learners themselves for their own learning purposes.

Limitations of the Study

Certain limitations of the study related to the measurement of the learning outcome, treatment possibilities, the task design and operational restrictions refrain us from reaching a definite conclusion as to the effectiveness of corpus consultation through concordancing on the learning of formulaic academic language use in written discourse.

First of all, given the (as of yet) preliminary and inconclusive results of the line of research on the acquisition and assessment of the lexico-grammatical or formulaic

language items used by both native and non-native speakers of English among other languages (Schmitt et al, 2004), the present study lacked the resources of standardized measurement of the use and knowledge of the targeted language domain that formed its basis. The formulaic sequences test developed by the researcher was based on a preliminary model suggested by Schmitt et al, but despite efforts to improve the reliability of the test following several stages of piloting and editing, the Cronbach's alpha for the final version of the test was calculated to drop to an undesirable low of 0.3244 from the Cronbach's alpha of 0.5211obtained in the final piloting of the test. Given this flaw in the reliability of the single test in the assessment battery that aimed to measure productive and receptive knowledge of a number of formulaic sequences corresponding to the Moves in isolation rather than in an overall performance like in the summary writing tests and the research paper proposal, the results of the study should be interpreted with precaution. Another factor that hindered accurate measurement of the learning outcome as a result of the treatment was plagiarism. Although in the marking of the summary writings and the research paper proposals inter-rater reliability coefficients were found to be high, problems encountered in making correct judgments about the extent of plagiarism or problems with proper paraphrasing may have flawed a precise evaluation. Furthermore, the crowdedness of the computer laboratory sessions coupled with problems in opening or locating the downloaded software caused classroom management problems, which reduced the already limited amount of time (c. 25 mins x 7 weeks) that was allocated for hands-on practice with corpus consultation. Given the relatively unstructured nature of corpus exploration and the time required to learn the necessary search skills to conduct informed searches via concordancing,

it should be understandable that more time was required by these learners to be better oriented towards the tool. This is in line with the finding of Gaskell and Cobb's study (2004) in which most of the students were able to use concordance searches for error correction but at the end of the course, there was only a slightly significant decrease in three error types out of the ten depicted in the pre-writing samples. Finally, use of a built-in computerized tracking system would have allowed the researcher to understand the exact extent and kind of queries conducted by each subject, upon which exposure to the programme could be better understood and hence the evaluation of the effectiveness of the concordancing activity would be built on more informed grounds.

A second kind of major limitation of the study concerned task design. Despite being user-friendly, the freely available software TextSTAT did not feature analytical options that could have allowed design of more challenging tasks. On the other hand, the challenge facing the learners was twofold and in a way already burdening. In the first place, they were expected to have learnt how to summarize research articles in order to be used in writing a research paper proposal as part of their course requirement outside of the laboratory sessions. In the second place, they had to familiarize themselves with a new programme and concept called concordancing and make intelligent use of this tool for focusing on the language aspect of academic writing conventions.

Operational restrictions of the research did not allow time and resources for more structured interviews with more subjects, which could have enabled the researcher to provide specific insight into the distinguishing properties of the concordancer through comparison of data from both the experimental and control

groups. Finally, due to restrictions related to time and human resources, the subjects could not receive prior training about the basic concepts of corpus linguistics and the prospects offered by concordancing.

Suggestions for further Research

Following this experimental study, which is one of the very few examples of its kind, a number of suggestions can be made for further research. First and foremost, since corpus consultation through concordancing necessitates good search skills so that informed questions about language data can be posed at the query stage and cognitive skills so that the search findings can be interpreted, analyzed and processed for further use in novel contexts, further studies could investigate the role of individual differences such as learners' expectations, language aptitude, cognitive and learning styles, motivation and learning strategies that all affect the success of second language learning. Identification of specific learner strategies used in both corpus consultation and analysis might contribute to a more precise definition of the scope and design of training sessions, task types to be used during exploration of the corpus and finally the consolidation exercises to follow up on the exploration stage. In parallel to this, within a perspective that attempts to tailor concordancing activities to the needs of Turkish students' educational background, there is also need for research on the variety of ways Turkish ELT students may exploit concordance outputs or corpus data for material or test production as well as syllabus design in general.

Most of the existing studies, including the present one, have concentrated on the use of concordancing in the context of university education for EAP/ESP purposes at relatively advanced levels of English. However, there is also need for more quantitative and qualitative studies that will explore how and if the tool can be exploited with less advanced learners for the establishment of language awareness and search skills.

Further experimental studies could concentrate on developing better methods of assessing the learning outcome that is likely to result from the investigation of corpora via concordancers for the learning of not only vocabulary but also the improvement of writing within a genre-analytical approach.

Inasmuch as in the final analysis, corpora remain to be data sources to be searched via concordancers for the retrieval of information based on predetermined needs, there is also scope for the investigation of the benefit of such activity as opposed to or alongside other conventional resources such as the dictionary, reference grammar or course book. In this way, the analytical options created by the frequency of use information and concordance output may be clearly identified, leading to a better description of the properties of corpus consultation through concordancing that distinguish it from conventional text-based activities aiming to teach language features in discourse.

Corpus-based analyses of learner corpora compiled from written texts produced in EAP settings might be conducted to help syllabus and material design based on illustrated problems or difficulties experienced by advanced learners.

Research in software design could explore more stimulating alternative layouts for the display of concordance lines bearing in mind the pedagogical benefits to be gained by learners in the role of researchers.

Finally, there are few examples of a variety of research methods used in the existing studies. For example, in the present study, the subjects were not students of the researcher, which was one of the aspects that differentiated it from most of the previous studies in the field in terms of objectivity in the research design. There is urgent need for more experimental as well as qualitative studies that will ideally be preceded by a large-scale integration of corpus linguistics into language study programmes for a better evaluation of the pedagogical benefits of concordancing.

