Integrating Corpus Linguistics in Second Language Vocabulary Acquisition



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Abstract

Corpus linguistics has been used for over three decades in language teaching but not until now has it become a mainstream approach to language learning in the classroom. Thus, this thesis explores how the use of corpora can be successfully integrated into the English Foreign Language classroom, specifically in the Saudi classroom context. The integration is explored through two studies. Study One addresses the learners' actual use of corpora in the classroom for learning general verbs patterns. General verbs patterns are selected through a multi-level approach which consists of a corpus-based approach as a first level, a phraseological approach as a second level and a pedagogical approach as a third level. The study relies on data collected from 51 participants who were at the intermediate level studying general English in the foundation year. The study ran for five weeks and included three training sessions, in which the learners were trained in how to use the corpus resource and how to read and analyse concordance lines and two testing sessions. The participants were tracked via software tracker in both training and testing sessions. The data were collected through tracking logs, activity sheets, reflective forms and interviews. The findings of Study One show that the intermediate-level learners were able to use the corpus resource in the same way as they had been trained, which indicates that the training was successful. The learners were also able to identify general verbs patterns through the use of concordance lines. Most participants had a positive attitude towards the use of corpora in the classroom besides identifying a few difficulties related to the use of corpora.

Study Two investigates teachers' attitudes towards the use of corpora in the classroom which included 56 in-service teachers who attended a training course on the uses of corpora in the classroom. The data collected included questionnaires (pre-course and post-course questionnaires) and interviews. The findings show that the questionnaires had a good reliability value and the teachers' attitudes were moderately positive towards the use of corpora in the classroom. In addition, Study Two finds that there are some factors that seem to influence teachers' attitudes, such as the training course, the level of computer literacy and the teachers' perceptions of their role and learners' roles within the communicative approach. The interviews constitute an in-

depth investigation of teachers' views about the use of corpora in the classroom by listing possible factors that facilitate or hinder the implementation of corpora in everyday teaching practice. Through the discussion of these findings from Study One and Study Two, a full integration of corpus linguistics into the Saudi classroom is possible taking into consideration the hindrances. These difficulties can be overcome through the offered proposal for implementing the use of corpora in the classroom.

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Dedication

My love and prayers are dedicated to my father, a man who valued education and never thought twice when it came to investing in his children's education. I am sad he passed away during the course of this study, May his soul rest in peace. For the first person who believed in me, my dad, I dedicate this thesis.

Contents

Abstract ... **1**
Acknowledgements ... **3**
Dedication ... **4**
Contents ... **5**
List of Tables ... **9**
List of Figures ... **11**
Introduction ... **12**
I. Background to the thesis ... 12
II. Aim of the thesis ... 15
III. Overview of the thesis ... 16
PART ONE: Theoretical Background ... **18**
Chapter 1: Corpus Linguistics and Language Teaching ... **19**
1.1. Corpus linguistics and its contributions to second language pedagogy ... 19
1.2. Data-driven learning ... 20
1.2.1. The nature of the DDL approach ... 21
1.2.2. Learners ... 21
1.2.3. Teachers ... 22
1.2.4. Resources (DDL and learning materials) ... 23
1.3. Language learning theories underpinning the data-driven learning approach ... 23
1.3.1. Sociocultural theory and the data-driven learning approach ... 24
1.3.2. The noticing hypothesis and data-driven learning ... 26
1.4. Corpus-based studies in language teaching ... 27
1.4.1. Perceptions and attitudes towards the use of corpora in the classroom ... 27
1.4.2. Evaluations of corpus-based approaches in the classroom ... 34
1.4.3. Measuring the effectiveness of corpora use in learning ... 40
1.4.4. Using tracking logs for corpus consultation in the classroom ... 48
1.5. Corpora and Teacher Education ... 51
1.5.1. Corpora and pre-service teachers ... 52
1.5.2. Corpora and in-service teachers ... 61
Chapter 2: General verbs and corpus linguistics ... **66**
2.1. Corpus linguistics models to the description of GVs patterns ... 68
2.1.1. The idiom principle ... 68
2.1.2. Pattern Grammar ... 69
2.1.3. General verbs patterns ... 71
2.2. Descriptions of GVs patterns through corpus-based studies ... 73
2.2.1. Syntactic and semantic studies of GVs patterns ... 73
2.2.2. Comparative and cross-linguistic studies of GVs patterns ... 78
2.3. The use of GVs patterns in the classroom ... 80
PART TWO: Study One ... **85**
Chapter Three: Selection Criteria for General Verbs ... **86**
3.1. Definition of GVs ... 86
3.2. Operationalisation of GVs in the classroom ... 88
3.3. Multi-level approach ... 92
3.3.1. Previous classifications of GVs ... 92
3.3.2. First-level (corpus-based approach) ... 95
3.3.3. Second-level analysis (phraseological approach) ... 102
3.3.4. Third-level analysis (pedagogical approach) ... 115
3.3.5. Final list of *make* ... 125

Chapter Four: Research Methodology 127
4.1. Research questions 127
4.2. Participants 127
4.3. Design 129
4.4. Materials 129
4.4.1. Reading concordances procedure 129
4.4.2. Training sessions 132
4.4.3. Testing sessions 134
4.4.4. The software 135
4.5. Piloted software 136
4.6. Data Collection 137
4.6.1. Tracking logs 138
4.6.2. Tasks 139
4.6.3. Reflective form 139
4.6.4. Interviews 139
4.7. Procedures 140
4.8. Data Analysis 141
4.8.1. Scoring data 143
Chapter Five: The Results and Discussion 149
5.1. Exploring the learning process of the DDL approach in learning GVs patterns 149
5.2. Examining the relationship between DDL use and the successful completion of the activities 168
5.3. The ability to use a computer and its effect on the use of the DDL approach in the classroom 172
5.4. Participants' overall evaluations of the use of the DDL approach and the corpus resource in the classroom 174
5.5. Discussion 180
5.5.1. Independent use of the DDL approach 182
5.5.2. The participants' use of the DDL approach and the successful completion of tasks 186
5.5.3. Computer skills and attitudes towards corpus use in the classroom 188
5.5.4. The participants' overall evaluations of the use of the corpus approach/corpus recourse in the language classroom 189
PART THREE: Study Two 194
Chapter Six: Specific Theoretical Background 197
6.1. Factors affecting teachers' attitudes towards corpus use in classroom 198
6.1.1. Demographic information 198
6.1.2. Authentic materials 201
6.1.3. Computer skills and attitudes 203
6.1.4. Communicative approach 203
6.1.5. Course evaluation 204
Chapter Seven: Research Methodology 205
7.1. The overall design and research questions 205
7.2. Participants 206
7.3. The materials for introductory training course 208
7.3.1. Course content 208
7.3.2. Learning objectives and outcomes 208
7.3.3. Course structure 209
7.4. Questionnaire design 211
7.4.1. Conceptualisation 211

7.4.2. Procedure for questionnaire development 212
7.4.3. Small-scale exploratory interviews 214
7.5. Interviews 226
7.5.1. Sampling strategy 227
7.6. Procedures 228
7.7. Data Analysis 229
7.7.1. Data scoring 229
7.7.2. Reliability of items 231
Chapter Eight: Quantitative results and discussion 239
8.1. Teachers' attitudes towards the use of corpora in the classroom 239
8.1.2. Analysis of attitudes towards the uses of corpora in the classroom (sub-scales) 240
8.2. Teachers' attitudes towards the use of corpus-approach for teaching GVs 241
8.3. Factors affecting teachers' attitudes towards the use of corpora in the classroom 242
8.4. Discussion 244
8.4.1. Teachers' attitudes towards the use of corpora in the classroom 244
8.4.2. Teachers' attitudes towards the use of the corpus approach for teaching GVs 245
8.4.3. Factors affecting teachers' attitudes towards the use of corpora in the classroom 246
Chapter Nine: Qualitative Results and Discussion 249
9.1. Open-ended questionnaire 249
9.1.1. Analysis of qualitative data on the uses of corpora in the classroom 249
9.1.2. Analysis of qualitative data on the introductory course 253
9.2. Teachers' Interviews 254
9.2.1. General attitude towards the uses of corpora in the classroom 255
9.2.2. The influence of the introductory course on the teachers' attitudes 261
9.2.3. The factors that facilitate or hinder corpora implementation 262
General Conclusion 273
I. Summary of the Findings 274
Study One 274
Study Two 276
II. Implications and Recommendations 278
Proposal for Implementing Corpora in the Classroom 281
III. Limitations and Future Research 283
References 287
Appendices 305
Appendix 1: GVs patterns after I applied the multi-model approach 305
Make pattern 305
Have pattern 307
Do pattern 308
Take pattern 311
Get pattern 313
Give pattern 315
Appendix 2.A. Rating tasks instructions for Native speaker 318
Appendix 2.B. Rating tasks instructions for Non-native speaker 320
Appendix 3.A. Introductory session 321
Session one (introductory session) 321
Appendix 3.B. Training sessions 330
Session two 330

Appendix 3.C. Testing sessions 340
Session four 340
Appendix 4. Reflective form (Study One) 348
Appendix 5: Interview guide (Study One) 350
Appendix 5.A. Interviews transcriptions (Study One) 351
Appendix 6: Hand-out of the introductory course (Study Two) 352
Session one: Introductory course on corpora and language teaching 352
Session two: investigating lexical patterns using AntConc 359
Appendix 7: The questionnaire (pre- and post-) (Study Two) 369
Appendix 8: A sample of the analysis conducted on one of the open-ended questions in the questionnaire (Study Two) 382
Appendix 9: Interview guide questions (Study Two) 383
Appendix 10: Interview transcriptions (Study Two) 385
Appendix 10.A. Hafya interview (in-service teacher, exploratory interviews) .. 385
Appendix 10.B. Ella interview (in-service teacher, post questionnaire interviews) 385

List of Tables

Table 1. *Comparison of non-corpus and corpus approaches in investigating general verbs structure* .67
Table 2. *Previous classifications of GVs in the literature* 92
Table 3. *GVs' ranking from the BNC (written discourse)* 94
Table 4. *Collocates of* make *in BNC according to log-likelihood measure under no restriction and span of +1* 98
Table 5. *Collocates of* make *in the BNC according to log-likelihood measure under noun restriction and span of +1* 100
Table 6. *Classification of collocations* 103
Table 7. *Classification of* make *pattern according to restrictedness criterion* 109
Table 8. *Cowie's (1991) categorisation of the semantic transparency of collocations (Adopted from Nesselhauf, 2005, p. 14)* 111
Table 9. *Classification of* make *pattern according to transparency criterion* 113
Table 10. *Difficulty of collocation based on Nesselhauf (2005)* 118
Table 11. *First choice in the third-level: Fully restricted patterns* 122
Table 12. *Second pedagogical choice in the third-level: Fully transparent patterns* 123
Table 13. *Application of Restrictedness and transparency on* make *pattern* 124
Table 14. *Third pedagogical choice in the third-level: Incongruent patterns* 124
Table 15. *Final list for* make 126
Table 16. *GVs patterns featured in training and testing session* 131
Table 17. *Variables of the tracking logs* 144
Table 18. *Variables of the tasks* 145
Table 19. *Variables of the reflective form* 146
Table 20. *Means (M) and standard deviations (SD) of the process during each stage and for each session* 150
Table 21. *Means, standard deviation, and median values of each step according to session type* 151
Table 22. *Pairwise comparison values* 152
Table 23. *The percentage of participant completion of all steps for each verb (all sessions)* 153
Table 24. *Attempts to download the data file* 160
Table 25. *Attempts to use the wildcard ** 160
Table 26. *Descriptive statistics of time spent on each verb and on each session* 161
Table 27. *Pairwise comparison values for the time spent on each session* 162
Table 28. *Results of paired t-tests and descriptive statistics for the time spent on* make, take, *and* get 163
Table 29. *The overall time spent on each step for each verb per session* 164

Table 30. *Results of paired T-tests and descriptive statistics for the time spent on the 'type' and 'start' steps* 167
Table 31. *Results of paired T-tests and descriptive statistics for the time spent on the 'sort' and 'R1' steps* 167
Table 32. *Means and standard deviations of the activity scores in both testing sessions* 168
Table 33. *The percentage of participants successfully completing each activity* 170
Table 34. *Correlation between activity scores, time spent and process scores for both testing sessions* 172
Table 35. *The emerged themes from the qualitative data (reflective form)* 175
Table 36. *The course units and the topics covered* 210
Table 37. *The steps used during the second phase of the generic approach, pre-coding and coding* 218
Table 38. *Variables of the questionnaire* 229
Table 39. *Questionnaire factors* 232
Table 40. *Description of each factor* 234
Table 41. *Pearson correlation between the teacher attitude towards corpora in the classroom and the three factors of general computer literacy, the communicative approach, and use of authentic materials* 240
Table 42. *Pearson correlations among the three factors of general computer literacy, the communicative approach, and use of authentic materials* 243

List of Figures

Figure 1. The mediate nature of learner and corpus resource 25
Figure 2. Screenshot of participant's computer screen 138
Figure 3. Textual log of participant 138
Figure 4. Pairwise comparison of the followed processes during the four sessions 152
Figure 5. The screenshot taken of Participant 43's work 154
Figure 6. Means of 'type' step across the four sessions 156
Figure 7. Means of 'start' step across the four sessions 157
Figure 8. Means of 'sort' step across the four sessions 158
Figure 9. Means of 'R1' step across the four sessions 159

Introduction

Corpus linguistics (CL) has been used in language teaching (LT) for over three decades. More specifically, the use of CL in LT dates back to the 1980s when it was pioneered by Sinclair (1987) with his work, the COBUILD Project, and Johns (1986) with his Data-Driven Learning (DDL) approach. Since then, many researchers have acknowledged and identified various corpus benefits in teaching and learning a language. And yet, despite the developments in CL and the potential for its applications in language pedagogy, Römer (2006, p. 121) declares that it still has not "fully arrived" to language pedagogy. Moreover, as she notices, there is still "hesitation" in using corpus approaches in teaching, regardless of the wide recognition of corpus benefits; in other words, there is "strong resistance" from teachers, students and even material designers towards CL (Römer, p. 122). In addition, there is "little evidence" that corpora are used as alternatives to textbooks and traditional resources, such as dictionaries (Chambers, 2005, p. 111). The state of corpora use has not changed significantly since Chambers's (2005) article, as has been emphasised by several later researchers, including Römer (2011), Boulton (2012), Hughes (2012), Boulton & Pérez-Paredes (2014), Leńko-Szymańska & Boulton (2015) and Vyatkina (2016a).

I. Background to the thesis

Vyatkina (2013, p. 45) argues that "the fact that corpora are treasure troves of language does not necessarily make them easy to use for instruction purposes", which, to some extent, is true. Although much published research investigates learners' evaluations of corpora and their performance showing improvements in learners' performance and learners' positive attitudes (Vyatkina, 2016a; Smart, 2014; Yoon & Hirvela, 2004), implementing this approach in daily teaching is still a distant goal (see Frankenberg-Garcia, 2012; Leńko-Szymańska & Boulton, 2015). More specifically, implementing the DDL approach in the Saudi context seems an even more distant possibility with the lack of published studies that explore the use of corpora in teaching English in the Saudi context. Alongside this lack of research, there is also lack of knowledge of CL despite the encouragement of the Ministry of Higher

Education to develop and improve the English curriculum and teaching methodology. Many studies have reported that the Saudi students are not exposed enough to the English language which leads to poor achievement when they enrol in their undergraduate studies (Almulhim, 2001). Hence, a major development took place to improve teaching English which was the implementation of the Preparatory Year Programme (PYP). The PYP aims to reduce the gap between schools and undergraduate programs where students study English intensively (15 hours per week) for one year as a mandatory subject. However, teaching English in Saudi Arabia is still "full of difficulties" as Al-Nasser declares (2015, p. 1616), which according to him is caused by many factors such as the lack of using information communication technology in teaching, the lack of teacher training whether content training (linguistics) or pedagogical training (teaching methodologies), the use of Grammar Translation method, in addition to the lack of authentic materials and the over-dependence on textbooks. These factors are related to the possible bureaucratic constraints to the DDL approach in this context. In order to understand these constraints, the following paragraph briefly introduces the educational system in Saudi Arabia.