APPENDIX A - List of Articles Included in the Corpus

Second Language Research

1.Hopp, H. (2005). Constraining second language word order optionality: scrambling in advanced English–German and Japanese–German interlanguage *Second Language Research* 21/1 : 34-71

tokens: 9,407

Studies in Second Language Acquisition

2. Leow, R. P. (2002). Models, attention and awareness in SLA : a response to Simard and Wong's "Alertness, orientation, and detection: the conceptualization of attentional functions in SLA". *SSLA* 24/1:113-119

tokens: 2,169

3. Leow, R. P. & Morgan-Short, K. (2004) To think aloud or not to think aloud: the issue of reactivity in SLA research methodology. *SSLA* 26/1 : 35-57

tokens: 6,041

4. Mackey, A., Gass, S., & McDonough, K. (2000). How do learners perceive interactional feedback? *SSLA* 22/4 : 471-497

tokens: 9,309

5. Nadasdi, T, Rehner, K & Mougeon, R. (2003). The learning of sociolinguistic variation by advanced FSL learners: the case of nous versus on in immersion French . *SSLA* 25/1: 127-156

tokens: 9,448

System

6. Burgess, J. & Etherington, S. (2002). Focus on grammatical form: explicit or implicit? *System* 30/4: 433-458

tokens: 8,172

7. Jackson, J. (2003). Case-based learning and reticence in a bilingual context: perceptions of business students in Hong Kong. *System* 31/4 : 457-469

tokens: 4,841

8. Rodrigoa, V., Krashen, S. & Gribbons, B. (2004). The effectiveness of two comprehensible-input approaches to foreign language instruction at the intermediate level. *System* 32/1: 53-60

tokens: 2,410

9. Smith, B. & Gorsuch, G.J. (2004). Synchronous computer mediated communication captured by usability lab technologies: new interpretations. *System* 32/ 4: 553-575

tokens: 6,781

TESOL Quarterly

10. Han, Z. (2002). A study of the impact of recasts on tense consistency in L2 output. *TESOL Quarterly* 36/4 : 543-572

tokens: 7,983

11. Kamhi-Stein, L. D. (2003). Reading in two languages: how attitudes toward home language and beliefs about reading affect the behaviors of “underprepared” L2 college readers. *Tesol Quarterly* 37/1: 35-71

tokens: 9,757

12. Kumaravadivelu, B. (2001). Toward a Postmethod Pedagogy. *Tesol Quarterly* 35/4: 537-560

tokens: 8,417

13. Maguire, M.H. & Graves, B. (2001). Speaking Personalities in Primary School Children’s L2 Writing. *Tesol Quarterly* 35/4 : 561-593

tokens: 11,461

14. Nassaji, H. (2003). L2 vocabulary learning from context: strategies, knowledge sources, and their relationship with success in L2 lexical inferencing. *Tesol Quarterly* 37/4 : 645-670

tokens: 7,865

APPENDIX B- FLED Lab Syllabus

2005/II. TERM

LAB SECTION A: MONDAY 7
LAB SECTION B: MONDAY 8

WEEK	LAB	PRE-LAB READINGS
FEB 28-MARCH 4	LIBRARY VISIT	
MARCH 7-11	Lecture on CARS Model and summary writing	Swales&Feak (1997) Units 1&5
MARCH 14-18	SUMMARY WRITING	Swales&Feak Unit 1/pp. 25-28 Unit 5/pp. 105-129
MARCH 21-25	SUMMARY WRITING	
MARCH 28- APRIL 1	CLAIMING CENTRALITY (MOVE 1A) SUMMARY WRITING TEST 1	Swales&Feak Unit 8/pp. 173-179
APRIL 4-8	LITERATURE REVIEW (MOVE 1B)	Swales&Feak Unit 8/pp. 179-185 Task 6
APRIL 11-15	FEEDBACK ON SUMMARY	Handout
APRIL 18-22	SUMMARY WRITING TEST 2	
APRIL 25-29	SPRING BREAK	
MAY 2-6	ESTABLISHING A NICHE (MOVE 2)	Swales&Feak Unit 8/pp. 185-189 Task 8
MAY 9-13	OCCUPYING THE NICHE (MOVE 3)	Swales&Feak Unit 8/pp. 190-193
MAY 16-20	SUMMARY WRITING TEST 3	
MAY 23-27	FINAL LAB TEST	

IMPORTANT NOTE: STUDENTS ARE EXPECTED TO COME TO THE LAB SESSIONS HAVING READ THE ASSIGNED PAGES FROM SWALES&FEAK

APPENDIX C.01-Lesson Plans for the Control Group for Weeks 1-7

WEEK 1 /FLED 104 LAB A/ March 14, 2005

TASK 1: SUMMARIZING

OBJECTIVES: A) To study instances of summarizing words/expressions used in referring to previously stated points (Swales&Feak, Unit 1, pp. 25-28)

B) To study various instances of expressions used in referring to a source. (Swales&Feak, Unit 5, p.117-118)

ACTIVITIES

1. Task 11 and 12 in "English in Today's Research World" pp. 44-51
2. Ask students to find in their PDF files *Tesol Quarterly* 35/4a and scan the text for examples of summarizing words/expressions as well as expressions used to refer to a source. They might find the "find" function useful in their queries.

3. Ask students to tabulate their findings and work in pairs to report them to the whole class.

4. Have frequently encountered items listed on the board:

SUMMARIZING WORDS	REFERRING TO A SOURCE
Ex: This notion.....	Ex: In.....'s 1991 paper.....

WEEK 2/FLED 104 LAB A/March 21, 2005

TASK 2: SUMMARIZING

OBJECTIVES: A) To identify instances of reporting verbs (e.g. maintain, claim, argue) used in stating main ideas (Swales & Feak, Unit 5, pp. 117-121)

B) To identify instances of summary reminder phrases (Swales & Feak, Unit 5, p.121-125)

ACTIVITIES

1. Students find in their PDF files SLR 21 1 (Constraining second language word order optionality: scrambling in advanced English-German and Japanese-German interlanguage) and scan the text to locate reporting verbs and summary reminder phrases.
2. Students note the related language features used by the author and list the verbs and phrases they come across together with their usage. Ask students to try to determine whether they are any different from the verbs presented in Swales & Feak.

3. Students work in pairs to report their findings to the whole class. Discuss the reporting verbs and summary reminder phrases typically used in the article.

4. Have typically/frequently encountered items listed on the board:

REPORTING VERBS	SUMMARY REMINDER PHRASES
Ex: .....argues that.....	Ex: .....also believes that.....

WEEK 3/FLED 104 LAB A/March 28, 2005

TASK 3: ESTABLISHING TERRITORY BY MEANS OF CLAIMING CENTRALITY

OBJECTIVE: To study instances of conventional language expert writers use in the field of applied linguistics to establish territory by means of claiming centrality (Move 1 a) in writing a research paper along the lines offered by Swales'CARS Model. (Swales & Feak, Unit 8, pp.173-179)

ACTIVITIES

1) Students scan the following 4 articles in their PDF files: System 30/4 ; 31/ 4 ; 32/1 ; 32/ 4

2) Locate section(s) corresponding to Move 1a, identify and note typical verbs/phrases/items corresponding to the function of Move 1 a in these exemplar texts produced by professional writers.

3) Using the Internet/Library homepage students access full text of one more article in the field and look for the same or similar instances of typical items. They note the language features the author uses to claim centrality.

4) Students work in pairs to report their findings to the whole class. Discuss whether there are any emerging patterns.

5) Have typically/frequently encountered items listed on the board:

SAMPLE SKELETAL STRUCTURES USED IN CLAIMING CENTRALITY
Of particular interest is.....
A central issue in .....is.....
Many recent studies have focused on .....
Journal writing has become a well-entrenched discursive practice in.....
.....widely recognized as.....
....has been much discussed...

WEEK 4/FLED 104 LAB A/April 4, 2005

TASK 4: ESTABLISHING TERRITORY BY MEANS OF INTRODUCING AND REVIEWING ITEMS OF PREVIOUS RESEARCH

OBJECTIVE: To study instances of conventional language expert writers use in the field of applied linguistics to establish territory by introducing and reviewing items of previous research (Move 1 b).

(Swales & Feak, Unit 8, pp.179-185)

ACTIVITIES

1) Ask students to summarize the patterns introduced in Swales&Feak:

Pattern 1: reference to single studies Jones (1987) investigated...

Pattern 2: reference to areas of inquiry : The causes of illiteracy have been widely investigated (Jones 1987, ...)

Pattern 3: reference to state of current knowledge : The causes of illiteracy are complex (Jones 1987)

Alternatives: According to Jones (1987)....

Jones'research shows that...

Verbs used to indicate A) what a researcher did (investigated, studied, analyzed, etc.) B) what a previous researcher wrote/thought (stated, concluded, claimed, etc.)

2) Students scan the following 2 articles in their PDF files: Tesol Quarterly: 36/4; 37/4 and

a) locate instances of citation corresponding or not corresponding to the patterns discussed and note/discuss alternative patterns

b) compare their findings with the following list of verbs found by Hyland (1999) to typically appear in the field of applied linguistics : suggest, argue, show, explain, find, point out

3) Students work in pairs to report their findings to the whole class. Discuss whether there are any emerging patterns.

4) Students do Task Four (reconstructing a literature review) and Task Five (identifying differences between two reviews) from ETRW (p. 154-157) to study more instances in context.

5) Have typically/frequently encountered items listed on the board.

WEEK 5/FLED 104 LAB/APRIL 11, 2005

OBJECTIVE: To raise awareness of accurate and conventional academic language use

TASK 5: Learners edit a collection of problematic extracts from their first summary writing exam papers. Learners are to use their collection of articles to assist them in improving the extracts contained in the following handout:

Language Focus Handout for the First Summary Writing Exam :

Work in pairs to identify and improve the problematic parts in the following extracts from your summaries of John Gray's article. Make sure you refer back to the text and try to make use of your corpus of selected articles while improving the extracts.

1. According to John Gray in his research article "The language learner....." he states that active involvement of adult learners in the process.....

2. As a result of Brinton & Holten and Pennington's studies concern of teachers is for procedural issues but after some time passes the concern is for interpersonal aspect of teaching.

3. Burke's case study of the use of learner diaries served to help trainer and trainess to see learners'needs and.....

4. In “The language learner.....John Gray discusses that the direct participation of the students in training process may be usefull for novice teachers before they became real teachers according to researches conducted by several people.

5. Gray, in his article states that trainee teachers on pre-service courses can benefit from the direct contribution of the learners in the training process.

6. In conclusion; Gray found out the fact that the dailogue between the trainess and learners is crucially important as it provides the trainees with opportunity for planning more effective classes based on learner needs and learner feedback without a tutor.

7. According to the previous researches; novice teachers have concern for both theirselves, their efficiency in lessons and the needs of students during the learning process.

8. In order to make such a learning process above, several scientists suggested several ideas which are parallel to each other. To illustrate that we can show Fuller and Brown, Holten, Burke and...They also suggested several methods but the one which was suggested by Burke (1995) She believed that the more listeners.....

9. John Gray states that “.....” Fuller states that “.....” Holten states that “.....”

10. So far many research has been made on this topic.

11. John Gray, in his study “The language learner.....” states that many adult learners have a vast store of valuable experience and knowledge

which will be useful for teacher trainees to improve their conceptions and methods of teaching and learning.

12. Learners' comments included a wide range of areas, -complaints, requests and other kinds of things.-

WEEK 6/FLED 104 LAB A/May 2, 2005

TASK 6: ESTABLISHING A NICHE

OBJECTIVE: To study typical instances of conventional language used by expert writers in the field of applied linguistics to establish a niche (Move 2)

(Swales&Feak, Unit 8, pp. 185-189)

ACTIVITIES

1) Scan the following 2 articles: Tesol Q 35/4; 37/1 , locate section(s)corresponding to Move 2, and make a note of the typical verbs/ adjectives/ phrases corresponding to the function.

Students could pay attention to chunks centering around the following key words: Fail to/ known to; Although, however, further, yet; Need; Study, article, paper; Few, little, no; Would, might, may, could

2) Using the Internet/Library to access full text of one more article and note the language features the author uses to establish a niche.

3) After students share findings with classmates, have frequently encountered items listed on the board.

WEEK 7/FLED 104 LAB A/May 9, 2005

TASK 7: OCCUPYING THE NICHE (Move 3a)

OBJECTIVE: To study instances of conventional language expert writers use in the field of applied linguistics to occupy the niche by outlining purposes or stating the nature of the present research. (Swales&Feak, Unit 8, pp. 190-193)

ACTIVITIES

1) Students are advised to refer to pp. 190-193 during the lesson.

2) Students scan the following articles: SSLA 24/1; 25/1 ; SLR 21/1 and locate section(s)corresponding to Move 3a and make a note of the typical verbs/ nouns/ phrases corresponding to the function.

3) Students tabulate their findings according to the language features they have identified

	Examples (Note vocabulary and tense use)	Reference to "type of text" vs "type of investigation"
Purposive	1) The aim of this investigation was to test.....	Type of investigation (I)
Descriptive	1) This paper reports on the results obtained.....	Type of text (T)

APPENDIX C.02-Lesson Plans for the Experimental Group for Weeks 1-7

WEEK 1/FLED 104 LAB B/March 14, 2005

TASK 1: SUMMARIZING

OBJECTIVES: A) To study instances of summarizing words/expressions used in referring to previously stated points (Swales&Feak, Unit 1, pp. 25-28)

B) To study various instances of expressions used in referring to a source. (Swales&Feak, Unit 5, p.117-118)

ACTIVITIES

3. Students run TextStat on their mini-corpus (articles.crp) to search the following items: this/these/paper/research/article/study/according to/ In / *s that / been / (19*)

   Concentrate on the words around the search term. Try right or left sorting depending on the nature of the search term. Quickly scan the examples and try to decide which items correspond to the function of summarizing.

4. Note the frequently used prepositions/articles/words that follow or precede the search term. Are they similar to or different from the typical expressions presented in Swales&Feak?

3. Students work in pairs to report their findings to the whole class. Discuss language features typically used in the corpus for the function of summarizing.