The educational system in Saudi Arabia is very prescriptive where the teachers have to follow closely imposed curriculum and guidelines which could have an impact on the teachers' attitude towards the use of corpora in the classroom. According to Shah (2014) the leadership style adopted at Saudi Arabian universities have influence on the teaching environment and in particular on teachers attitudes. The distribution of leadership in Saudi universities is top-down (hierarchal style) as Shah mentioned (2014). This style starts from deans and vice-deans who have the final saying in approving or rejecting certain plans, then "the middle managers", the academic coordinators who have a list of roles related to teacher evaluation, quality assurance, professional development, training services, and developing a range of leadership and management provisions, as well as learning and teaching development and support, and finally the teachers who have a more limited roles within the classroom (Shah, 2014, p. 11). The teachers in this context have a very restricted role to the classroom which is controlled and directed by the academic coordinators (policy-makers). From my own experience the policy-makers have the absolute power to include or exclude

any teaching methods or materials that might be the reason why teachers were not certain that the policy makers will embrace this innovative methodology (corpora). To this end, this thesis aims to provide a holistic view for implementing the use of corpora[1] in the classroom.

The first step to realising this holistic view is to target learners and teachers, all equally important elements in the classroom. The second step is to target the learners by investigating their actual use of the DDL approach via tracking software (Study One). To be able to conduct the second step, an additional step is necessary, which is selecting the target items, general verbs, according to a systematic multi-level approach (also part of Study One, Chapter 3). The next step is to examine in-service teachers' attitudes towards the uses of corpora for language teaching (Study Two). The view is holistic because it explains the reluctance to use corpora in the Saudi classroom context by clarifying the interconnection of the important elements (language content, learner and teacher). This holistic view provides insightful results for implementing corpora in language learning and teaching. As stated earlier, building this holistic view is established by attempting to bridge the gaps found between English LT and CL.

There are four main gaps this thesis addresses. First, to the best of my knowledge, there has been no study that attempts to operationalise general verbs (GVs) in the classroom. Operationalising GVs in the classroom involves finding a direct application and putting them to use for teaching purposes. Thus, I conducted a case study on GVs as part of investigating how the DDL approach is used in the classroom. I defined and identified GVs within a corpus-based approach as an operationalisable concept in the classroom (See Chapter 3 for a detailed discussion). I also selected identifiable criteria for using GVs in the English Foreign Language (EFL) context. Second, most research that investigates learners' uses of corpora in the classroom does not provide sufficient training on the use of corpus tools in which the learners receive training before performing tasks with a short introduction about CL (see section 1.4). This leads, in most studies, to statistically insignificant results and

[1] This term refers to the use corpus linguistics in the classroom including the DDL approach and corpus tools also Mukherejee (2004) uses the term corpus-based methods to refer to the use of corpora in the classroom.

less positive attitudes for supporting the DDL approach in the language classroom (e.g., Cresswell, 2007). Third, the absence of utilising direct observation methodologies leads to a shortage of available information regarding learner engagement with corpus-based resources, and learners' independent corpus use. Finally, the role of the teacher in the process of using corpora in the classroom is neglected even though it is an essential step in popularising CL. The teacher plays a transformational role and is the leader of any possible changes in the classroom. The above brief overview hints at how it is possible to integrate the uses of corpora into the Saudi classroom by addressing the existing gaps in the current literature cited in this thesis. The next section spells out the aims of this thesis more explicitly and in greater detail.

II. Aim of the thesis

The overarching goal of this thesis is to examine the possible integration of corpora uses in a foreign language context, specifically the Saudi context. This goal can be fulfilled by addressing the above-mentioned gaps through answering the following research questions:

- First, the initial research question investigates how GVs can be defined and identified within a corpus approach as an operationalisable concept in the classroom. It will be answered through designing a systematic approach for selecting GVs patterns to be used in Study One. The key reasons underlying the selection of GVs patterns are as follows: as an EFL learner and teacher, I am aware of the difficulties encountered by other learners in relation to collocation knowledge, as well as the limited awareness surrounding the importance of learning the target language within a native speaking environment. GVs are not acquired in isolation but rather as collocations; hence, it is necessary to investigate resources, such as a corpus, that facilitate the learning process for these verbs.
- The second research question explores if the intermediate students have learned how to use the DDL approach independently in the language classroom for learning GVs. The question will be addressed by designing

training and testing sessions to track the students' uses of the DDL approach and the corpus resource to investigate whether learners benefit from the training and to provide details of how learners use corpora as individuals. Study One was developed by my personal motivation to contribute to the field of EFL by providing a deeper understanding of the DDL approach, which will enable its wider use for learners at all levels.

- Finally, the third research question investigates the teachers' dispositions towards the use of corpora in the classroom. This question attempts to reduce the gap regarding the lack of research on the role of the teacher in the CL classroom by investigating teachers' attitudes towards the use of corpora in the classroom and providing training course materials for in-service teachers.

III. Overview of the thesis

This thesis aims to provide a bigger picture of the integration of CL into language learning and teaching. The thesis is divided into three parts. Part One discusses the theoretical background, contained in Chapters 1 and 2. Chapter 1 provides a review of the literature associated with the use of corpora in language teaching and learning, starting with an overview of the DDL approach, and its major contribution to the use of corpora in language pedagogy. Chapter 1 also discusses two language learning theories and how they are related to the DDL approach: the sociocultural theory and the noticing hypothesis. Additionally, Chapter 1 also provides a review of empirical studies of the use of corpora with learners from different foci, which include perceptions and attitudes towards the use of corpora in the classroom, evaluations of corpus-based approaches in the classroom, measuring the effectiveness of the use of corpora in learning, and a summary of using tracking logs for corpus consultation in the classroom. Then the chapter reviews the use of corpora in the classroom from the angle of teacher education as well as reviews empirical studies that investigate pre- and in-service teachers. Chapter 2 introduces GVs patterns from CL models (idioms principle and pattern grammar). Also, Chapter 2 states the reasons for selecting GVs in this thesis as well as how they have been investigated from different perspectives.

Part Two consists of three chapters (Chapters 3, 4 and 5) which constitute Study One. Chapter 3 addresses the first research question by discussing the selection criteria of GVs patterns for operationalising them in the classroom through a multi-level approach: the first level is corpus-based, the second is phraseology-based and the third is pedagogy-based. In Chapters 4 and 5, the second research question will be answered. Chapter 4 outlines the research methodology of Study One including the materials, the procedures, data collection and data analysis methods. Then Chapter 5 describes the results (quantitative and qualitative) and discusses these results by linking them to the specific research questions of Study One, which are related to these themes: the learning process of the DDL approach in learning GVs patterns, the relationship between the DDL use and the successful completion of the activities, the ability to use a computer and its effect on the use of corpora in the classroom, and the learners' evaluations of using the DDL approach and corpus resources in the classroom.

Part Three introduces Study Two, which consists of four chapters (Chapters 6, 7, 8 and 9) that address the third research question by targeting the in-service teachers. Chapter 6 outlines the specific theoretical background of Study Two, and Chapter 7 describes the research methodology, including the training course, and the procedures and data analysis methods. Chapters 8 and 9 summarise and discuss the quantitative and qualitative results of Study Two respectively. Both chapters address the specific research questions of Study Two which explore teachers' dispositions towards the uses of corpora in the classroom, attitudes towards the uses of a corpus-approach (DDL) for teaching GVs, and the factors that may influence their attitudes. Finally, the conclusion outlines the summary of the findings of Study One and Study Two, implications for implementing corpora in the classroom, and the limitations of this research and future directions.

PART ONE: Theoretical Background

Although the use of corpora in the classroom is no longer a novel methodology (Pérez-Paredes, 2011), it has not yet reached maturity (Boulton & Pérez-Paredes, 2014). As Boulton and Pérez-Paredes (2014, p. 122) have observed, "the focus is switching from corpus linguistics to language pedagogy", meaning that the focal point is on facilitating the learner's use of corpus resources and approaches rather than justifying the use of corpora in the classroom or mentioning the benefits of CL. In this thesis, Study One (see Part Two) also focuses on the pedagogical aspect by observing the learner's actual use of corpus resources by means of tracking software in the context of a Saudi classroom. Numerous scholars have emphasised that there is a lack of research that provides direct evidence of learners' use of corpus resources in EFL context, particularly Saudi context (see, for example, Hafner & Candlin, 2007; Pérez-Paredes et al., 2011). Although corpora have been acknowledged in language teaching, they are still rarely used by teachers (Leńko-Szymańska, 2014). Thus, Study Two (see Part Three) attempts to address this gap by investigating teachers' attitudes towards the use of corpora in the Saudi classroom.

This first part of the thesis discusses some of the relevant literature. The first chapter addresses the use of CL in language teaching. The first section 1.1. outlines the contribution of CL to language pedagogy and then introduces the data-driven learning (DDL) approach in section 1.2 and the theories underpinning it in section 1.3. Sections 1.4 and 1.5 review empirical studies on the uses of CL in language teaching by analysing two viewpoints: the learner's and the teacher's. The second chapter views GVs from a CL perspective by exploring basic models in CL and then reviewing GVs from two perspectives: descriptions of GVs and the use of GVs in the classroom.

Chapter 1: Corpus Linguistics and Language Teaching

1.1. Corpus linguistics and its contributions to second language pedagogy

One major contribution of CL is its data-driven and empirical description of language. This is based on language in use, whether written or spoken (Biber et al., 1999), which, in turn, enriches our knowledge of that language. This unbiased description of the language has radically changed the design of dictionaries, starting with the influential COBUILD project at Birmingham University (Sinclair, 1987), which was followed by many famous publishers of pedagogical materials (Cobb & Boulton, 2015). This influence on material design extended to include grammar books, such as the *Longman Grammar of Spoken and Written English* (Biber et al., 1999). These reference books are influential because they were designed based on "real usage and frequency data" (Cobb & Boulton, 2015, p. 479). Real usage can be summarised by providing more reliable information on how different aspects of language are used, such as judgment on collocations, frequency, semantic prosody, and pragmatic meaning (Hunston, 2002). There is a consensus that CL is a valuable source of information on actual language use (Chambers & O'Sullivan, 2004). Gavioli (2005) noted that concordance lines can enhance the teacher's ability to gauge difficult or problematic areas, such as synonyms. The use of corpora in teaching and learning can be fruitful because it provides an opportunity for students to interact with real language and allows teachers to manipulate this real language in various ways—for example, to illustrate a variety of registers (Granath, 2009). Learner autonomy is also supported by the independent use of corpora (Chambers, 2005). In addition, corpora may increase teachers' and learners' language awareness and facilitates the development of their skills (Breyer, 2009; Farr, 2008) by providing information related to frequency, distribution across registers, and patterns of target items.

In this regard, it is important to mention that the early use of corpora in the classroom was in the form of the DDL approach (Johns, 1991a). This approach is based on the communicative approach that focuses on teaching languages according to communicative competence rather than performance (Richards & Rodgers, 2014). DDL is known for encouraging a student-centred learning process and fostering

learner autonomy. In addition, Cheng (2012) asserted that this approach can be used to improve explicit and implicit learning, which eventually leads to the improvement of the explicit and implicit acquisition of knowledge. Given the complexity of DDL and its use in the classroom, the following section elaborates on this approach and the reality of its implementation in the EFL context.

1.2. Data-driven learning

DDL emerged as a result of the COBUILD project by Johns (1986), who sought to teach English by exploiting authentic language. DDL can be defined as "the use in the classroom of computer-generated concordances to get students to explore the regularities of patterning in the target language" (Johns & King, 1991, p. iii). At the beginning of his project, Johns prepared teaching materials using a concordance from the Bank of English (a corpus consisting of 4.5 million words of English texts) and printed concordance lists out as hard-copy handouts for use as exercises in the classroom instead of using an online concordancer. However, with the development of computer software, the use of an online corpus in teaching has become easier. To conclude his project, Johns (2002, p. 109) stated that DDL methods are more "effective" in teaching lexis–grammar interfaces, especially collocations. The DDL approach is based on the inductive approach in teaching (Bernardini, 2004), where the students analyse the targeted features with or without teacher's help.

Other researchers have studied the effectiveness of DDL and CL applications and attitudes in language learning and teaching (e.g. Hafner & Candlin, 2007). However, despite an increase in research on corpus consultation, whether direct or indirect, the awareness is still low (Boulton, 2010a; Breyer, 2009). In other words, the awareness of practitioners is still low in recognising the major benefits that corpus-based resources can provide. Although the application of DDL includes many benefits, DDL is still not applied in "ordinary learning practices" (Boulton, 2010a, p. 20). This is due to many factors, including *the nature of the DDL approach*, and its relation with *learners*, *teachers* and *resources*. Therefore, the following sections will discuss each of these factors in detail.

1.2.1. The nature of the DDL approach

DDL is a communicative and task-based learner-centred approach, which fosters autonomy and learning by discovery. Yet, practitioners and researchers have dealt with it with caution, because the large amounts of concordance line data may be difficult to manage for learners. Furthermore, DDL is more useful in specific language areas that employ "fuzzy" knowledge that relates to frequent and typical uses rather than rules, such as synonyms, collocations and colligations (Boulton, 2009a, p. 83). Despite the obstacles in adopting DDL, this approach has been linked with a number of benefits that encourage its use. Firstly, it extracts rules based on language usage, and it presents patterns to explain the exceptions to these rules. Secondly, it sheds light on the importance of frequency when learning rules and forms – something that is absent from traditional learning methods. Thirdly, a potentially highly beneficial aspect of DDL is learning language through different registers. However, DDL challenges the traditional methods of teaching (i.e., rule-based learning) which are preferred by teachers. An important aspect of the DDL approach is the process of learning in which the learners formulate the rules according to the corpus data (authentic materials). This aspect makes the application of DDL is somehow difficult because formulating the rules, especially when coming across typical uses of language such as collocations, leaves the learners with difficulty to comprehend the rules and apply them (Boulton, 2009a, p. 85). To better understand the reality of DDL's implementation in the classroom, it is necessary to examine how this approach affects learners.

1.2.2. Learners

Independence and taking responsibility for learning and searching are at the heart of the DDL approach. As many learners prefer to depend on the teacher as a language expert, some students may resist this approach (Boulton, 2010a). Numerous variables—such as motivation, learning approaches, and confidence in using the resources and performing the tasks—may influence learners' perceptions and attitudes towards the use of the DDL approach in the classroom. This is well documented in a study conducted by O'Sullivan and Chambers (2006), in which lack of confidence is demonstrated to have an impact on learners' attitudes towards corpus consultation with respect to correcting errors in writing assignments. Also, the cultural

backgrounds of learners may affect their attitudes towards DDL and determine how learners perceive this approach. For instance, Sun and Wang (2003) examine the application of the DDL approach (inductive and deductive) in an Asian community (Taiwan) where the teacher is traditionally at the centre of the learning process; they find that teachers state that inductive learning is too time-consuming. As well, Cheng and Dornyei (2007, p. 168) observe that "promoting learner autonomy" is rarely used in the Taiwanese context. Many studies show that motivation can affect the outcomes of DDL. Chambers (2005), Boulton (2009c), and Flowerdew (2015) state that motivation and learning styles strongly influence the results of learner groups. Thus, learners' identities and their individual differences have a significant impact on the types of actions afforded by corpus-based resources. The aforementioned suggests that the DDL approach should be introduced gradually, considering the learner's cultural, motivational and learning style, as well as individual differences. This also indicates that the success of the DDL approach depends significantly on the role of the teacher.