4. Have frequently encountered items listed on the board:

SUMMARIZING WORDS	REFERRING TO A SOURCE
Ex: This notion.....	Ex: In.....'s 1991 paper.....

WEEK2/FLED 104 LAB B/March 21, 2005

TASK 2: SUMMARIZING

OBJECTIVES: A) To identify instances of reporting verbs (e.g. maintain, claim, argue) used in stating main ideas (Swales & Feak, Unit 5, pp. 117-121)

B) To identify instances of summary reminder phrases (Swales & Feak, Unit 5, p.121-125)

ACTIVITIES

5. Students run TextStat on their mini-corpus (articles.crp) to search the reporting verbs and summary reminder phrases used. They might find the following search items useful in their queries:

   s that ; been ; (19) ; (20*); also ; further

   Quickly scan the examples and try to decide which items correspond to the functions of stating main ideas and summary reminding. Try to come up with different search items and concentrate on the words around them.

6. List the verbs and phrases together with their usage. Are they any different from the verbs presented in Swales & Feak?

3. Students work in pairs to report their findings to the whole class. Discuss the reporting verbs and summary reminder phrases typically used in the corpus.

4. Have typically/frequently encountered items listed on the board:

REPORTING VERBS	SUMMARY REMINDER PHRASES
Ex: .....argues that.....	Ex: .....also believes that.....

WEEK3/FLED 104 LAB B/March 28, 2005

TASK 3: ESTABLISHING TERRITORY BY MEANS OF CLAIMING CENTRALITY

OBJECTIVE: To study instances of conventional language expert writers use in the field of applied linguistics to establish territory by means of claiming centrality (Move 1 a) in writing a research paper along the lines offered by Swales'CARS Model. (Swales & Feak, Unit 8, pp.173-179)

ACTIVITIES

1) Students scan the following 4 articles in their PDF files: System 30/4 ; 31/ 4 ; 32/1 ; 32/ 4

2) Locate section(s) corresponding to Move 1a , identify and note typical verbs/phrases/items corresponding to the function of Move 1 a in these exemplar texts produced by professional writers.

3) Students run concordances (on their mini-corpus) for as many of these items (or any other additional items they deem significant) as possible. Remind students to note the findings that relate to claiming centrality as well as right/left collocates for grammatical use of the relevant results.

Example search items: interest, issue, central, recent, widely.....

4) Students work in pairs to report their findings to the whole class. Discuss whether there are any emerging patterns.

5) Have typically/frequently encountered items listed on the board:

SAMPLE SKELETAL STRUCTURES USED IN CLAIMING CENTRALITY
Of particular interest is.....
A central issue in .....is.....
Many recent studies have focused on .....
Journal writing has become a well-entrenched discursive practice in.....
.....widely recognized as.....
....has been much discussed...

WEEK4/FLED 104 LAB B/April 4, 2005

TASK 4: ESTABLISHING TERRITORY BY MEANS OF INTRODUCING AND REVIEWING ITEMS OF PREVIOUS RESEARCH

OBJECTIVE : To study instances of conventional language expert writers use in the field of applied linguistics to establish territory by introducing and reviewing items of previous research (Move 1 b).

(Swales & Feak, Unit 8, pp.179-185)

ACTIVITIES

1) Ask students to summarize the patterns introduced in Swales&Feak:

Pattern 1: reference to single studies e.g. Jones (1987) investigated...

Pattern 2: reference to areas of inquiry e.g. The causes of illiteracy have been widely investigated (Jones 1987, ...)

Pattern 3: reference to state of current knowledge : The causes of illiteracy are complex (Jones 1987)

Alternatives: According to Jones (1987)....

Jones'research shows that...

Verbs used to indicate: A) what a researcher did (investigated, studied, analyzed, etc.) B) what a previous researcher wrote/thought (stated, concluded, claimed, etc.)

2) Students scan the following 2 articles in their PDF files: Tesol Quarterly: 36/4; 37/4 and a) locate instances of citation corresponding or not corresponding to the patterns discussed and note/discuss alternative patterns b) compare their findings with the following list of verbs found by Hyland (1999) to typically appear in the field of applied linguistics : suggest, argue, show, explain, find, point out

3. On their mini-corpus students run concordances for the verbs /nouns they have identified as well as Hyland's list. Ask students to note any other features in their search and run concordances for those as well. Remind students of the following search tip: been *ed/ (19*)/(20*)

Ask students to try left/right sorting to get better results. Make sure they concentrate on the language the authors use to introduces and review items of previous research.

4) Students work in pairs to report their findings to the whole class. Discuss whether there are any emerging patterns.

5) Have typically/frequently encountered items listed on the board.

WEEK 5/FLED 104 LAB/APRIL 11, 2005

OBJECTIVE: To raise awareness of accurate and conventional academic language use by having learners edit a collection of problematic extracts from their first summary writing exam papers. Learners are to use the concordancer to assist them in improving the extracts contained in the following handout:

Language Focus Handout for the First Summary Writing Exam (See Appendix C.01-Week 5)

WEEK 6/FLED 104 LAB B/May 2, 2005

TASK 6: ESTABLISHING A NICHE

OBJECTIVE: To study typical instances of conventional language used by expert writers in the field of applied linguistics to establish a niche (Move 2)

(Swales&Feak, Unit 8, pp. 185-189)

ACTIVITIES

1) Students scan the following 2 articles: Tesol Q 35/4; 37/1 , locate section(s)corresponding

to Move 2, and make a note of the typical verbs/ adjectives/ phrases corresponding to the function.

2) Run a concordance for fail* to as an example and quickly go over the lines, paying attention to the language used.

Tell students that they might also find the following items helpful in their search:

although/ need/ study/ article/ paper /few/ little/ no/ would/ might/ may/ could/ further/ however/ yet

Students run on their mini-corpus concordances for the items they have selected and make a note of their findings.

3) After students share their findings with classmates, have frequently encountered items listed on the board.

WEEK 7/FLED 104 LAB B/May 9, 2005

TASK 7: OCCUPYING THE NICHE (Move 3a)

OBJECTIVE: To study instances of conventional language expert writers use in the field of applied linguistics to occupy the niche by outlining purposes or stating the nature of the present research.

(Swales&Feak, Unit 8, pp. 190-193)

ACTIVITIES

1) Students are advised to refer to pp. 190-193 during the lesson.

2) Students scan the following articles: SSLA 24/1; 25/1 ; SLR 21/1 and locate section(s)corresponding to Move 3a and make a note of the typical verbs/ nouns/ phrases corresponding to the function.