1.2.3. Teachers

Boulton (2009a, p. 91) argues that there are three reasons why teachers avoid adopting the DDL approach. First, teachers may simply not know about it. Second, they know about DDL approach, but they are unwilling to try it. Third, they may try DDL, but eventually reject the approach. Therefore, Römer (2006) suggests facilitating the implementation of CL in LT through increasing the accessibility to corpus resources, and developing as well as disseminating research of pedagogical implications of DDL. Introducing CL applications and the DDL approach in initial teacher training programmes (O'Keeffe & Farr, 2003; Farr, 2008) might also make teachers more willing to experience new procedures and techniques in teaching. In addition to this, corpora can be included in the plan for training the in-service teachers to increase awareness of corpora uses. As Mukehreeje (2004) finds, in-service teachers are able to pick up the benefits of corpora after a short training course such as they can use corpora as a source to correct exams and not depend on native intuition. Also, corpora can be used as a source of authentic examples (Cobb & Boulton, 2015), depending on the teacher's choice of using corpora indirectly or directly in the classroom.

Boulton (2010a, p. 20) emphasises that DDL is "not ordinary practice", but that it should also not be considered "extraordinary". The main threat that teachers see

from the use of the DDL approach in the classroom is that they feel that their authority is "questioned" (Boulton, 2009a. p. 93). Therefore, he suggests that DDL can be integrated with traditional teaching materials and techniques. In line with Boulton, Leńko-Szymańska (2014, p. 261) argues for the need to train and teach in-service and pre-service teachers the use of corpora "explicitly" in language teaching.

1.2.4. Resources (DDL and learning materials)

There is a lack of extensive corpus-informed materials and within the corpus-informed textbooks that do exist, there is a lack of DDL practices included. Boulton (2010a) confirms this after evaluating different corpus-informed materials, eight textbooks, and research publications. For example, the *Touch Stone* course book is entirely corpus informed, with the language and texts formulated in the manner of traditional materials and lacking any DDL materials.

Boulton (2010a) argues that the evident lack of DDL exercises is due to commercial rather than pedagogical reasons. More specifically, as DDL is used mostly at the university level and in learning English for specific purposes (ESP), the demand for DDL-based materials is subsequently lower than in the case of general English courses, which make major publishers reluctant to invest in DDL materials. However, given the many benefits of DDL, its application in the context of general English and at beginner levels will quite likely promote a demand for DDL materials, thus creating a new market and encouraging investment by major publishers (Boulton, 2010a). Incorporating CL into general English teaching courses in the initial teacher training programs can help in transferring their experience to the pre-service teachers who will create a demand among students for DDL materials, compelling the designers of educational materials to create DDL-based materials for learners and teachers.

1.3. Language learning theories underpinning the data-driven learning approach

A close relationship exists between the DDL approach and some second language acquisition (SLA) theories. Both are based on acquiring language as chunks rather than as morphemes or words in isolation. It is clear that the DDL approach supports

learners' autonomy by providing them with an opportunity to control the process of learning. As well, it encourages and stimulates inductive learning strategies in that it is related to sociocultural theory (SCT) by using corpora as mediation tool. Furthermore, DDL by its definition urges learners to notice the similarities and regularities of a pattern through reading many concordance lines, which in turn leads us to the connections between DDL and the noticing hypothesis. Thus, the following sections explore SCT in section 1.3.1 and the noticing hypothesis in section 1.3.2 because of their close relationship to the DDL approach.

1.3.1. Sociocultural theory and the data-driven learning approach

This section explores SCT from the second language learning viewpoint without delving into a broader account of the theory. Interest in applying SCT to language learning has been increasing since 1990 (Mitchell et al., 2013). SCT, which is established based on Vygotsky's (1978) work (Ellis, 2008), views language as "a semiotic tool" (Ellis, 2008, p. 516) and learning as a "social phenomenon" (Villamil & Guerrero, 2006, p. 23). Language is a means to achieve social goals in the sense that it is a tool to transfer our thoughts and provide a means of communication. Based on this view of language, STC coincides most closely with CL theories that focus on meaning rather than form, and communication as the extended lexical unit of meaning (see section 2.1.1). One of the central concepts of SCT is mediation, which is defined as "the process through which humans deploy culturally constructed artefacts, concepts, and activities to regulate (i.e. gain voluntary control over and transform) the material world or their own and each other's social and mental activity" (Lantolf & Thorne, 2006, p. 79). Therefore, learning does not take place solely in the head of the learner but also through contact with the object (corpora), to acquire *the target form of the language*. The learner has to develop or acquire knowledge by employing artefacts and using mediating tools (Ellis, 2008). The artefacts are "fundamentally social in nature" (Ellis, 2008, p. 524), as is the case in this thesis (see Part Two, where the guided inductive use of corpora can be an artefact for the independent use), and the learners use mediated tools to develop their knowledge of GVs patterns. See Figure 1, which was adapted from Lantolf and Thorne (2006, p. 62).

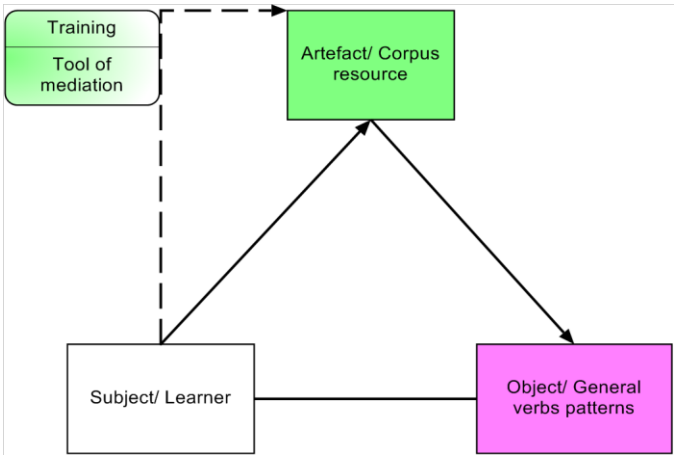


Figure 1. The mediate nature of learner and corpus resource

The learner asserts GVs patterns through mediation tools, which are corpus resources that require social interaction. Because the learner is using corpus tools for the first time, he or she will be provided with training in how to use them as artefacts and mediating tools to acquire new knowledge. This leads to so-called regulation (of the other or the self), which is one form of mediation (Lantolf & Thorne, 2006, p. 199). Regulation basically means gaining voluntary control over the mental functions by developing new knowledge which can be upgraded to what is called internalisation, in which the learner becomes aware of these acquired functions, which leads to more control over them. From the SCT point of view, the use of corpora in the classroom may be called internalisation, by means of which learners move from object/other regulation to self-regulation. First, the learners are trained how to use corpus tools besides how to read and analyse the concordance lines (object/other regulation) and then, once the learners acquire the required skills from training, they are able to independently utilise corpora (self-regulation).

Study One in this thesis shows how internalisation can be achieved through training. During the training sessions implemented in Study One (see section 4.4.2), the learners were directed to key features of GVs patterns until they were able to produce the meanings of the patterns; this is called scaffolding, which is important concept in SCT (Mitchell et al., 2013). Another important concept is the zone of proximal development (ZPD) which is "the site where the social forms of mediation develop" (Lantolf, 2000, p. 16). The ZPD is a concept used for observing how the knowledge was internalised through the use of mediation tools (Lantolf, 2000).

Lantolf and Throne (2006) noted that the ZPD is helpful in education because of its connection to the view of assessment, as it distinguishes what learners can do with assistance and what they can do independently. The ZPD leads to focus on what the learners can do with assistance rather than what they are able to do independently (Ellis, 2008, p. 532). The ZPD refers to potential development, which is learning. In Vygotsky's (1978, p. 86) words, the ZPD refers to "those functions that have not yet matured, but are in the process of maturation". Therefore, once these functions or skills that have been acquired through assistance become autonomous, this will lead to the creation of new zones of development. To this end, training in the use of corpora in the classroom inevitably leads to the internalisation of these new skills and knowledge, which, in turn, lead to the necessary development for the autonomous use of corpora, which can include interaction with the environment (corpus tool) and society (teacher, peers, and corpus data). The reviewed SCT's aims provide evidence of the relative effectiveness of applying this theory to DDL pedagogy.

1.3.2. The noticing hypothesis and data-driven learning

The noticing hypothesis is frequently referred to within DDL because of its close relationship with noticing target patterns through concordance lines (Flowerdew, 2015). According to the noticing hypothesis, the "learner must attend to and notice linguistic features of the input that they are exposed to if those forms are to become intake for learning" (Schmidt, 2012, p. 723). The inductive approach is considered the backbone of DDL, which is dependent solely on the noticing hypothesis. Therefore, learners must pay attention to the repeated patterns to enhance their learning, which is entirely dependent on noticing. Nevertheless, the noticing hypothesis is rarely linked "explicitly" to corpus-based studies (Flowerdew, 2015, p. 20). Three theoretical considerations underlie the noticing hypothesis: consciousness as intention, consciousness as attention, and consciousness as awareness (Schmidt, 1990). Consciousness as intention refers to incidental learning—that is, when students learn without having the intention to learn. Consciousness as attention is what Schmidt (2012) described as "the heart of the matter" (p. 724): learning requires attention, whether intentionally or not. Consciousness as awareness is the highest level of noticing; awareness is raised by the attention that is required for learning. Through many corpus studies (Gaskell & Cobb, 2004; Kennedy & Miceli, 2010; see sections

1.4.2 and 1.4.3), the noticing hypothesis was employed using the guided inductive approach, by means of which noticing is initiated by the teacher, as well as through the inductive approach, by means of which noticing is initiated by the learners. Flowerdew (2015) notes that more empirical research is needed to investigate the effectiveness of SCT and the noticing hypothesis on the application of DDL in the classroom.

1.4. Corpus-based studies in language teaching

The following sections review selections of empirical studies, featuring a variety of research designs and objectives that investigate the use of corpora in the language classroom. They provide a flavour of research in this area and draw attention to the existence of the gaps in the current literature which this thesis addresses. The studies presented here are divided into four main categories according to their main focus: first, perceptions and attitudes towards the use of corpora in the classroom; second, evaluations of corpus-based approaches in the classroom; third, the effectiveness of the use of corpora in learning; and finally, a summary of using tracking logs for corpus consultation in the classroom.

1.4.1. Perceptions and attitudes towards the use of corpora in the classroom

Most research studies that are covered in this review of existing literature that investigates the uses of corpora in the classroom have focused on learners' attitudes and perceptions rather than the actual uses, or how it can be implemented (e.g., Hafner & Candlin, 2007; Yoon & Hirvela, 2004; Chambers & O'Sullivan, 2004; O'Sullivan & Chambers, 2006; Varley, 2009; Geluso & Yamaguchi, 2014; and many others). Nevertheless, these studies provide a significant overview of how learners in different contexts perceive corpora. Although the reviewed studies in this section share the same focus, they are different at many levels: the context of the study, the use of corpus applications in the classroom, the learners' proficiency and the targeted skill. For example, Hafner and Candlin (2007), Yoon and Hirvela (2004), Chambers and O'Sullivan (2004), and O'Sullivan and Chambers (2006) focus on improving the writing skills of learners, whereas Varley (2009) is more concerned with the grammar and Geluso and Yamaguchi (2014) focus on improving learners' fluency.

In a study by Hafner and Candlin (2007), the authors deal with ways of improving writing skills whilst covering three different topics: learners' attitudes towards corpus tools, learners' perceptions of DDL tasks, and learners' ability to observe patterns. The article focuses specifically on a connection between learners' habits of using the internet for searching and their confidence in using corpus tools. Besides the specialised corpus, online dictionaries were also connected to the concordancer. In the study, learners used online corpus tools to practice professional writing (in a legal context) whilst being engaged in a professional legal training course where the corpus tools were used to help them in improving their writing. Training resources in the forms of help files (online demonstration) and face to face tutorials were provided to increase learners' familiarity with the corpus tools and their uses.

The study of Hafner and Candlin (2007) is significant given its extensive use of tracking techniques. In their study, the tracker software tracks the individual's interaction with the corpus by connecting to the individual's account. Two types of data were collected and processed: large-scale and small-scale data. The former contains information from tracking logs and questionnaires and was obtained during the first phase of the project from about 150 students. Throughout the second phase, the small-scale data was obtained from four participants and then five participants by using semi-structured and focused group interviews together with examples of learners' writings and screen records.

The tracker shows how the learners' uses of the concordancer increased from 21% in the first year to 40% in the second year, which reflects the learners' growing awareness of the concordancer. It should be clarified that the authors provided a one hour hands-on training session (in the second year) which may have influenced the reported increase in the students' awareness. The tracking logs give an insight into the types of activities participants engaged with during the use of the corpus resources. There are two types of responses to the tasks that use corpus tools: model-based and aiding. Regarding the first type, the learner uses the tools to search through the full document, which is similar to the product approach, instead of searching for a particular lexical phrase. In the second type, the learners search the corpus for a particular form or phrase. The second group used the aiding type more than the first group; however, they stopped using the aiding type and replaced it with the model-

based type after two months of finishing the hands-on training sessions, which emphasised the need for on-hands training.

The learners' attitudes were two types: "adopters" and "non-adopters" (Hafner & Candlin, 2007, p. 314). The adopters use the concordancer and intend to use it later as well. The non-adopters do not prefer using it and they can be further divided into two categories: one with a preference in using other web-based tools and the second type without a specific preference for any tool. The learners who adopted the corpus tool as a means of improving their writing found it helpful in providing needed assistance. It may be argued that using a corpus tool in improving ESP writing entails benefits such as promoting discovery learning that encourages incidental learning and supports the communicative environment for authentic learning as mentioned by Leech (1997) and Bernardini (2004). In light of this review, the tracking methodology seems important during the use of corpora in the classroom to monitor the actual learning and to figure out how learners use corpora (i.e., adopter or non-adopter).

Another study that focuses on writing skills and includes a 2-level sample is one conducted by Yoon and Hirvela (2004). The study's importance is based on its positive results regarding the use of corpus consultation for both intermediate and advanced learners. In addition, the study emphasises the importance of familiarising learners with the corpus before using it in the classroom, regardless of their proficiency level, as this ultimately leads to an improvement of learners' attitudes. The study examines learners' attitudes and perceptions of using corpus tools in an L2 writing class. The use of corpus tools was gradually integrated into writing classes in the case of both groups.

The learners used the COBUILD corpus as a reference tool, first in a guided manner and then in a more independent, unguided way. During the guided sessions, the teacher provided learners with an explanation of how to use corpus tools and the benefits of using them for the potential improvement in writing skills, including grammar and vocabulary. In addition, the teacher trained the learners in different techniques of using corpus tools, such as prototypes search, a frequency list, and collocation. The learners were asked to identify problems in their writing, then to search the corpus for possible solutions. In another instance, it was the teacher who identified issues in students' writing. This served as a form of feedback for students

who then used this feedback to search through the corpus. Thus, these tasks utilise a problem-solving approach, which is usually more motivating for students. The researchers distributed questionnaires in both groups in order to obtain students' perceptions regarding the corpus pedagogy's strengths and weaknesses. They also conducted semi-structured interviews.

The study's findings indicate improvement of both groups of students' writing skills after the corpus consultation. Yoon and Hirvela (2004) show that the learners' levels do not have a significant effect on learners' perceptions and attitudes towards the use of corpus, as the lack of familiarity and training can do. The significance of this study is that the intermediate level students displayed a more positive attitude than the students at the advanced level, which clearly contradicts the arguments of other researchers, such as Granath (2009) and Turnbull and Burston (1998), who indicate that the uses of corpora are more suitable for advanced learners than lower or intermediate learners.

I think that the approach chosen by Yoon and Hirvela in their study with respect to designing the tasks is not suitable for all learners, which might explain the positive attitudes from students at the intermediate level and less positive attitudes from students at the advanced level. Yet, whilst it is possible to claim the tasks were not designed in the most appropriate way, it is erroneous to assume that the motivation had no impact on learners' attitudes. In other words, the intermediate level students were fascinated by the information they received, as they perceived it as something new and helpful, whereas the more advanced students were less motivated because the type of information offered by the corpus tools was not new. This means that even if they made a mistake, this was not due to their unfamiliarity with the specific word or its form. Furthermore, if the tasks were more related to their major or designed according to their needs, this might have positively affected their motivation and subsequently changed their attitudes towards the use of corpus in the classroom. It should be clarified at this point that both groups used the same corpus materials and techniques.

Similar to the two above-mentioned studies, two research projects by Chambers and O'Sullivan (2004) and O'Sullivan and Chambers (2006) focus on improving students' writing through the use of corpus tools. These projects also share

the same structure of the research sample as the study by Yoon and Hirvela (2004) by considering two levels of proficiency: intermediate and advanced. The first phase (Chambers & O'Sullivan, 2004) involved eight graduate learners who received training in using concordance tools. After the learners submitted their essays, the researchers underlined errors for learners to correct them using the corpus consultation. The findings show improvements in error correction that ensued from this consultation. In the second phase (O'Sullivan & Chambers, 2006), the sample consisted of 14 undergraduate students who underwent the same procedure as the participants in the first phase. Similar to the first phase, these students also experienced improvements in error correction.

However, there are differences between the two phases. In the first phase, the graduate learners showed more willingness to continue using the corpus later on, as they thought that their writing had improved because of the corpus; on the other hand, participants in the second phase felt less positive regarding improvements in their writing, and they were not sure if they would use a corpus in the future. This unwillingness may be explained by the chosen approach in the study in which learners had to correct their errors by themselves after having them identified by the teacher. Despite undertaking training sessions, the learners needed guided corpus consultation, especially at the intermediate level, since they did not have enough knowledge and confidence to correct their errors by themselves. This was true especially for errors related to a wrong word choice, as well as students' lack of knowledge regarding corpus use which they tended to perceive as an unfamiliar learning tool. The used approach in the study can be more significant if the learners are familiarised with corpus tools, and the guided consultation is necessary if the tools are used for the first time.

The training period differed between the two studies: in the 2004 study, two hours of training was provided for three weeks (one-hour lecture, one hour in computer labs); whereas the 2006 study included three hours of training for three weeks (one-hour lecture, two hours in computer labs). Furthermore, both studies suffer from a specific drawback, which is the unguided consultation that was applied in both phases of the whole research project. It seems that this did not affect learners at the advanced level (first phase), but the use of the unguided consultation had an

impact on the students at the intermediate level, as shown by the unwillingness to use corpora in future (second phase).

Despite the fact that the previous studies focused on the same issues, we can notice that their findings differ. For instance, the studies conducted by Hafner and Candlin (2007) and Chambers and O'Sullivan (2004) both found that the advanced learners displayed positive attitudes towards corpus consultation. Conversely, Yoon and Hirvela (2004) found that the students at the intermediate level showed more positive attitudes towards the DDL approach than the advanced learners. This, however, contradicts the study conducted by O'Sullivan and Chambers (2006) where the intermediate learners were found to feel less inclined to use a corpus than the learners at the advanced level.

Varley (2009) approached the issue of using a corpus from a different angle by focusing on the benefits of the CL in teaching grammar and lexico-grammatical features. In this regard, Varley's study (2009) differs from other studies in the level of detail it provides and the type of methodology it employs. Varley conducted a small-scale study to examine how undergraduate learners benefit from the direct corpus consultation using concordance software (Wordsmith). Also, he sought to investigate learners' preferences towards the use of the DDL approach. The author exposed learners to two types of sessions: theory sessions in the classroom (two hours) and practical sessions in the computer lab (two hours) for fourteen weeks. The tasks in the study were of two types: group tasks and individual tasks. A group task would be in the form of a training task in which the author selected a lexico-grammatical feature for the learners to investigate as a group, whereas when working on an individual task, the learners selected a feature of a genre they are interested in and investigated individually. This particular approach in designing the task provided learners with training and motivations, as they were able to select what they were interested in, therefore they were committed to examining a given feature.

The majority of the participants in Varley's study believed that the corpus consultation was beneficial in the context of learning English and that they would continue using the program to learn English even after the project was finished. Varley (2009) used manual logs to track learners' interactions with corpus and its tools while he sought to draw learners' attention towards using a corpus in analysing

language. These logs represented a reflective report for the experiment in which learners used the concordancer to tackle a lexico-grammatical feature such as *get* and *will*. Varely's study (2009) is interesting from a research standpoint, particularly because it uses manual logs and interviews based on the comments learners wrote in the logs. This methodology sheds light on the learners' attitudes towards the DDL approach by elaborating on the information that is collected from the reflective reports.

An example of a study that focuses on another aspect of language use is Geluso and Yamaguchi's (2014) project on improving fluency using corpus consultation. This research is based on using corpus consultation of formulaic language to increase the fluency of speech. The study focuses on three perspectives: EFL curriculum based on DDL; how participants are effective in applying the discovered phrases in conversations; and participants' attitudes towards the DDL approach in acquiring speaking skills. The study employs a well-designed curriculum lasting for three weeks that consists of a theoretical section that presented the aim of the course and the DDL approach whilst comparing between inductive and deductive learning methods. Then, in the practical part of the curriculum, learners tackled tasks called "speaking journals" (2014, p. 229). The authors found the speaking journals tasks were motivating for learners, since as a part of their preparation for giving a speech, they had to consult the corpus by searching for the formulaic language they were going to use. The learners had to also fill in logs to help them focus on the aims of their search. The logs included information about the searched word, its collocates, and its frequency. As a part of the study, the authors drew learners' attention to the mutual information (MI) value, which measures the strength of the association of collocations and helps them to distinguish between frequent and odd collocations.

The results of Geluso and Yamaguchi's study indicate that the DDL approach is helpful for language learning and the use of concordance lines are useful for learning novel phrases. One significant result is that concordances increased the knowledge of collocations and formulaic sequences, which consequently facilitated learners' acquisition of speaking skills. Moreover, participants were aware of the association between grammar and lexis. The participants displayed positive attitudes

towards the DDL approach in language learning, although they still preferred to use a dictionary to verify particular items.

The above-mentioned studies indicate that training learners in the use of the DDL approach as well as corpus tools is essential to the fostering of positive attitudes towards the corpus tools and corpus approach. At the same time, it seems that learners' proficiency levels do not have a significant effect on learners' attitudes. What is missing from the reviewed studies is the hands-on training and description of how the learners actually use the corpus tool and how they cope with the DDL approach, with exception to Varley's (2009) and Hafner and Candlin's (2007) studies.

1.4.2. Evaluations of corpus-based approaches in the classroom

This section presents studies that are concerned with how learners actually go about their investigations during the use of corpora. This differs from studies reviewed in the previous section that are concerned with what can be done with corpora, or what learners think about corpora usage in the classroom. In this section, I provide an overview of six studies, of which two investigate ways of integrating corpus-based resources as a means of improving writing skills, which is the dominant researched skill in most corpus studies (Kennedy & Miceli, 2001, 2010), and one focuses on the use of a corpus to facilitate vocabulary acquisition and grammar learning to improve academic English (Thurstun & Candlin, 1998). I also include studies that attempt to train learners in corpus design because these studies are also interested in answering the question of how learners actually go about using corpora (Charles, 2012, 2014, 2017). At the first glance, the studies reviewed in this section are seemingly unrelated due to the difference in the learners' levels and focus of the researchers' investigations; however, the findings from all these studies similarly show how the learners conducted searches using corpora in the language classroom.

This first reviewed article in this section is a study by Kennedy and Miceli (2001). The study's aim is to investigate how learners conduct corpus research. The authors successfully present a training model for use during the corpus consultations in the classroom. The study does not attempt to measure the effectiveness of using a corpus in the classroom; hence, there is an absence of clear results from this study that would provide an insight whether using a corpus can prompt and improve language

learning. However, there is an important indication found in the study that the proficiency level of learners is not important for the use of a corpus as previously argued by a number of studies.

The authors assume that a small corpus is better for language learners, insofar as the amount of data can be moderated, thereby mitigating the students' feelings of being overwhelmed by all the new information. They also provided a training program for the learners to familiarise them with the corpus. A sub-corpus for each writing task was employed by the authors, thus enabling them to follow a four-step approach to track the learners' interaction with the corpus. These steps were: formulating the question, devising a search strategy, observing and selecting relevant examples, and drawing conclusions. These steps can be used as a guide in using the corpus in the language classroom and in other language-learning contexts.

In the first step, formulating the question, the learners had to ask specific questions that did not allow open-ended answers to limit the scope of the search and to narrow their focus. Moreover, asking general questions could lead to unnecessary results and an undesirable increase in the amount of data to be processed. During the second step – devising a search strategy – students had to formulate a strategy that would help them to obtain relevant results. This step is essential for investigating the corpus, as the learners have to recognise the pattern that they are looking for or find relevant results. Observing and selecting the relevant examples is based on understanding the link between the key word or form and the relevant result. The learners had to observe the examples and select the direct relation to the question they had asked. In the fourth step – drawing a conclusion - the learners had to correct their errors. The authors analysed these steps and evaluated how the learners behaved and what difficulties they faced during each step. Importantly, they noticed a lack of confidence among the learners throughout the four-step process, which may reflect the need for more time and training to familiarise learners so they increase their confidence. The main findings of the study reveal that the learners found the use of corpus was helpful in learning grammatical structures and in raising their confidence in error correction.

In conclusion, the study by Kennedy and Miceli (2001) highlights two issues that have been considered controversial with respect to using a corpus in the

classroom: the level of learners' proficiency and the presence/absence of training. The authors claim that the learners' proficiency level is not important for guaranteeing the effectiveness of using a corpus in the classroom. The study shows that training learners how to use corpora should be guided and gradual. The research is significant in investigating how learners interact with the resource and by providing effective strategies to follow during the corpus consultation. Despite the absence of statistically presented results, the study's value lies in the provision of a full evaluation of the used approach. Yoon and Hirvela (2004, p. 262) criticise the study for not presenting the results of learners' reactions to the approach which only provides a partial picture of the project. Kennedy and Miceli's study differs from other research projects in its focus on the learners' effectiveness in performing the corpus investigation. In other words, the importance is given to how the learners performed the search rather than what they searched for.

Kennedy and Miceli (2010) conduct a similar research study to gain a deeper insight into their approach of using a corpus in a writing class. The authors elaborate upon the 2001 study by developing the notion of treasure hunting to pattern hunting in which they activated the learner's role as a researcher. The study (2010) presents three functions that the learners employed in their corpus search: pattern hunting, pattern defining, and equivalent search. The pattern-hunting function was designed to provide learners with the freedom to browse the corpus, searching for important and/or interesting forms or phrases. This function encourages the notion of the learner as a researcher. The second function is pattern defining, which is based on investigating the pattern selected as a result of the first function. This function provides the learners with sufficient information on how to use a given pattern. The equivalent search function is a combination of dictionary and corpus uses in which learners found the Italian equivalent for an English pattern and then explored the corpus for related patterns.

The authors determine five principles in improving the use of a corpus as a reference resource in the classroom. These principles are based firstly on the notion that the functions that are employed in using the resource are more important than the resource itself. Secondly, these functions should be focused on using the resource and understanding the relationship between the functions and the resource. Thirdly, the

limitations of the resource should be explained in relation to the selected function and not in relation to the general criticism; in other words, specific functions have specific difficulties that need to be discussed. Fourthly, the teacher and the learner should be ready to face a series of difficulties and errors when using a corpus, as it is different from any other resource used previously in the classroom. The last principle is that using a corpus requires time and practice, whereby it is expected that the learners will gradually become more confident in its use.

Reviewing the two studies by Kennedy and Miceli (2001, 2010) reveal the potential of using corpora as a resource. The studies also shed more light on the importance of following the apprenticeship approach. From my point of view, the main argument of the two reviewed studies is two-fold. First, the learners' proficiency level is not essential for the use of corpus-based resources in the classroom, although it may present some difficulties, which can be avoided, however, by designing a specific curriculum or a task that suits learners' needs. Second, gradual and guided training is essential for a successful implementation of corpus-based resources in the classroom.

Thurstun and Candlin's (1998) study differs in this regard, as it focuses on creating a corpus approach to teaching vocabulary and grammar using corpus resources in the classroom. Although this study is a bit dated, it has still a lot to offer with respect to the approach it follows. The study describes creating material using a concordance program in teaching academic English for native speakers and non-native speakers. The aim of the study is to introduce materials for teaching unfamiliar academic discourse, vocabularies and grammar based on the DDL approach. The authors sought to familiarise learners with the concordance lines first; then, learners were supposed to discover the meanings and uses. The learners followed a "chain of tasks or activities in which the successful completion of each task facilitates the completion of the succeeding activity" (Thurstun & Candlin, 1998, p. 271).

The chain of tasks was repeated with every keyword (target item) by following four steps: *look, familiarize, practice,* and *create*. The learners looked at the concordance lines to identify the words they had studied and their collocations. Then, they familiarised themselves with the pattern of the keyword and, at the same time, completed a task by referring to the keyword from the concordance line, leading them

to the next step, which was practice. In this step, they practised using the keywords in tasks without using the concordance line directly. During the last step, the learners had to produce a writing piece using the keywords that had been studied earlier for academic writing. It should be mentioned that the authors preferred using gap-filling and matching exercises because of the familiarity they can provide in contrast to the "novel nature of the materials" (Thurstun & Candlin, 1998, p. 273). In other words, the authors preferred using familiar exercises in order not to overwhelm the learners by the new procedures, resources, and the exercises. Therefore, this strategy attempted to limit the feelings of the unfamiliarity that may stem from different variables that may interrupt the process of learning. Thus, using familiar tasks are desirable to establish positive attitudes towards the DDL approach. Most of the participants (teachers and students) in the study found the material helpful, as it provided a rich context for learning a language. This procedure can be used for other skills and for learning different aspects of a language, since it contains important steps that can facilitate learning using a corpus approach whilst eliminating the sense of novelty that is often accompanied by it. This study is similar to Johns's study (1991a), in which Johns designs tasks based on the DDL approach in teaching language with similar procedures.

Charles (2012; 2014; 2017) conducted a series of training courses using corpora to improve participants' writing skills. Charles (2012) ran a training course for postgraduate students for improving their writing skills (for ESP) using corpora, in which participants trained to build their own corpus as well as trained to use DDL. The overall evaluation of this approach was positive and participants found it easy to build their own corpus. Later on, Charles (2014) ran a similar course but in this course, she collected data one year after finishing the course to investigate the uses of corpora during post-training. Interestingly 70% of the participants used corpora after the course ended, which supports that corpora use increases learners' autonomy and independent learning. Even the participants who did not use their personal corpus since the course ended declared that they had the intention to use it later. Charles (2014, p. 39) argues that once the students "get the corpus habit" they could continue using it autonomously. Charles (2017) ran a similar course with an important difference that the training course was taught by teachers who were not CL experts,

which is rarely done in the CL field. In this study, she elicited students' and teachers' opinions through questionnaires and interviews. Both students and teachers agreed on the benefits the DIY (Do It Yourself) corpus can provide for improving ESP writing, with some reservations. For example, students were worried about the quality of the language in their compiled corpora, and they had to be very careful with the patterns and frequency. The teachers' concerns were related to the lack of technical skills and concerns about classroom management and discipline. Nevertheless, the DIY approach is very interesting and beneficial for both students and teachers.