3) Students tabulate their findings according to the language features they have identified

	Examples (Note vocabulary and tense use)	Reference to "type of text" vs "type of investigation"
Purposive	1) The aim of this investigation was to test.....	Type of investigation (I)
Descriptive	1) This paper reports on the results obtained.....	Type of text (T)

4) Students start their corpus search with the following items: we, this study, this paper, thisarticle, our study, the present, purpose, the current, report.

They are also advised to run concordances for the items they have selected.

5) After students share findings with classmates, have frequently encountered items listed on the board.

APPENDIX-D.01 Formulaic Sequences Test

FLED 104 LAB FINAL
PART I
Below are passages from original research articles. Some parts have been left out. Read the passages carefully, and paying attention to academic writing conventions, circle the letter of the correct option for each blank.

Passage 1
One characteristic afforded to online communication is increased message permanence, which allows a reader to scroll up to reread a previous passage or to recheck the spelling of a new or known word used earlier. (1)_____ argued that such permanence helps explain the lack of learner uptake (compared with F2F communication) that is present in online communication among language learners (Smith, 2004).

1. a. It has been
   b. A researcher has
   c. In 2004,Smith
   d. Smith has

Passage 2
The factor of specificity of the group of individuals referred to by the pronoun "on" was also examined by Boutet, who used a three-part distinction of specificity and restriction to characterize the various uses of "on". (2) _____, she distinguished among references to: (a) a group that is both specific and restricted (b) a group that is specific but not restricted and (c) a group that is not specific and not restricted.

2. a. Moreover
   b. For example
   c. More specifically
   d. In fact

Passage 3
In L2 reading, one might expect that readers would develop such beliefs based on L1 reading experience, but within the (3)_____ literature on L2 reading, comparatively little research has focused on the relationship between home language and L2 reading, or what Bernhardt (2000) calls "cross-lingual processing strategies" (pp. 801–802).

3. a. immense
   b. extensive
   c. massive
   d. great

Passage 4
These excerpts from conversations with a multilingual child frame our exploration of the complex relationship between second language writing and identity construction as reflected through journal writing in the classroom. We (4) _____ a constructivist, sociocultural-historical framework (Bakhtin, 1986; Vygotsky, 1986; Wertsch, 1998) to examine the texts, and voices of three 8-year-old Muslim girls as they learn to write English.

4. a. construct
   b. adopt
   c. need
   d. analyze

Passage 5
(5) _____ Long (1996) and Long and Robinson (1998), we also explored learners' perceptions about conversational interaction involving recasts, which occur when an interlocutor produces a more target-like version of a learner's utterance while preserving the semantic content of the learner's utterance.

5. a. Following
   b. Just like
   c. As in
   d. Referring to

Passage 6

Although evidence from first language (L1) research suggests that L1 learners learn much of their vocabulary from context, the results of second language research in this area are (6)_____. There is uncertainty among second language researchers regarding the role of lexical inferencing as an efficient vocabulary learning strategy.

6. a. inadequate
b.inconclusive
c. awkward
d. preliminary

Passage 7

Our study (7) _____ a variationist analysis of the alternation between the subject pronouns “nous” and “on”, both of which designate two or more individuals including the speaker. This case of variation has been documented in many varieties of contemporary spoken French. The (8)_____ of our study is twofold. First, we seek to determine whether French immersion students use both pronouns “nous” and “on” to mean “we” (e.g., Ma soeur et moi nous allons ala` me`la meˆme e´cole and Ma soeur et moi on va aˆme e´cole, both of which mean “My sister and I, we go to the same school”). Second, we seek to determine whether the immersion students’ usage of these pronouns is conditioned by the same linguistic and extralinguistic constraints that have an impact on native speaker usage as well as by independent variables that are specific to second language (L2) learners —for example, the amount of exposure to native French outside school and the learners’ first language. As such, (9)_____belongs to a strand of second language acquisition research that investigates the learning of sociolinguistic variation by L2 learners. Within this strand of research, (10)_____ studies have focused on French as a second language, but no synthesis of these studies’ findings has yet been attempted. Thus, our paper will include such a synthesizing overview.

7.a. presents
b. contributes to
c. aims
d. reveals

8. a. area
b. design
c. result
d. objective

9. a. this plan
b. this study
c. this method
d. this case

10. a. academic
b. further
c. lots of
d. numerous

PART II

Below are extracts from different sections of original research articles. Some parts have been left out. Read the clues in the parentheses under each item and complete the letters so that you have one single word in each blank. (Note that in each blank a different number of letters is missing.)

Example: The case of variation un_der_____st__udy_____
(The case of variation that is examined)

11. Negotiation work that triggers interactional adjustments by a native speaker or more competent peer is wi_____ thought to facilitate second language acquisition.

(There are many researchers who think that)

12. However, many researchers would agree that, if successful, inferencing can aid comprehension and contribute to, if not lead to, immediate learning and retention of lexical and semantic information about words (Ellis, 1997; Hulstijn, 1992; Paribakht & Wesche, 1999). Y_____ lit_____ is known about the exact mechanisms underlying successful inferencing and, in particular, how different strategies and knowledge sources used to infer word meanings from context relate to ultimate success in lexical inferencing.

(But researchers do not know much about)

13. Second language learners' lexical inferencing and its link with vocabulary acquisition is not as well understood and therefore has recently become the fo_____ of m_____research (de Bot, Paribakht, & Wesche, 1997; Dubin & Olshtain, 1993; Fraser, 1999; Haynes, 1993; Joe, 1995; Lewis, 1993; Morrison, 1996; Nation, 1990).

(has recently received the attention of many researchers)

14. For an over_____ of such research, the reader is directed to Adamson (1988), Beebe (1988), Ellis (1999), and Tarone (1988, 1990).

(To learn about the major issues regarding such research)

15. Some have argued that computer-mediated communication may provide the ideal medium for students to benefit from interaction in this way because the written nature of the discourse allows greater opportunity to attend to and reflect on the form and content of the communication (Warschauer and Kern, 2000). Of part_____ int_____ in this study is what video-and audio-enhanced data suggest participants might be attending to.

(What specifically concerns us)

16. Our over_____ pur_____ for conducting this study was to investigate how using usability lab technology to capture simultaneous video and audio feeds of participants during task completion as well as 'live' screen capture data could help us
better interpret non-native to non-native English speakers' task-based interaction during SCMC.

(Our general objective in conducting this study)

17. The wealth of research findings and accompanying protracted discussion about grammar and its teaching (Thornbury, 1997, 1998; Celce-Murcia et al., 1997; am_____ oth_____) mean that teachers are faced with a potentially bewildering range of options for use in their classrooms.

(to mention only a few researchers)

18. The lack of follow-up interviews is a maj_____ lim_____ to the study.

(an important shortcoming of the study)

19. The place and type of grammatical instruction within language learning has been th_____ sub_____ of language acquisition research and discussion for at least 40 years (Ellis, 2001).