Many researchers have employed different procedures in approaching corpus-based resources; however, this review is limited to previous studies whose approaches are particularly significant, in terms of the design of the procedures (Kennedy & Miceli, 2001, 2010) and gradual integration (Thurstun & Candlin, 1998). Nevertheless, there are studies mentioned in different sections of this chapter that also included effective procedures and approaches for different skills in using corpus-based resources in the classroom. One example is Varley's study (2009) and its genre analysis approach that is based on enhancing learners' motivation towards a task. Another example is Geluso and Yamaguchi's (2014) study that was aimed at improving speaking skills by adopting a four-phrase system (explained in section 1.4.2).

The previous section also discussed two important studies that focus heavily on familiarising learners with corpus resources in the classroom as means of increasing the effectiveness of using a DDL approach. Kennedy and Miceli (2001, 2010) sought the improvement of writing skills. In this regard, Kennedy and Miceli's (2001, 2010) approach seems superior, especially since it employs various different techniques and functions such as pattern hunting. Thurstun and Candlin's (1998) early yet valuable study, particularly is significant given the focus of the present research which is the teaching of GVs patterns. The study manages to facilitate the use of corpus resources in learning collocations and patterns. The quality of the procedure chosen by Thurstun and Candlin has been considered as appropriate for the present research, teaching the participants GVs patterns by using a concordancer. However, the above-mentioned studies did not provide any details of whether the learners use

corpora as they were taught or just use it when they need it, or if they use it at all, so those studies lack data of the learners' actual use of corpora.

1.4.3. Measuring the effectiveness of corpora use in learning

The following section discusses studies that investigate the effectiveness of the DDL approach in the classroom whilst providing statistics to support any final verdict regarding this effectiveness. The number of such studies is relatively small, and the studies reviewed in this section vary in terms of the effectiveness of the DDL approach on different foci of knowledge, for example on vocabulary (e.g., Cobb, 1997; Kaur & Hegelheimer, 2005); writing skills (e.g., Cresswell,2007; Gaskell & Cobb, 2004; Cotos, 2014); collocational knowledge (e.g., Chan & Liou, 2005; Sun & Wang, 2003; Smart, 2014); lexico-grammatical features (e.g., Boulton, 2010c; Pérez-Paredes et al., 2011; Vyatkina, 2016a, 2016b).

One of the significant studies in investigating the effectiveness of a corpus in the classroom is Cobb's (1997) study. This study is very specific in testing the effects of using concordance lines in measuring vocabulary acquisition. The sample in the study comprised of over 100 learners divided into the control and experimental groups. Cobb (1997) provided both groups with the same software and taught the vocabulary in the same way, with the exception that the experimental group received the vocabulary examples and definitions through concordance lines and the control group received the vocabulary definition through only one full sentence. This procedure enabled Cobb to track the progress of the experimental group very specifically, as the only variable—concordance and non-concordance conditions—between the two groups was the exposure to the concordance lines. The researcher conducted pre- and post-tests together with weekly quizzes followed by a questionnaire to evaluate the learners' progress. The results indicate that the concordance condition helps to improve learners' acquisitions of new vocabulary. A particularly valuable element of this study is the use of a protocol file that records the interactions between learners and the PET.200─ the CALL software used in the research which contained five activities and the tracking function. The log files recorded each interaction between a learner and the CALL program. Therefore, by employing tracking logs on a relatively large sample and achieving improvement in

learners' performance, Cobb's study contributed significantly towards the development of the corpus consultation in classroom as a teaching tool.

In addition, Cobb's study provided learners with enough time to familiarise themselves with one variable; hence, the author was able to obtain reliable results. Chambers (2007, p. 5) declares that this study is "the largest investigation of corpus consultation to date". This declaration indicates the difficulty of working with a large sample when using corpus-based resources, especially in the context of language learning.

Another well-executed study was conducted by Kaur and Hegelheimer in 2005. This study examines the effectiveness of an online concordance in vocabulary acquisition and in translating vocabulary knowledge to writing. The study focuses on the authenticity that concordances can provide for learners. The researchers employed different methods during their investigation. They conducted a pre-test to measure the receptive knowledge of the students. Then, both groups engaged with vocabulary learning activities (cloze and building sentences) where they received two training sessions using an online concordance and an online dictionary. The treatment group consulted the concordance and the online dictionary whilst the control group consulted only the online dictionary. In the final stage, the learners had to submit written work to test their productive knowledge. A questionnaire was employed to gain information about learners' strategies in learning vocabulary and their perceptions of using the concordancer.

The results show that overall, the treatment group performed better than the control group. Although the difference in the vocabulary activity results between the two groups is insignificant, the treatment group used the online dictionary more than the concordancer. The results of these writing tasks highlight more accurate uses of the vocabulary by the treatment group. Even though the treatment group used online dictionaries more than concordances, they outperformed the control group which might be because they used the concordance as an extra learning tool. The treatment group had a limited time, thirty minutes, to perform vocabulary tasks, which is not enough to consult both a dictionary and a concordancer. Finally, the study concludes that using a concordancer has a positive impact on transferring vocabulary knowledge to academic writing. The authors point out a limitation of their study that revolves

around the difficulty in transferring the learned vocabulary to the writing tasks. Despite students' attempts to use the acquired words from the concordancer in producing an essay, the results were not impressive. However, I believe that it is simply not possible to conclude that the fact that the learners were not using the newly acquired words in their essays is a testament of the concordancer's inability to help in vocabulary acquisition.

The previous studies provide positive results regarding the use of corpus-based resources in the classroom. However, there were no such positive results in case of Cresswell's (2007) study. The study aimed to test the effectiveness of DDL in teaching academic writing skills. The study was conducted in communicative contexts following a process-model of writing in advanced learners who had attended initial training sessions on using a corpus. Cresswell compiled learner corpora for both groups (a DDL and non-DDL group), which consisted of 90,000 words. He analysed the corpus using a wordlist and Concord to investigate the frequency of acceptable and non-acceptable uses of the target form of connectors (metadiscourse). In Cresswell's research, the corpus is used as a research tool, whereby the learner searches through the corpus using a Concord tool to find connectors (e.g., in fact, indeed) patterns and their uses. The results indicate a minor difference between the experimental and the control group. The study did not obtain strong findings that would support the notion that DDL is effective in improving writing skills. Although, it should be pointed out that the study indicates that learning styles and learner types may have an impact on using a corpus in a pedagogical context. Cresswell explains the reasons for these results by underlining the difficulty of the target form and the proficiency level of the participants, which both affected the results.

Gaskell and Cobb (2004) investigated how lower-intermediate students utilised concordances to correct errors in writing classes. The study took place over 15 weeks and they did not use a control group. The corpus was used as a reference tool. The investigation was designed very carefully so that five typical errors per assignment were identified each time so that the learners would not be overwhelmed by the data. The authors gradually prepared the participants to shift from an indirect use of the concordances (ready URL concordances were pasted into the students' text) to a direct

use (search the concordance website directly by the students themselves), hence the first four weeks of the experiment comprised of several training sessions.

During the first four weeks, the learners received feedback in the form of an online concordance link to the Brown corpus for only five errors. Then, the learners revised their writing before a final submission. After four training weeks using the software indirectly, the students began to use the software directly and correct errors by themselves. The authors compared pre- and post-writing samples of the learners to track the improvement in their assignments as a result of using the concordancer. When the researchers compared the rate of error correction, they found that the rate was higher during the first four weeks (approximately 80%), yet it declined to 60-70% in the following period after the link was removed. This may indicate that an indirect consultation is more effective than a direct consultation for lower-intermediate level learners. The authors employed a questionnaire to further investigate learners' perceptions towards the corpus consultation – the majority of the responses were positive. Overall, learners were able to use the concordancer to correct errors, and they displayed positive attitudes towards using the corpus consultation to improve their writing.

This study's significance lies in enabling the gradual shift from the indirect to the direct corpus consultation for the learners at the lower-intermediate level. The authors provided the learners with a convenient way to familiarise themselves with concordance. Also, an Internet Protocol (IP) was used to ensure that learning through concordance took place. Therefore, it can be claimed that the results of the study are valid because they rely on the actual results of the interaction process during the corpus consultation. However, although the authors considered the pre-writing as a control criterion to assess the learners' levels and the post-writing as a measure to gauge the learners' improvement, the absence of the control group renders the comparison of the learners' improvement difficult.

Cotos's study (2014) investigates the effects of two types of DDL activities aimed to enhance L2 writing using learner corpus data. The participants, comprising of both intermediate and advanced learners, attended advanced academic writing courses. They were further divided into two groups: the treatment group and the control group, albeit the latter should not be considered as a control group since it

exposed the participants to a new treatment that used a native corpus in completing the given tasks. The two types of DDL activities were based on the type of the corpus data available for learners: learner-driven data and native speaker corpus data. The learners in the treatment group had to compare the target items from a learner corpus and the native speaker corpus, whereas the control group had to only search through the native speaker corpus. The study conducted pre- and post-tests and a questionnaire. The study intended to compare the effects of using a learner corpus and a native speaker corpus in improving writers' knowledge of linking adverbials. Both corpora were employed as a research tool. Although both groups experienced an improvement in using the linking adverbial, the treatment group displayed a more significant improvement. Since both groups were exposed to new treatments, it is difficult to judge if the observed improvement was due to the treatment or due to the exposure to the target form. Despite the absence of a control group being the major flaw of the study, its results are still interesting, insofar as the study combined a learner corpus, which was compiled by the participants, and a native speaker corpus, which was used to enhance writers' knowledge of specific language features.

Another study was conducted by Chan and Liou (2005) who focus on a number of variables which, however, ultimately weakened the findings of the study. The study examined the effects of a bilingual concordancer in a learning collocation for 32 college freshmen (non-English major) through an experimental method, pre-test, post-test and delayed post-test with no control group. A questionnaire was employed in collecting the background information, the learners' perceptions of deductive and inductive teaching methods, and their attitudes towards a web-based bilingual concordancer. The learners showed a significant improvement after the experiment with positive attitudes and perceptions towards concordancing. The learners used the concordancer as a reference tool in searching for the verb patterns inductively. Whilst in the control units, the learners received the target pattern deductively through the teacher's explanation and exercises.

There are two significant aspects of the study: the target form of collocation and the applied methodology. The target form was a verb–noun collocation, and the authors presented its difficulty and its problematic nature for foreign language learners clearly. The methodology followed a quantitative approach in which the authors

designed web-based units consisting of five units, with three units being taught using a bilingual concordancer and two units being taught without a concordance (the latter is considered as a control criterion). In addition, a computer tracker was utilised to track the learners' behaviours and interactions. This study presents evidence to suggest that a concordancer has a positive effect on acquiring the de-lexical verb collocations. The tracker program recorded the learners' scores in each unit and showed that the items that were taught through a concordancer were higher than the other group without a concordancer; thus, it can be assumed that a concordancer assists in improving and acquiring problematic collocations. A significant result of the study is that de-lexicalised verbs were acquired more effectively than the other types of collocation. A conclusion was that reached after discussing this study is that it may be more effective if a traditional method is used with the corpus tools to enhance the learning and to reduce the unfamiliarity of the corpus tools by using well-known teaching methods. As already indicated, I think the study has employed too many variables to be controlled effectively and to lead to reliable results. These variables were represented by deductive and inductive teaching methods, a concordancer program, and the target forms, which were different types of collocations (synonymous verb pairs, hypernymy and troponymy verb pairs, delexical verbs, and non-congruent verbs in Chinese and English).

Pérez-Paredes et al. (2011) conducted an experiment that lasted only one week, which is not enough for learners to familiarise themselves with the use of a corpus. The study's significant contribution to the pertinent field is based on the authors' focus on the actual uses of the guided and unguided corpus consultation. The participants (37 intermediate EFL learners) were divided into two groups: an unguided control group and a guided treatment group in which learners performed focus on form tasks.

One limitation of the study is that it does not explain the extent of guidance the treatment group received, nor does it illustrate what instructions were given to the control group. Although the study mentions that the control group did not have access to the directions for using the corpus which were provided to the treatment group, there is no clarification regarding the information provided to the control group. Such explanation is essential, as it would help to clarify whether the performance of the

control group was affected by the absence of the guidance or by the lack of familiarity with using corpus resources. The tasks focused on syntactic forms based on the students' course book: '*it-cleft*' and '*subject–verb inversion*' forms. The parameters set for tracking learners' behaviour indicate differences between the two groups: the control group completed a higher number of activities than the treatment group. On the other hand, the treatment group searched through the BNC more times than the control group.

However, regarding the limitations and benefits of using DDL approach in language learning and teaching, the authors reflect on these in a comprehensive way. For instance, they explain the importance of using guided corpus consultation as a way of integrating the DDL approach into language teaching. The authors argue that direct observation methodologies such as the software tracker and internet protocols are better than indirect ones such as a questionnaires and interviews, since observation methods are better in obtaining valid results. Moreover, Pérez-Paredes et al. point out that direct methodologies such as utilising the tracking program are essential to capture the actual interaction of students rather than depending fully upon learners' self-reports (2011). This emphasis on drawing upon observations of learners as opposed to depending on self-reports of performance is indeed important for providing valid data. However, the results presented are drawn from a small-scale study and conducted over a short period of time – one week – which may have affected the study's results.

Although the results of the study were not thoroughly explained, the study does show that the guided corpus-consultation methodologies can encourage language learners in completing tasks in the classroom. Furthermore, in terms of the research design, the use of the tracker in this study was important for issues of validity: two participants completed the tasks without referring to the corpus, thus it was possible to remove their responses from the study. Perhaps a larger-scale study conducted over more than a few weeks would have provided more useful results and illustrated the differences more clearly. However, the disadvantage of such a study would be the difficulty of implementing the tracker software on individual computers because analysing the tracking logs is time-consuming. It is also costly in terms of cleaning the huge amount of generated data and in the cleaning process for web ads and server-

generated scripts. This might explain the reason behind the authors' decision to conduct a small-scale study over a short period of time. To conclude, it should be emphasised that the study by Pérez-Paredes et al. (2011) was promising in terms of its achievable aims, but it was poorly conducted.

Sun and Wang (2003) conducted a study to investigate the effectiveness of deductive and inductive approaches using the online concordancer for learning collocations. They found that the inductive group outperformed the deductive group. Noticeably there was no control group. A recent study examineed the inductive and deductive approach too, using the paper-based DDL by Smart (2014). Smart's study contained a control group unlike Sun and Wang (2003). Smart reached the same results that guided inductive group outperformed other groups which received deductive treatment, and control group received traditional treatment. Smart (2014) argues in two points: guided use of DDL is essential to its success, and paper-based DDL is more effective with certain learners according to learner styles. Boulton (2010c) argues that paper-based DDL appeared to be easier to handle for lower-level students. He conducted a study and found that the paper-based DDL group improved marginally more than the control group (dictionary-based method). Boulton (2010c) did not provide prior DDL training to the participants, which may affect the results.

Vyatkina (2016a) replicated Boulton's (2010c) study to compare the paper-based DDL and the non-DDL method effects on lower level participants. Vyatkina's study was run by the teachers of the participants. Vyatkina (2016a) found that the DDL group outperformed the other group in lexical and grammatical knowledge. Vyatkina (2016a) added another condition, the course level (low and middle), to Boulton's study. She found that the participants of the low course (DDL group) performed better than the participants of the low course (non-DDL group) while the participants of the middle course (DDL group) did not outperform the participants of the middle course (non-DDL group). Her results support the argument that DDL approach is suitable for low-proficiency learners and not advanced learners only. Vyatkina (2016b) conducted a study to compare the effectiveness of hands-on (computer-based) and hands-off (paper-based) DDL for intermediate level students (B1). She found that both types of DDL intervention were effective in learning collocations. The results of the immediate and delayed test differed in terms of test

type – for the gap filling test, the participants maintained high gains in both tests, while in the sentence-writing test, the gains in the immediate test were better. This finding emphasises what Thurstun and Candlin (1998) argue for the use of gap-filling exercises, as it was preferred using familiar exercises in order not to overwhelm the learners by the new procedures.

Most studies in this section demonstrate that the gradual and guided use of the DDL approach is more effective than the un-guided one. In addition, these studies underline the importance of tracking learners' behaviour with corpus tools to guarantee that learning is taking place. I would argue that, generally, the most reliable methods of finding results regarding the effectiveness of a particular tool include the use of an experiment that contains a pre- and post-tests with a control group.

However, the results can differ in various contexts. For example, the two studies by Cresswell (2007) and Chan and Liou (2005) were conducted in a similar environment (FL context), yet each study had a different focus, worked with different proficiency levels, and targeted different foci. Unsurprisingly, each study's results were different. Cresswell's (2007) study found that the treatment was insignificant and learners did not benefit from using the DDL approach in the classroom, whereas Chan and Liou's (2005) study's findings indicated that the treatment was significant with respect to some types of collocations, and the learners benefited from using a concordancer. As discussed before, it is quite rare to find studies in the existing body of literature that would provide hands-on training and investigate the learners' actual uses of corpora at the same time. However, the studies reviewed in this section still provide a useful insight into the use of corpus tools in teaching languages despite the flaws in their design.

1.4.4. Using tracking logs for corpus consultation in the classroom

By reviewing studies in the previous sections, I provide a summary of the tracker methods employed in these studies. A limited number of studies that recorded the active exploitation of corpus tools can be divided into two groups based on the data extraction method they used: manual logs and software logs. The former was employed in studies such as Chambers and O'Sullivan (2004), O'Sullivan and Chambers (2006), and Varley (2009), whilst the latter was utilised in studies by Cobb

(1997), Gaskell and Cobb (2004), Chan and Liou (2005), Hafner and Candlin (2007), and Pérez-Paredes et al. (2011). This section summarises significant aspects of using tracker logs during the corpus consultation. It should be noted that all of these studies have been already reviewed, albeit from a different angle in the previous sections.

Manual logs

The manner in which manual logs can be employed is diverse. For instance, there are different forms of logs that learners fill in, and various types of information learners have to collect, such as search words, search results or resources that have been used, and/or learners' reflections and conclusions. In this regard, Chambers and O'Sullivan (2004) and O'Sullivan and Chambers (2006) used a manual log to track the changes that learners made during their time in a concordance programme aimed at improving writing skills. Gaskell and Cobb (2004) used manual logs as well as Internet Protocol (IP) to track learners' interactions with concordances to ensure that learning through the concordance took place.

Both studies employed manual and/ or IP logs to determine whether learners actually use the concordance lines to acquire the target form. The learners had to note down every step they took in the process of interacting or consulting with the concordancer when correcting errors, to ensure that they consulted the concordance link properly. First, they began by identifying the error; then, they searched through the concordance lines to find the correction for this error. In addition, Gaskell and Cobb (2004) planted an IP to record every action in the learners' computers to confirm that the learners actually consulted the concordances during the correction process. Therefore, it can be claimed that the results of the research have an extra degree of validity, as the authors relied on the actual results of the interaction process during the consultation.

Varley (2009) in his study employed reflective logs throughout the whole experiment. He aimed to draw learners' attentions towards the strategies and the types of information that can be provided by corpora and concordances. In addition, he asked them to compare a concordance and a dictionary using the types of findings they had discovered. The logs employed by the author are similar to reflex reports, where learners describe their attitudes towards using corpus tools in learning lexico-grammatical features.

Software logs

Chan and Liou (2005) used a tracker programme to record learners' actions during the concordance consultation, such as the searched words, the number of times each word was searched and the answers to each online unit. Although the learners did not state clear preferences for any teaching method—inductive or deductive—the tracker helped to reveal how many times the learners searched the concordance, which was about 2,900 times for all the units, indicating a higher score for the items taught through concordances than taught by the traditional methods. Therefore, it can be assumed that the concordance helps in improving collocation knowledge based on the results of the test and the tracker records (see section 1.4.3 for a full review).

A great addition to the research in the field of corpus linguistic is Cobb's (1997) use of protocol files that record the interactions between learners and the PET.200 (the CALL programme) used in the research. The files present not only the number of interactions with the programme, but also the time spent on every task. The study revealed that the treatment group that used the concordance lines spent more time reading the concordance lines during the consultation, whereas the actual time spent on doing the tasks was the same in both groups. In addition, the protocol files (the tracker logs) were bigger for the treatment group, which indicates that they spent a considerable portion of time reading the concordances when using the PET.200 programme.

From all the reviewed studies, it is clear that there is a scarcity in research that tracks learners' interactions during the process of using a corpus in the classroom, except in few studies such as Pérez-Paredes et al. (2011), which did not provide training to familiarise the learners because of the short period of the study. Also, the reviewed studies did not provide information on how students approach the corpus or whether they benefited from the training. Cobb and Boulton (2015, p. 497) noted a gap related to the amount of training needed and how much scaffolding is provided when learners interact with corpora. Thus, this thesis, namely Study One, attempts to determine 1) whether the training in corpus use was successful and whether the participants used the concordancer as they had been taught, 2) whether they were able to identify patterns relevant to each GV, and 3) whether the correct use of the DDL approach was linked to the successful completion of the tasks.

1.5. Corpora and Teacher Education

This section explores the relevant literature in the area of teachers' training, pre-service and in-service teachers' use of corpora in the classroom, and issues related to the lack of research in these particular areas. The aim is to highlight the significance of this thesis (see Study Two), by pointing out the lack of studies that investigate in-service teachers' attitudes towards the uses of corpora in the classroom. In this section, I highlight the theoretical considerations regarding the implementation of corpora in teacher education, demonstrating that CL is compatible with the theories and practice of language teaching education. First, CL is still not implemented in teacher education in the foreign language context, despite developments in the use of corpora in language teaching (Zareva, 2015). The gap between these developments and teacher (whether in-service or pre-service) education can be attributed to the lack of knowledge and training regarding how to use corpora in the classroom (Flowerdew, 2012). Nevertheless, CL can coincide closely with and help inform teacher education practice (Farr, 2012).

Farr (2012) noted four current philosophies in teacher education that underscore its compatibility with CL: "self-directed cognitive development," "construction of knowledge," "mediated and scaffolded acquisition," and "relevance of context" (pp. 622–623). The first shared key between CL and language teacher education (LTE) is independence in learning and self-directed development. CL encourages users (whether teachers or learners) to take the lead in their learning and to follow discovery learning (i.e., DDL). Farr (2008) and Leńko-Szymańska (2014) showed that the participants were able to conduct investigations to explore their own hypotheses, which supported self-directed development. The corpora were also used by the participants (pre-service teachers) to conduct independent projects (assignments).

Regarding the second key—construction of knowledge—with respect to the acquisition of the forms or features of language (see section 1.1). What is provided by corpora is an increase in conscious awareness through the presentation and manipulation of corpus data to emphasise the repeated patterns and information frequency (Hunston, 2002). Increasing awareness can include inductive and deductive

learning. The third key—mediated and scaffolded acquisition—is a part of SCT (see section 1.3.1) that requires learning to be within the ZPD for it to be successful. Therefore, every learner needs to receive training and guidance before achieving independence in learning. The guided inductive use of corpora can be an artefact for the independent use. The use of corpora in the educational context takes two forms: the guided inductive approach is the first step to the inductive discovery approach (the second form), which, as Farr (2012) noted, supports scaffolded learning. Several scholars have stated that the first form facilitates the second form (Bernardini, 2004; O'Keeffe & Farr, 2003). The fourth key—relevance of context—refers to context-based learning (Farr, 2012). CL acknowledges the varieties of contexts and provides proof of the differences among genres. Consequently, in some ways, CL enhances context-based learning by providing examples from real data in individual learning contexts. Upon reviewing these main aspects, it becomes clear that CL should be employed in teacher education. As Mukherjee (2004) stated,

> Corpus linguistics will find its way into the reality of English language teaching in all EFL countries only if not only students of English language and literature but also qualified English teachers are trained on the job. The institutionalisation of introductory workshops may offer a way forward from the present gap between applied corpus-linguistic research and the reality of English language teaching. (p. 248)

The following two sections review empirical research on the use of corpora in the classroom for teachers.

1.5.1. Corpora and pre-service teachers

The studies in this section target pre-service teachers (MA students), which could fit well under section 1.3 due to the fact that they are targeting students; however, I mention them here because of their focus on the training courses and workshop design that can be used in teacher education programmes. These studies focus primarily on the evaluation of training courses. Although these studies do not focus primarily on teachers' attitudes and their uses of CL in the classroom, I found them more closely related to teachers' education than learners', especially because of the assignment that

was given to the participants, which required them to design teaching lessons and corpus-based activities (e.g., Leńko-Szymańska, 2014).

O'Keeffe and Farr (2003) noted that the rapid developments in the uses of corpora were excluded from language teacher education; the majority of the developments targeted corpus-based materials, such as dictionaries and grammar books. Therefore, they saw an evident gap in initial teacher education. They utilised corpora as a resource in initial teacher training and, therefore, aimed to train their students to use corpora to enhance the creation of the "expert teacher". This teacher should have three characteristics: he or she should be knowledgeable, efficient, and insightful (p. 392). The first recommendation was the provision of "basic technological expertise"; to avoid intimidating pre-service teachers, they insisted on basic training rather than complex statistics (O'Keeffe & Farr, 2003, p. 393). In addition, they placed emphasis on the core functions of corpora software, such as concordance and word frequency lists. They also created a corpus to use in teacher education. This corpus consisted of four types of spoken data: experienced teachers operating in sociocultural settings that differed from those of their students, experienced teachers operating in the same sociocultural settings, other students operating in different sociocultural settings, and students during their on-site practice teaching sessions. O'Keeffe and Farr (2003) believed that the characteristics of the expert teacher could be achieved through the use of corpora such as knowledge. Whether it was the content knowledge of the language or the specific content knowledge and pedagogical knowledge (such as motivational strategies), the teacher's knowledge could be enhanced through the use of corpora. O'Keeffe and Farr (2003) also provided a series of activities as examples of the exploitation of corpus data in the course. They provided a thorough description of practical and theoretical aspects of the use of corpora in language teacher education.

In a later article, Farr (2008) attempted to evaluate pre-service teachers' predispositions towards the use of corpora and integrated them into a Language Systems module in an MA English language teaching course, which covered aspects of English grammar: formal, functional, discourse-based, phonology, morphology and semantics. The participants comprised 25 students who attended two courses in the Module (four hours per week in Semester 1 and three hours per week in Semester 2).

The corpora were integrated as a tool for exploring English grammar, and approximately 15–20 hours of each semester were devoted to this area. In Semester 1, the participants were taught about the theoretical background of CL and were shown demonstrations of corpora software, such as Wordsmith Tools. They also attended hands-on seminars on the use of corpora in research. In Semester 2, the participants continued using corpora for the module tasks (assignments) each week. Farr (2008) designed a questionnaire to elicit participants' responses regarding the use of corpora in that module based on a pilot study, and the participants in the pilot provided feedback on the corpora component of the module. The questionnaire consisted of five sections, the first of which comprised nine statements to be responded to, based on a Likert scale ranging from 1 to 4, depending on the level of agreement. The other four sections comprised questions related to time spent on corpora outside the classroom, the negative and positive uses of corpora, the use of corpora in the dissertation project, and whether the participants would use corpora in their future teaching.

Farr (2008) found that the participants had a positive attitude towards the use of corpora in terms of enjoyment and perceived benefits, although difficulties were identified with regards to technical aspects and time constraints. Despite the high rate of participants who were willing to use corpora in their future teaching, few applied it. This was due to circumstantial factors, such as the unavailability of the source, the strict methodology, and the lack of opportunities to secure positions in teaching. Farr's (2008) study targeted pre-service teachers, but focus was placed on the use of corpora within the frame of the module rather than the use of corpora in the classroom. Her study provided information on the possibility of integrating corpora into teacher education programmes, as well as student teachers' attitudes towards corpora use, including possible difficulties. However, the use of corpora in the classroom was analysed to a limited extent.

Breyer (2009) argued that the teacher's role in integrating the use of corpora into the classroom is essential; thus, he reported the results of a qualitative study of six teachers who were introduced to, and trained in how to teach using corpora. Breyer's study had a greater focus on the direct application of corpus-based activities in the classroom than Farr's (2008). Breyer's (2009) study was part of a larger project on integrating corpora into language teacher education. The aim of his small-scale study

was for the participants to use corpora as learners and teachers and to relate their experiences of learning about the uses of corpora and their incorporation into their future teaching. A final assignment entailed designing corpus-based teaching materials as a supplement to the textbooks. Regarding this study, an interesting point is that the participants who were attending this course had to attend courses on linguistics and teaching methodology, as well as basic IT competence, as prerequisites so they have background information about teaching methodology and computer uses. The course ran for 11 weeks, of which two hours per week were spent in the computer lab. The participants were 18 EFL teachers. The course followed a specific training approach—"a combination of theory and practice"—in which the participants trained to use corpus for language analysis and simultaneously considered how best to use these methods and tools to teach in the classroom (Breyer, 2009, p. 158).

Three types of data were collected: the teacher's diary, a questionnaire, and teaching material. However, Breyer (2009) discussed the teacher's diary and questionnaire only in his article. The questionnaire consisted of two open-ended questions, which were a type of structured interview. The enthusiasm that the participants showed towards the use of corpora for exploring language was immediately noticeable. Upon analysing the participants' diaries, Breyer (2009) found four main areas of focus: the methodology that the teacher should follow (i.e., teaching complete rules vs teaching simplified rules), language content (i.e., teaching real language using authentic texts), use of concordance lists (i.e., how to teach the target items or rules), and redefinition of the teacher's role (i.e., taking risks in the classroom vs. being authoritative). The participants had been asked to design teaching materials, and by answering the two open-ended questions during the final assignment of the course, they were able to recognise the possible difficulties that they could encounter if they used corpora in their teaching practice. The participants reported problems related to the novice users of corpora, such as the lack of suitable corpora, lack of control regarding corpus content, and lack of control regarding the task results, which contradicts the soul of DDL, for which the aim is language use in natural contexts.

Breyer (2009) recommended integrating the training of the uses of corpora into teacher education due to the time constraints for the classroom and the tight schedule

for the in-services teachers that numerous scholars reported as serious challenges (Chambers, 2005; Farr, 2008). The integration of training can also increase teachers' awareness in regard to the use of language content as well as the discrepancies between textbooks and real (authentic) language.

Heather and Helt (2012) investigated six pre-service teachers' use and development of corpus literacy during an introductory grammar course. The study, which integrated corpus literacy, ran for one semester. Heather and Helt (2012) aimed to provide clear guidance related to corpus literacy in language teacher education and to obtain learning outcomes from the empirical study. The sample contained both graduate and undergraduate students who aimed to become EFL teachers. The course comprised an introduction to CL, corpus-based grammatical analysis, corpus output in the form of concordance lines, frequency and distribution information, and handouts about corpus resources. The participants were asked to undertake two projects. The first, which took the form of group work, entailed critiquing a certain rule in a grammar textbook and designing teaching materials. The second project was similar to the first, but the participants worked individually. Another difference between the two projects was the use of the Corpus of Contemporary American English (COCA), which was optional in the first project but compulsory in the second. The performances of the six participants in the course were strong, average, and weak; therefore, Heather and Helt (2012) claimed that their sample represented typical and interesting cases. They discussed the results using the so-called "components of corpus literacy" (2012, pp. 425–433), which included selecting an appropriate corpus, understanding what a corpus can and cannot do, understanding and analysing corpus data, and using corpus data to develop teaching materials. One major finding was that more exposure to corpora uses had a positive effect, as was the case with the concordance lines. In addition, the participants developed their language awareness due to their exposure to corpus data and improved their ability to critique the textbook. For successful implementation of corpora, there is a need for more focused instruction and activities to increase the autonomous use of the DDL approach by training pre-service teachers to ask the right questions that can guide students towards noticing the required target items. Heather and Helt (2012) noted that some participants had difficulty with the COCA interface, which is an issue that can be

resolved by additional training, as recommended by numerous scholars (e.g., Charles, 2017). A final point raised by Heather and Helt's (2012) study was the difficulty that some participants encountered in the grammar classes, which made it even more challenging for them to conduct corpus research.