(has been addressed)

20. The increasing need to address the internal validity of studies conducted within an attentional framework in second language acquisition is clearly mani_____ in current research designs (e.g., discourse in Alanen, 1995; Leow, 2001b; Rott, 1999; problem solving tasks in Leow, 1997a, 1998a, 1998b, 2000, 2001a; Rosa & O'Neill, 1999; stimulated recalls in Mackey, 1999; computer-based tasks in Rosa & Leow, in press a, in press b).

(is clearly shown)

APPENDIX-D.02 Formulaic Sequences Test Answer Key

Part I
1 A
2 C
3 B
4 B
5 A
6 B
7 A
8 D
9 B
10 D

Part II

11) is widely thought to

12) Yet little is known about

13) has recently become the focus of much research

14) For an overview of such research

15) Of particular interest

16) Our overall purpose for

17) among others

18) major limitation to

19) has been the subject of

20) is clearly manifested

APPENDIX-D.03 Language Features Corresponding to the Moves in Each Test Item

Item	*Move 1a	**Move 1b	***Move 2	****Move 3a
1		It has been argued that		
2		More specifically		
3			Extensive literature	
4				We adopt (a ..... framework)
5		Following (Long and Robinson...),		
6			Results...are inconclusive	
7				Our study presents
8				The objective of our study
9	This study (belongs to a strand of research...)			
10		Numerous studies (have focused on...)		
11	is widely thought to			
12			Yet little is known about	
13	Has recently become the focus of much research			
14		For an overview of such research		
15				Of particular interest (in this study)
16				Our overall purpose for (conducting this study)
17		Among others		
18			A major limitation to (the study)	
19		Has been the subject of (... research)		
20	is clearly manifested (in current research design)			

*Move1a: Establishing a territory by showing that the general research area is important, central, interesting, problematic, or relevant in some way (claiming centrality)

**Move1b: Establishing a territory by introducing and reviewing items of previous research in the area (literature review)

***Move2: Establishing a niche by indicating a gap in the previous research, raising a question about it, or extending previous knowledge in some way

****Move3a : Occupying the niche by outlining or stating the nature of the present research

APPENDIX D.04 - Task Familiarity Worksheet 1

Bearing in mind academic writing conventions, fill in each blank with one word so that the extracts have the same meaning as the clues in the parantheses. Note that in each blank different numbers of letters are missing.

1. In the next ph_____of the study

   (in the next stage of the study)

2. In th_____st_____ of a

   successful and less successful bilingual

   (in the study in which they examined a successful and less successful bilingual)

3. In the pr_____ study

   (in the current study)

4. the findings in this study are con_____with the claims of the

   (the findings in this study agree with the claims of ...)

5. The procedure ad_____in this study

   (the procedure which we used in this study)

6. the current study did not a_____ t_____ operationalize

   (the purpose of the current study was not to operationalize)

7. In a re_____study, Hakuta and D'andrea (1992) found

   (In a study which dealt with the same issue)

8. The objective of our study is tw_____

   (Our study has two objectives.)

9. Hansis (1994) found in a s_____o_____ adults' responses to fliers .....

   (Hansis examined adults' responses to fliers and he found that)

10. Alanen's (1995) study in_____36 L1

    English beginning learners of semiartificial Finnish showed that.....

    (There were 36 L1 learners in his study)

APPENDIX D.05 – Task Familiarity Worksheet 2

Vocabulary phrase completion

NAME _____

In the two following passages, there are a number of vocabulary phrases in bold. Some words in these phrases have their second half cut off. Look at the context and fill in the blanks with the missing half of the words. Sometimes only one letter is missing and sometimes several letters are missing. For example:

The economy is sure to improve **in the long r un**. (*over a long period of time*)

Learning English

Learning English as a second language is a difficult challenge, but we do know several ways to make learning more efficient. Fi____ of a____, almost every research study shows that you need to use English as much as possible. I____ is cl____ that the more you use English, the better you will learn it. There is no disagreement about this. (*to begin with*) (*this is obvious*)

Second, learning English from textbooks seems to help in most cases. Most evidence shows that studying grammar rules with textbooks can help you memorise those rules. Therefore, i____ seems lik____ that studying with textbooks can help you learn something about grammar. However, if you only use a book but do not practice speaking, you will probably not be able to use the grammar rules when you speak. If we look at language learning research, there i____ no evid____ that just learning from textbooks can make you a good speaker. Of course, studying grammar will help your speaking t____ a certain ext___, but it is not the only thing you need to know. You must also know how to do things like ask questions and give directions. With reg___ to giving directions, you must know phrases like *Turn right at the corner*. (*this is probably true*) (*nothing to show that this is true*) (*some amount, but not all*) (*concerning this certain thing*)

Third, beginning learners and advanced learners need to study differently. For example, beginners have little language proficiency to build upon. At this st____, it is probably best to focus on building vocabulary and learning grammar. In te____ of vocabulary, beginning learners should try to learn the most common 2,000 words of English. Then, as intermediate students, they should try to build a vocabulary size of 5,000 words. It may take some time to learn this many words, but as a res____, learners should be able to read natural English texts, like newspapers and magazines. Advanced learners should learn even more vocabulary. If a learner continues to study over many years, in t____ long te___ they can reach a vocabulary size of 10,000 words or more. (*at the start of development*) (*concerning this certain thing*) (*something happening because of another thing*) (*over a long period of time*)

International debt

Speaker A: I've been watching the news report and they say that there's a go____ cha____ that the international debts of poorer countries might be cancelled. (*this will probably happen*)

Speaker B: Really? I don't think so. As f____ as I kn____, the international banks do not want to cancel the debt because it would cost them too much money. (*I think this is true*)

A: On the cont____, the banks would have more money because they would get some money from the government instead. They may not get the loans back from the poorer countries for a long time anyway. (*the opposite is true*)

B: That's a good po____. I guess it's better for the banks to get some money now and just forget the loans, particularly when they take into acc____ the fact that some countries may never be able to pay the loans back. (*the idea in your argument is a good one*) (*consider this issue*)

A: The problem is that many people do not want the government to pay the banks. They feel that the banks caused their own problems by lending money too easily.

B: I s____ what you me____. Many specialists told the banks that some countries had very weak economies and could not repay the loans. In sp___ of this, the banks loaned the money anyway. (*I understand your argument*) (*doing something even though there is a good reason not to*)

A: Yes, some loans were too dangerous. On the other ha___, some countries used the money wisely to improve their economies and their people's living conditions. (*looking at the opposite argument*)

B: That's true. But the po____ is that many countries cannot pay back their loans and it is damaging their economies. There are many arguments for and against cancelling the loans, but o___ the wh___, I think it would be best to cancel them. (*the main issue in the argument*) (*considering the complete situation*)

Source: Schmitt et al (2004)

APPENDIX D.06 –Task Familiarity Worksheet 3

The passage below is an extract from “Kubato, M. (2001). Error correction strategies used by learners of Japanese when revising a writing task. *System* 29: 467-480”. Fill in the blanks with the missing parts of the words. Note that the number of missing letters in each blank is varied. Make sure you pay attention to academic writing conventions.