Leńko-Szymańska (2014) designed a more specific course on the use of corpora in language education than Heather and Helt's (2012), Farr's (2008), and O'Keeffe and Farr's (2003) courses. The course, which focused on corpora and was not integrated with any other course, included corpora resources and corpus-based activities and tools. This study shares the focus on evaluating the training course, rather than the participants' attitudes towards the use of corpora in the classroom, with other studies (e.g., Ebrahimi & Faghih, 2017; Leńko-Szymańska, 2015; Zareva, 2015). These studies are important in displaying the participants' evaluation of training courses. Leńko-Szymańska (2014) attempted to provide a comprehensive training course on the exploration of the uses of corpora rather than on teaching procedures involving the selection of free, user-friendly resources and tools. The course ran for one semester (approximately 13–15 weeks) and started with general themes before moving to more specific ones. The first module was an introduction to corpora and their resources, while the second was about general corpora and their uses in teaching different skills. The third module, which was even more specific, focused on the creation and uses of small and specialised corpora in designing teaching materials and syllabi. An assessment component required each participant to build his or her own corpus, analyse it, and prepare a teaching lesson and materials. In addition, there was a questionnaire that contained two parts: prior to the course and after the course. The participants were 13 MA students. The first part of the questionnaire consisted of five questions (two close-ended and three open-ended) about the participants' prior knowledge of corpus and their reasons for taking this course. The second part consisted of 19 questions (three of which were open-ended), which aimed to elicit participants' reactions to the course in terms of its aims, content, and procedures. Leńko-Szymańska (2014) admitted that the questionnaire did not directly address the participants' attitudes towards the use of corpora in the classroom, but she claimed that their responses were "indicative of their attitudes" (p. 267). In general, the participants had positive feelings about the course and the uses of corpora;

however, they admitted that they needed more time and training to enable them to feel confident in using corpora by themselves. There was also a contradiction in the participants' responses: on the one hand, they stated that the course load was too heavy as a result of all the homework and tasks, and on the other, they stated that they needed more time and training to enable them to use corpora resources by themselves. I believe that this contradiction was due to the numerous tools and corpora references presented within a limited time frame. By presenting many sources, Leńko-Szymańska (2014) attempted to avoid making the participants depend on one or two sources or tools, but this could have caused a lack of confidence, especially because the participants had no prior knowledge of corpora. Leńko-Szymańska (2015) replicated the same study (2014) with 18 MA students, but she modified the questionnaire to evaluate the participants' perceptions of corpus-based methods of teaching a foreign language. The questionnaire consisted of 43 questions, of which 40 were close ended, 2 were open ended, and 1 was for ranking the course. The questionnaire was divided into five themes: reasons for choosing the course (4 items), prior knowledge of corpora (3 items), perceptions of course results (24 items), attitudes towards the course content (4 items), and course evaluation (8 items). The participants in the 2015 study showed more motivation and interest in the course than the participants in the 2014 study, which might be because this half of the participants (the former set) had prior practical experience with corpora. The participants were satisfied and felt positive towards the use of corpora in language education, and Leńko-Szymańska (2015) claimed that they even started to use corpora to resolve their own linguistics problems outside the classroom. Leńko-Szymańska (2015) did not, however, run a reliability test for the questionnaire before or after conducting the study—possibly because of the low number of participants—and the results therefore were discussed qualitatively.

Ebrahimi and Faghih (2017) conducted a qualitative-based study, which was the largest carried out among all the pre-service teachers that were reviewed. The study, which comprised 32 MA participants who were majoring in EFL teaching, differed from others in this section due to the mode of delivery, which was an online course. The course, which was an introduction to CL, lasted for seven weeks, and the results were obtained through questionnaires (background information), weekly

reflections, discussion forum entries, and semi-structured interviews conducted after the course. Similar to many other studies in this section, it aimed to evaluate the course presented to the participants rather than the participants' attitudes towards corpora use. The course was similar to that conducted by Leńko-Szymańska (2014) in regard to its aims: to provide basic concepts of CL and a range of free, user-friendly resources and tools; to compile a corpus with a focus on statistical measurement; and to apply corpora in language teaching, in addition to the final project, which consisted of three corpus-based activities. Ebrahimi and Faghih (2017) ran inter-coder reliability to assess the consistency of the qualitative data analysis. As well as the study evaluating the online course, the participants could reflect on their own attitudes towards the use of corpora. For example, they found that the Lextutor[2] tools were useful for them as teachers, while the COCA was difficult to use, as the interface and the analysis of the output were complicated. The teaching experience had an influence on their perceptions: the more experienced the teachers were, the more cautious and less optimistic they were about considering the application of corpora tools in their teaching. In addition, they were in favour of the indirect use of COCA in the classroom. They agreed that it was better to use corpora with advanced-level learners, as they believed that COCA could not be used with beginners because they thought it would be confusing and time consuming, The same idea occurred with regard to AntConc—that is, that it could be used only with learners who had a high level of proficiency. Another obstacle was the time constraints in terms of the preparation of teaching materials or the use of corpora sources directly in the classroom. The unavailability of computers and an internet connection was a hindrance because of the educational context in which the study was conducted. The participants emphasised their desire to have the support of instructors or experts, as well as more training on the pedagogical applications of corpora.

Zareva (2015) conducted a small-scale qualitative study similar to that carried out by Heather and Helt (2012). She integrated corpus literacy components into a grammar course for TESOL trainee teachers. The participants were 21 MA students who had different teaching experiences. The corpus literacy was an additional

[2]Complete Lexical Tutor is a website for learning vocabulary.

component of the English grammar course, which aimed to provide sufficient knowledge of corpora to enable the participants to design a corpus-based project. The course, which lasted 15 weeks and comprised of 30 classes, included rich content. It contained five sessions of training participants how to use the corpora (COCA, MICASE), incorporated discussion of the required reading, and offered guidance in the form of seven mini projects, which were spread out over a period of 10 weeks. At the end of the course, there was an assessment of the final project, for which the participants on average earned a grade of 94%. A questionnaire was administered with the aim of investigating participants' attitudes. Only a few participants had prior knowledge of corpora. The questionnaire was more targeted towards the course itself rather than towards the attitudes to corpora use in the classroom. The participants were satisfied with the course content and resources and were able to recognise the close relationship between grammar and corpus-based findings. They were also able to recognise other uses of corpora in teaching vocabulary, collocation, and writing skills. The disadvantages were similar to the typical difficulties encountered when using corpora, such as technical difficulties, the fact that it is time-consuming, and too many examples of targeted items (see section 1.4). Zareva (2015, p. 8) found that the participants encountered a serious challenge with regards to formulating the questions for investigating corpus data, which was related to "knowing what can and cannot be done with a corpus". This was raised because of the short period of training or the lack of explicitly formulated research questions in the provided training course.

Lin and Lee (2015) designed an interesting study to examine the DDL approach when teaching grammar for the first time. The participants were six second-year students enrolled in an MA course, prior to which they had teaching experience of at least one year. The participants received training in designing DDL activities and teaching materials for two sessions, each of which lasted for three hours. The participants worked as a team to teach three different classes that were focused on three different grammatical features. They were asked to teach the first class using an approach that was 60% DDL and 40% grammar translation method. The second class was the opposite, with 40% DDL and 60% grammar translation. In the third class, they used the grammar translation method only. The participants reflected on their experiences by writing essays after each class, as well as a final report that evaluated

the entire experience. The results were in line with those of other studies (e.g., Leńko-Szymańska, 2014; Zareva, 2015). The main findings of Lin and Lee's study can be summarised as follows: DDL is an innovative method that supports active learning, is learning-centred, and increases interaction between teachers and students, as well as between student peers. However, typical obstacles were identified by the participants, similar to Zareva's study (2015). Some of these difficulties can somewhat be resolved via increasing training or, as the participants suggested, using DDL to complement the traditional grammar translation method. I believe that the use of DDL activities as supplementary materials is essential for its success in the early stages of the implementation of corpora in the language classroom because it might help in eliminating the novelty and facilitate gradual familiarity of this implementation.

1.5.2. Corpora and in-service teachers

There are a few of published studies that target in-service teachers. The first study that will be reviewed in this section was conducted by Mukherjee (2004). This will be examined first because, according to Frankenberg-Garcia (2012), it is the "only well-documented survey" study that investigates the use of corpora in classroom (p. 475). As well, it targets in-service teachers in a similar context to Study Two in this thesis.

The aim of Mukherjee's (2004) study was to explore the extent to which teachers in Germany know or make use of corpora in the classrooms. He conducted a survey within the training workshops about CL and its application in the classroom. The data was collected from 248 in-service teachers, making the study the largest conducted to date. The eight workshops were brief (four hours each) and consisted of a theoretical part in the form of one lecture and one seminar, and practical sessions in the form of applications of corpus uses in the classroom, such as concordance-based exercises. Mukherjee aimed to introduce CL to the teachers, familiarise them with the applications and uses of corpora in the classroom, and identify what the teachers knew about corpus before they attended the workshops. Each workshop was designed to be different from the others and they were called "test workshops". The workshops aimed to find the most suitable form of workshop to be run for teachers in secondary schools in the future. The workshops incorporated the findings from corpus research and were compared and contrasted with traditional textbooks (e.g., the use of *any* and *some*). The workshops also provided the teachers with some applications of corpus

data (e.g., exercises related to concordance-based lines). The survey was divided into two parts: the first part was taken before the workshops and the second part after. The first part revealed that 80% of the teachers in this sample had no idea about CL before the workshops. The second part of the survey showed that 95% of the teachers thought that CL could enrich English language teaching. The teachers believed that corpus-based data and methods were useful for them but not for the learners. In other words, the teachers tended to favour the teacher-centred approach over the learner-centred approach. As Mukherjee (2004, p. 242) pointed out, this finding was a "clash" between the CL field and the teacher's point of view, because DDL fosters a learner-centred approach that will eventually increase learner autonomy. Boulton and Tyne (2014a) explained that this clash resulted from the teacher's persistence in changing his or her role as the expert in the classroom into the facilitator role. This clash was also found in Study Two (see Chapter 9). Mukherjee pointed out the existing gap (the lack of the uses of corpora in the classroom) between CL and language pedagogy by finding that even though most teachers used corpus-based dictionaries, they lacked knowledge of CL. Mukherjee (2004) suggested bridging this gap by introducing what he described as "quick-and-dirty" workshops (p. 244) for in-service teachers, especially in the absence of compulsory CL modules in universities. Quick-and-dirty workshops aimed to provide teachers with immediate solutions to difficult problems in the classroom so that teachers could spot the immediate benefits of CL applications. His suggestion of quick-and-dirty workshops coincides with the idea that in-service teachers have minimal time to devote to exploring CL.

A more recent study, conducted by Tribble (2015), also collected data using the survey method and targeted in-service teachers; however, the nature of the study was different from Mukherjee's (2004). Tribble (2015) ran a series of surveys to identify the changes that occurred in CL and language teaching. He administered the first survey in 2001 (29 participants), another in 2008 (150 participants online), and then another in 2012 (560 participants). Tribble discussed all of these surveys in his paper and admitted that the survey respondents comprised teachers who already had an interest in CL, which, therefore, affected the final results. Tribble (2015) gathered this sample using a corpus software provider and an internet discussion list (e.g., corpora list). These surveys covered specific areas, such as the teachers' institutional

levels, students' levels, teachers' computational knowledge, teachers' awareness of corpus applications in language teaching, the corpus resources they found useful, the reference books or academic publications they found useful, the benefits and disadvantages of the DDL approach, and a set of personal information (i.e., age, gender, country, mother tongue, and the language they teach), To this end, the nature of Tribble's study, which investigated the use of corpora by in-service teachers rather than introducing CL to teachers, was exploratory. Tribble's findings were significant in terms of increasing knowledge of what in-service teachers might need when they use corpora and shedding light on the existing uses of corpora in language teaching. However, his study did not aim to promote the use of corpora for language teaching nor, as Romer (2009) recommended, aim to bridge the gap between CL and language pedagogy, because it targeted existing users of corpora in the classroom. Tribble's (2015) findings showed that most of his sample comprised female users in university settings (higher education) who were under 50 years of age, with the largest number falling within the 30–39-years age group. Almost half of the sample (42%) had recently used corpora in the classroom. The teachers in Tribble's sample taught EAP programmes or language majors and had a high level of proficiency (B1 or higher). Tribble (2015) noted that the sample from the survey distributed in 2008 differed from the sample from the survey distributed in 2012 in terms of the student's type and level. Tribble found that in 2008, the teachers used corpora with secondary schools and in the private sector more than in higher education, while in 2012, 80% of corpora users were from higher education. Regarding the types of resources and tools, the majority (56%) preferred offline corpus tools, and 37% used online corpora. The most used online corpus was BYU (Brigham Young University corpus), and the most used computer programs were Wordsmith Tools and AntConc. Tribble (2015) found that the main reason for using specific programs was their user-friendly nature. An interesting finding was that the majority of the sample used corpus data to prepare teaching materials, and the teachers also used corpora as reference tools for themselves and for their students. The most used resource was the BNC, although they accessed it through the BYU interface, thereby reflecting the user-friendly nature of the latter. In addition, the majority of the teachers admitted that corpora had a positive impact on their teaching, while the impact on student learning was less significant.

Fifty-five percent of the teachers believed that corpora had a minor effect on students' learning. The final question in Tribble's survey asked, "Why do you think teachers use or do not use corpora in the classroom?" Not surprisingly, lack of knowledge and the time it takes to create DDL material were offered as the main reasons for not using corpora. Tribble concluded his study by emphasising that despite the encouraging findings, there remains work to be done; this thesis attempts to address this need. I believe that Tribble attempted to show an encouraging picture of using corpora, although the limitation of his sample selection was significant and did not provide an accurate representation of the average teacher.

The final study in this section is similar to the section of pre-service teachers, in which Ozbay and Kayaoglu (2015) focused on training and how teachers cope with it. Ozbay and Kayaoglu (2015) conducted a qualitative study with six in-service teachers over an eight-week period (three hours per week). The study aimed to investigate how the teachers perceived integrating corpus-based methods into English language teaching. None of the six teachers had ever used corpora in their classrooms. The teachers in this study held similar views to those in Mukherjee's study (2004) in terms of the benefits of using corpora in English language teaching. However, the six teachers raised the issue of student proficiency levels as a hindrance to the efficient use of corpora in their classes, referring specifically to the difficulties that beginners may face in understanding concordance lines. Ozbay and Kayaoglu (2015) noted that the majority of the teachers preferred to use corpora to teach writing skills and translation, while the minority suggested using it to teach speaking skills. All the teachers thought that concordance tools were efficient at expressing authentic texts. Ozbay and Kayaoglu (2015) observed certain challenges in the training course, such as the lack of knowledge regarding the basic concepts of CL and how to employ corpus-based methods and activities within the current curriculum. Additionally, there was a lack of awareness regarding ready-made materials and how to integrate these into classroom tasks.

From reviewing the related literature, it is clear that there are no quantitative studies nor published questionnaires with tested reliability that specifically target in-service teachers' attitudes towards the use of corpora in the classroom. Therefore, this thesis attempts to fill this gap in the literature. It is also an attempt to bridge the gap

between CL and the classroom in Saudi Arabia by providing a training course that can be utilised for in-service teachers despite their busy schedules. The following chapter explains the target items used in the first empirical study (Study One, Chapters 3, 4 & 5) in this thesis.