Error correction of students’ written work is a time consuming task for language teachers. Con_____ the time required for correction, the most effective way to correct errors is worth inv_____ Acc_____ to Lee (1997), attitudes towards error correction changed from direct correction before the 1960s to condemnation of error correction in late 1960s, and to a more critical view of the need and value of error correction in the 1970s and 1980s. In the 1990s, the contr_____ o_____ error correction rem_____ unres_____. Cur_____ a special coding system has been employed by teachers of Japanese to correct essays when getting students to revise for the Victorian Certificate of Education (VCE), which is equivalent to matriculation in the state of Victoria, Australia. Th_____ article re_____ on the results of an investigation car_____ out using the VCE coding system. The effectiveness of the coding system was ascertained, although the sub_____ of this investigation were university students, not VCE students. At the same time, strategies used by students to correct coded errors were investigated. Investigation of error correction strategies gives us ins_____ in_____ ways of improving the coding system. While abu_____ res_____ has been conducted on error correction in English as a Second Language (ESL) and English as a Foreign Language (EFL), studies of error correction in

Japanese as a foreign language are rare (Takeuchi, 1996; Hatta et al., 1997; Ishibashi, 2000). Much research has been conducted on effective correction methods in ESL and EFL, but there is no ag_____ among researchers on the most effective method.

Task Familiarity Worksheet 3 - Answer Key

Error correction of students' written work is a time consuming task for language teachers. Considering the time required for correction, the most effective way to correct errors is worth investigating. According to Lee (1997), attitudes towards error correction changed from direct correction before the 1960s to condemnation of error correction in late 1960s, and to a more critical view of the need and value of error correction in the 1970s and 1980s. In the 1990s, the controversy over error correction remains unresolved. Currently a special coding system has been employed by teachers of Japanese to correct essays when getting students to revise for the Victorian Certificate of Education (VCE), which is equivalent to matriculation in the state of Victoria, Australia. This article reports on the results of an investigation carried out using the VCE coding system. The effectiveness of the coding system was ascertained, although the subjects of this investigation were university students, not VCE students. At the same time, strategies used by students to correct coded errors were investigated. Investigation of error correction strategies gives us insight into ways of improving the coding system. While abundant research has been conducted on error correction in English as a Second Language (ESL) and English as a Foreign Language (EFL), studies of error correction in Japanese as a foreign language are rare (Takeuchi, 1996; Hatta et al., 1997; Ishibashi, 2000). Much research has been conducted on effective correction methods in ESL and EFL, but there is no agreement among researchers on the most effective method.

APPENDIX E.01- Summary Writing Test 1

FLED 104

SUMMARY WRITING 1

Time: 120 minutes

Article: Gray, J. (1998). The language learner as teacher: the use of interactive diaries in teacher training. *ELT Journal* 52/1: 29-57.

Read the article carefully and following academic conventions write a summary of at least 250 words (about half a page).

Bear in mind that your summary should meet the following three principal requirements presented in “Academic Writing for Graduate Students” (Swales & Feak):

1. Offer *a balanced coverage* of the original.
2. Present the source material in a *neutral fashion*.
3. *Condense* the source material and write *in your own words*.

You may take notes or annotate your text as you wish. Note that your summary will be graded on content (30 %), organization (20%), vocabulary (20%), language use (25%) and mechanics (5%).

APPENDIX E.02- Summary Writing Test 2

FLED 104

SUMMARY WRITING 2

Time: 120 minutes

Article: Cabrera, M. P and Martinez, P.B. (2001). The effects of repetition, comprehension checks, and gestures, on primary school children in an EFL situation. *ELT Journal* 55/3: 281-288.

Read the article carefully and following academic conventions write a summary of at least 250 words (about half a page).

Bear in mind that your summary should meet the following three principal requirements presented in “Academic Writing for Graduate Students” (Swales & Feak):

4. Offer *a balanced coverage* of the original.
5. Present the source material in a *neutral fashion*.
6. *Condense* the source material and write *in your own words*.

You may take notes or annotate your text as you wish. Note that your summary will be graded on content (30 %), organization (20%), vocabulary (20%), language use (25%) and mechanics (5%).

APPENDIX E.03- Summary Writing Test 3

FLED 104

SUMMARY WRITING 3

Time: 120 minutes

Article: Creswell, A. (2000). Self-monitoring in student writing: developing learner responsibility. *ELT Journal* 54/3: 235-244.

Read the article carefully and following academic conventions write a summary of at least 250 words (about half a page).

Bear in mind that your summary should meet the following three principal requirements presented in “Academic Writing for Graduate Students” (Swales & Feak):

7. Offer *a balanced coverage* of the original.
8. Present the source material in a *neutral fashion*.
9. *Condense* the source material and write *in your own words*.

You may take notes or annotate your text as you wish. Note that your summary will be graded on content (30 %), organization (20%), vocabulary (20%), language use (25%) and mechanics (5%).

APPENDIX F- Mark Scheme Used for the Summary Writing Tests

ESL COMPOSITION PROFILE (Jacobs, et al: 1981)

SCORE	LEVEL	CRITERIA
CONTENT	30-27	EXCELLENT TO VERY GOOD: knowledgeable*substantive*thorough development of thesis*relevant to assigned topic
	26-22	GOOD TO AVERAGE: some knowledge of subject*adequate range*limited development of thesis*mostly relevant to topic, but lacks detail
	21-17	FAIR TO POOR: limited knowledge of subject*little substance*inadequate development of topic
	16-13	VERY POOR: does not show knowledge of subject-non-substantive*not pertinent*OR not enough to evaluate
ORGANIZATION	20-18	EXCELLENT TO VERY GOOD: fluent expression*ideas clearly stated/supported*succinct*well-organized*logical sequencing*cohesive
	17-14	GOOD TO AVERAGE: somewhat choppy*loosely organized but main ideas stand out*limited support*logical but incomplete sequencing
	13-10	FAIR TO POOR: non-fluent*ideas confused or disconnected*lacks logical sequencing and development
	9-7	VERY POOR: does not communicate*no organization*OR not enough to evaluate
VOCABULARY	20-18	EXCELLENT TO VERY GOOD: sophisticated range*effective word/idiom choice and usage*word form mastery*appropriate register
	17-14	GOOD TO AVERAGE:adequate range*occasional errors of word/idiom form, choice, usage but *meaning not obscured*
	13-10	FAIR TO POOR: limited range* frequent errors of word/idiom form, choice, usage* *meaning confused or obscured*
	9-7	VERY POOR: essentially translation*little knowledge of English vocabulary, idioms, word form* OR not enough to evaluate
LANGUAGE USE	25-22	EXCELLENT TO VERY GOOD: effectice complex constructions*few errors of agreement, tense, number, word order/function, articles, pronouns, prepositions
	21-18	GOOD TO AVERAGE: effective but simple constructions*minor problems in complex constructions* several errors of agreement, tense, number, word order/function, articles, pronouns, prepositions but *meaning seldom obscured*
	17-11	FAIR TO POOR: major problems in simple/complex constructions*frequent errors of negation, agreement, tense, number, word order/function, articles, pronouns, prepositions and/or fragments, run-ons, deletions* *meaning confused or obscured*
	10-5	VERY POOR: virtually no mastery of sentence construction rules*dominated by errors*does not communicate* OR not enough to evaluate
MECHANICS	5	EXCELLENT TO VERY GOOD: demonstrates mastery of conventions*few errors of spelling, punctuation, capitalization, paragraphing
	4	GOOD TO AVERAGE: occasional errors of spelling, punctuation, capitalization, paragraphing but *meaning not obscured*
	3	FAIR TO POOR: frequent errors of spelling, punctuation, capitalization, paragraphing*poor handwriting* *meaning confused or obscured*
	2	VERY POOR: no mastery of conventions*dominated by errors of spelling, punctuation, capitalization, paragraphing*handwriting illegible* OR not enough to evaluate

APPENDIX G- Grading Rubric Used for the Research Paper Proposal

FLED 104 FINAL PROJECT GRADING RUBRIC

Name:

Literature Review (50)	Student establishes a research territory by introducing and reviewing items of previous research in the area (at least 4 primary sources). Primary and secondary sources are coherently summarized and synthesized.	4	8	12	16	20
	Student establishes a gap in the previous research by raising a question about it or extending previous knowledge in some way.	2	4	6	8	10
	Student occupies the gap by outlining purposes or stating the nature of the present research.	2	4	6	8	10
	Student defines key terms to be used in the study constitutively and operationally.	2	4	6	8	10
Methodology (10)	Student describes the participants (characteristics, number, selection criteria), the instruments (description of instruments with samples attached) and the data collection procedure.	2	4	6	8	10
Use of academic language and vocabulary (30)	Student competently uses grammatical structures and skeletal phrases marking rhetorical patterns and lexico-grammatical collocations. The paper is characterized by written academic style.	4	8	12	16	20
	The student effectively uses complex constructions, with few errors of agreement, tense, number, word order/function, articles, pronouns and prepositions.	2	4	6	8	10
Mechanics (10)	The student demonstrates mastery of academic conventions (APA style) with few errors of spelling, punctuation, capitilization, paragraphing.	2	4	6	8	10

APPENDIX H – Self-evaluation Questionnaire

Name:

This questionnaire is designed to help you and your instructor to understand the ways in which you feel about research articles and research paper introductions. For each of the specific statements below, place an 'X' in the cell that most accurately describes you. Your honest responses will give your instructor valuable information.

Scale:

____ Strongly disagree ____ Disagree ____ Not sure ____Agree ____ Strongly agree
(1) (2) (3) (4) (5)

PART I
In writing a summary of a journal article, I can __

	1	2	3	4	5
1. follow both the main points and the important details of the article I am to summarize.					
2. condense the source material.					
3. offer a balanced coverage of the source material.					
4. present the source material in a neutral fashion.					
5. present the source material in my own words with proper paraphrasing.					
6. present the material with effective complex sentence constructions with few errors in grammar.					
7. present the material with a sophisticated range of words/phrases typically used in academic writing.					
8. show mastery of the mechanics (spelling, punctuation, etc.) of writing.					

PART II
While reading a research article, I can follow where the author __

	1	2	3	4	5
9. shows that the general research area is important, interesting or relevant					
10. introduces and reviews items of previous research in the area.					
11. indicates a gap in the previous research or raising a question about it.					
12. outlines purposes or states the nature of the present research.					

PART III
In writing a research paper introduction, I can ___

	1	2	3	4	5
13. show that the general research area is important, interesting or relevant					
14. introduce and review items of previous research in the area.					
15. indicate a gap in the previous research or raise a question about it.					
16. outline purposes or state the nature of the present research.					

Any comments you would like to make:

APPENDIX I – Semi-structured Interview Questions

PART I

1) What is your overall impression of the lab sessions? Please comment on the positive and negative aspects.
2) What, in your opinion, were your weaknesses and strengths in using academic writing conventions (those of the research article moves) at the beginning of the semester?
3) What, in your opinion, are your weaknesses and strengths now in using these conventions?

PART II

1) How do you think the lab sessions contributed to your English?
2) What do you think was the main goal of the lab sessions?
3) In what way(s) do you feel the tasks you did during the lab sessions serve this purpose?
4) In your opinion, was the corpus of 14 research articles and the tool (PDF files/. concordancing) you used to retrieve sample language features helpful in reaching the stated objectives of the lessons?

PROBE

a) What problems did you have in using the tool?
b) What were its advantages?/What were you pleased with?
c) Were you pleased with the way you viewed/studied the texts? (i.e. mutilated lines vs. in context)
d) Do you think that teachers and/or learners may profit from using PDF files/concordancing?

5) In the future, would you consider consulting/or using PDF files/ concordancing, and if yes in which particular areas and how exactly?

PART III

6. Once again think back on your lab sessions and comment on

a) the assistance you were provided
b) your learning style

PART IV

Based on your observations of the articles you have studied, tell us in what three/four most striking ways does academic English differ from general English?

PART VI

Is there anything you would like to add?

APPENDIX J – Feedback on the Second Summary Writing Exam

FLED 104 LAB SESSION
MAY 2, 2005

General issues

A summary of an article

1) should initially refer to the source and the main idea (see Swales & Feak , Unit 5, p.117)
2) is not a narration of the experiment reported in the article
3) does not have to include everything so try to be selective and condense the important information.
4) does not have to review the literature reviewed in the article so try to express how previous research is related

Language issues

1) listen the tale B (Gr) → listen to tale B

2) found out (informal) → found that (see Swales & Feak , Unit 1, pp. 15-17

3) ; → punctuation (see Swales & Feak , Unit 1, p. 22)

Check to see how the following words are used in your corpus of articles

a) RESEARCH
b) STUDY
c) PAPER
d) ARTICLE
e) RESULT (S)
f) EXPERIMENT
g) SUBJECTS/PARTICIPANTS

Check to see what reporting verbs are used in your corpus of articles

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