Chapter 2: General verbs and corpus linguistics

General verbs (GVs) are constructions or phrases that consist of verbs and nouns where the verb serves a syntactic function and nouns carry most of the meaning. The verb, therefore, loses some of its lexical function (Nesselhauf, 2004). GVs patterns are frequently verbs that are used with nouns to indicate that someone or something has performed an action. The verb's meaning is derived from their object 'noun', such as *have a look, make an offer* (they are widely known as delexiacl verbs). The most frequently used verbs as GVs in the Bank of English are *give, take, do, hold, keep* and *set* (Vrbinc, 2005, p. 62). This group of verbs has semantic restrictions when combined with nouns, which sheds light on its importance for those studying English. Although these regulations are listed as a part of grammar, the restriction on the commutability of their elements has led to their inclusion in phraseology and collocation definitions (Juknevičienė, 2008). GVs are difficult to acquire because they fall at a midpoint between lexis and grammar. They are not a lexical phenomenon or a purely syntactic structure; instead, they exist in a grammar–lexis interface (Algeo, 1995). Their structure has been discussed as being a part of English grammar (Biber et al., 1999; Quirk et al., 1985), which endorses their inclusion in the grammar–lexis interface.

The previous literature on GVs patterns is limited. A quick glance at the reviewed literature on GVs patterns reveals that most studies reviewing GVs were based on non-corpus-based approaches; that is, they did not use corpus approaches or methodologies in analysing or describing GVs. Previous non-corpus studies used approaches that considered lexis and grammar unrelated, with exceptions. For example, Nickel (1968, as cited in Akimoto, 1989) and Olsson (1961, as cited in Akimoto, 1989) used grammatical and syntactical approaches to their studies, whereas Green (1974, as cited in Akimoto, 1989), Liefrink (1973, as cited in Akimoto, 1989) and Wierzbicka (1982) followed a semantic approach. On the other hand, Live (1973) used a mixed semantic and syntactic approach, whereas only Rensky (1964, 1966, as cited in Akimoto, 1989) depended on a stylistic approach. Studies that used non-corpus-based approaches will be not reviewed because they are beyond the scope of this thesis.

Studies that used corpus-based approaches to investigate language began to be published in the late 1980s, particularly those examining grammar. The review of the literature on GVs revealed that few studies on GVs used the corpus-based approach, such as Quirk et al. (1985), who used a mixed semantic and syntactic approach, and Akimoto (1989) who attempted to use a mixed approach (semantic, syntactic, and stylistic) in describing GVs. The corpus-based approach allows for the investigation of the patterns in which verbs co-occur, as well as detects the register and the discourse function of these occurrences.

There are many differences between the corpus-based and non-corpus-based research which can be generalised according to the following: the theory that the study is based on, the source of examples used in the study, the validity of the data, and the measure of word frequency. Although studies using the non-corpus approach can provide valuable insights into the structure of GVs, the resulting data of these studies and the utilised approaches are not very helpful in making generalisations about the structure. The following Table 1 clearly shows the differences between the two approaches.

Table 1. *Comparison of non-corpus and corpus approaches in investigating general verbs structure*

	Non-corpus approach	**Corpus-based approach**
Theory on which the study is based	Most studies are based on theories that consider grammar the key to understanding language; consequently items are examined in isolation.	Language is based on unity of meaning; items cannot be understood in isolation.
Source of examples	Invented examples cannot reflect the real use of language.	Based on the everyday use of language
Validity of data	The validity of data is questionable because they are based on unreal data.	Data are considered valid because they emerge from the everyday use of language or are at least relatively representative.
Frequency	Frequency is based on the researcher's intuition.	The frequency of the verbs is based on statistics.
Examples of studies	Wierzbicka (1982); Live (1973)	Quirk et al. (1985); Stein (1991); Akimoto (1989); Smith (2009); Verde (2003); Vrbinc (2005); Nesselhauf (2004; 2005); Altenberg & Granger (2001); Gouverneur (2008).

2.1. Corpus linguistics models to the description of GVs patterns

Before surveying the studies that investigate the descriptions and the use of GVs patterns, it is necessary to introduce and discuss basic models in CL which describe how meaning raises from text/language. This section explores two theories of CL that are significant in integrating lexis and grammar (as GVs are good example of the inseparability of lexis and grammar) which have had an effect on the evolution of the teaching field. The first approach is the idiom principle and the second is pattern grammar.

2.1.1. The idiom principle

Sinclair (1991) proposes two models for language description: the first is the idiom principle and the second is the open-choice principle, which complements the first one. He states that "the principle of idiom is that a language user has available to him or her a large number of semi-preconstructed phrases that constitute single choices, even though they might appear to be analysable into segments" (1991, p. 110).

Sinclair (1991) argues that frequency and meaning are the stems of the idiom principle, which means that semi-fixed expressions co-occur repeatedly in a text (corpus), and the meaning is derived from the whole expression and not the individual words. Sinclair (1991) explains that language is stored as a product in the lexicon. In this case, language is produced by retrieving the semi-fixed expression from the mental lexicon where it is stored as an extended unit of meaning rather than words.

The idiom principle does not, however, account for all the instances of language and thus Sinclair notes a second model is necessary, which is the open-choice principle (1991). This second model describes the traditional view of language which is "slot-and-filler", in which language users can use the stored language in the mental lexicon as individual words and combine them according to grammar rules (Sinclair, 1991, p. 109). This occurs in the "relatively rarer situations" in which the language user cannot find a semi-fixed expression in the lexicon (McEnery & Hardie, 2012, p. 143).

Although the two principles seem to present lexis and grammar as contrasting separate systems, they are in fact unified. Sinclair states that "meaning arises from

words in particular combinations" (1998, p. 23). Meaning is not solely defined by words but rather by a combination involving the co-occurrence of words. According to Sinclair (1998), in order to identify the meaning of an item, we must examine the five categories of the lexical item: the core or the node, collocation, colligation, semantic preference, and semantic prosody. The collocation and colligation are related to the syntagmatic relation within the phrase, while the semantic preference and semantic prosody relate to the pragmatic relation within the phrase (Stubbs, 2009). So, these categories represent how meaning can be observed through empirical data. The categories add to the description of meaning for a particular item. Meaning and form have a close relationship, as they cannot be separated. In Sinclair's description of units of meaning, he expresses the impossibility to separate meaning from form (1991, pp. 6-7); meaning affects structure by the associations that are found between particular meanings and forms.

The idiom principle is significant in understanding GVs patterns because in order to recognise GVs patterns (verb + noun collocation) as operated in that principle, it is important to store these patterns as single choice slots. This eventually helps in reducing the misuse of these patterns by foreign language learners. As well, learners should study GVs through concordance lines where they will be able to see GVs patterns as one unit which in line with idiom principle. Another CL theory relevant to my discussion of GVs patterns is pattern grammar, which is based on the idiom principle and seeks to unify lexis and grammar. I will discuss this in the following section.

2.1.2. Pattern Grammar

Hunston and Francis (2000) define patterns of a word as "all the words and structures which are regularly associated with the word and which contribute to its meaning" (p. 37). This approach is important in building generalisations about language. There is flexibility in this approach, as one word can appear in different patterns and the same pattern can appear with different words. At first glance, it seems that the pattern grammar approach focuses only on the surface structure. It appears to only analyse structures according to categories and does not explain the behaviour of the words; in fact, however, this approach relates the pattern and meaning of each word by being flexible in building patterns so that each item can join any pattern based on its

meaning. Therefore, any word with more than one meaning can be found in more than one pattern. This approach presents a strong relationship between frequency, meaning and pattern, which are key concepts in the field of CL. Hunston and Francis (2000) tend to classify words into two categories: grammatical and semantic. These classifications complete one another and strengthen the association between pattern and meaning. Pattern grammar is an extension to lexical grammar approaches, which are based on phraseological concepts. This approach aims to identify patterns which are basically phraseological units. These directions are essential to be considered during the design of a multi-level approach for selecting GVs to be used in the classroom (see Chapter 3).

Hunston and Francis (2000) state that their approach is based on identifying the meanings of words which have different patterns and classifying the patterns through a corpus-driven approach. This approach has two main principles: to identify the meanings of words which have different patterns, and to identify patterns that are associated with lexical items which have specific meanings (Hunston & Francis, 2000). Patterns are important in identifying the different meanings of polysemous words. Patterns are also essential in recognising the meanings of words in particular phrases based on the additional meanings of other related words. This approach is considered "remarkable" (Sinclair 1999, p. 160) because it is unique in analysing meanings and patterns as well as semantics and grammar.

Hunston and Francis (2000) argue that there are differences between their theory and Sinclair's Extended Lexical Unit (ELU), despite the shared principles. In the ELU, the meaning is based on the phrase and single words cannot convey the meaning alone. The ELU identifies the relation of the meaning through four levels starting from a concrete level (word-form, level one) to an abstract level (communicative function, level four) (Stubbs, 2009). "Our work is not entirely in step with that of Sinclair, who stresses the idiosyncratic behaviour of individual word forms. Where Sinclair seeks to differentiate, we seek to draw parallels and make generalisations" (Hunston & Francis, 2000, p. 77).

Both theories are based on the same principles but differ in their approaches. While ELU seeks to study the behaviour of words and phrases individually and establish differences among phraseological patterns within text, pattern grammar

seeks to generalise phraseological patterns by considering form and meaning. Furthermore, Sinclair's model, ELU, provides a very detailed view of item behaviour, while pattern grammar provides generalisations (Hunston & Francis, 2000). These approaches can complement one another. Pattern and meaning have a strong association, as do frequency and meaning. Items which tend to share patterns tend to share parts of meaning as well. If an item has many meanings, it will be frequent and will occur in different patterns and vice versa. This leads us to introduce GVs patterns from different perspectives as they are the target items in the current thesis.

2.1.3. General verbs patterns

GVs are often referred to as delexical verbs which share a form but differ semantically, which means that the semantic loads of verbs are distinct and differ according to the lexical noun combinations. Sinclair (1991, p. 113) expresses delexical verbs' tendencies by using the term "delexicalization"; he says that "we are reduced to talking about uses rather than meanings". Sinclair (1991, p. 113) refers to a tendency whereby frequently used words lose some of their meaning and independence through "progressive delexicalization". Progressive delexicalization can apply to any word where the word tends to have less independent meaning than other words or loses much of its meaning to other words in the phrase and only functions syntactically. Verda (2003, p. 867) attempts to investigate how other verbs were affected by the delexicalization phenomenon. Verda (2003, p. 867) finds that this phenomenon is "more pervasive" than previously believed, as the set *shed*, *cast*, and *throw* she examined were delexicalized to some extent and, as she expresses it, had "general meaning". Other researchers claim that these verbs are idiomatic or at least partly idiomatic (Biber et al., 1999). These verbs tend to collocate with large sets of nouns and some of them are used in idioms because they are part of the most frequently used English words (e.g., *make a splash*).

GVs are frequent verbs which also collocate frequently with high frequency nouns. Thus, from a CL perspective, frequency is an indication of the different meanings a word can express; if the word is more frequent, it has many meanings and occurs in almost all texts. The more frequent the word, the less independent it is in terms of meaning. Therefore, its meaning relies more heavily on the phrase in which it occurs (Stubbs, 2009). If the frequency of a word increases, its independent meaning

decreases; frequency and meaning have a strong negative correlation. According to the frequency concept, there will be a strong association between highly frequent verbs and highly frequent nouns. This phenomenon helps in identifying important phrases and indicates the need for a focus on collocation in FLT. A study conducted by Kilgarrif (2006), which aimed to identify the most collocated phrases using the BNC corpus, found that the most frequent nouns collocated with the most frequent verbs. Therefore, there is a need to analyse the collocational behaviour of GVs and their objects.

Another point which should be considered during the analysis of GVs is that frequency has a deeper interpretation than merely having a high number of occurrences. Sinclair et al. (2004) related the frequency of phrases and the frequency of words by hypothesising that frequent words are thereby frequent because they occur in frequent phrases. Those words are flexible in their ability to elaborate from their literal meanings and thus they are frequent. This elaboration from the literal meaning is true in the case of GVs because they gain new meanings when combined with nouns (objects). However, it cannot be concluded that because they lose some of their semantic weight, they have no meanings or no ability to gain new meanings. After all, the unit of meaning does not only assume that meaning is related to the word itself but also extends to other elements that shape the meaning of the unit based on four categories: collocation, colligation, semantic preference, and semantic prosody. Frequency plays a main role in defining GVs, as it allows for the detection of patterns where GVs repeatedly co-occur. Therefore, frequency will serve as the first criterion for identifying the concept of GVs in my research.

Sinclair argues that frequent words "need to be studied and described in their own terms" (1999, p. 157). This point shows the significance of this current thesis because the target items are GVs patterns, which will be studied according to Sinclair's argument. Frequent words generally cause difficulty for learners as they reoccur in every text encountered but often with different meanings. GVs also cause much difficulty, as they do not have specific meanings and frequently change meaning. Frequency influences the meaning and structure of words by creating new bonds in their co-occurrences, which can cause confusion between grammar and semantics. This complicated area needs to be analysed and studied by considering a

new perspective that combines both concepts. The meaning of GVs is affected by frequency, which leads to the expansion of their meaning from a single verb to a whole pattern. In addition, to accurately understand the meaning of GVs, it is important to look at patterns where they co-occur. Several corpus-based studies will be reviewed from different perspectives in the following sections.

2.2. Descriptions of GVs patterns through corpus-based studies

This section reviews corpus-based studies that investigate the descriptions of GVs patterns through different perspectives: GVs patterns syntactically and semantically, comparative and cross-linguistic, and learners' misuse or overuses of GVs through the analysis of learners' corpora. The studies reviewed in the following sections present aspects of the argument that a corpus-based approach is more effective for investigating items that fall within the lexis–grammar interface. GVs are items that cannot be investigated in isolation; a more comprehensive and integrative approach is required for studying them in patterns where they co-occur.

2.2.1. Syntactic and semantic studies of GVs patterns

One of the most significant corpus-based studies on grammar in general is *A Comprehensive Grammar of the English Language* (Quirk et al., 1985). Using three corpora, Quirk et al. attempted to cover most aspects of English grammar, using real examples with indications of the differences among written and spoken data, American and British variations, as well as references to different registers. Because Quirk et al.'s (1985) study is a corpus-based approach, it refers to the concept of frequency. For example, it explains how passive and active voices are used in different registers, based on frequency. However, the study refers to GVs only in terms of discussing types of objects, specifically eventive objects. The study defines GVs as "common verbs of general meaning" and selects verbs based on frequency (Quirk et al., 1985, p. 585). The authors' focus is on the object rather than the verb, and the classification is accordingly based on the object, not the verb. Quirk et al. noticed that the eventive object enhanced the lexical meaning of GVs more than if it was used alone. For example, the meaning of the GV pattern in (a) has greater semantic weight than the subject +verb construction does in (b):

(a) *They are having an argument*.

(b) *They are arguing.*

Quirk et al. (1985) also analyse in detail the types of eventive objects that combine with verbs, based on the corpus data. The object can be a deverbal noun, as in *they are having an argument,* or does not have an equivalent, as in *he makes an effort.* An important point mentioned by Quirk et al. is that the meaning of the combination changed from the meaning of the verb if it was used alone. For example, *make love* is different from the meaning of the verb *love*. Quirk et al.'s (1985) study is based on British and American corpora, so it distinguishes between the use of certain verbs in American English (AmE) more than in British English (BrE), such as *take* and *have: take* is more frequent in AmE while *have* is more frequent in BrE. It considers variety in dialects, so we can assume that the corpora are representative of AmE and BrE. Their classification of the object (noun) is the basis of many later studies that focus on GVs, such as Akimoto (1989) and Sinclair (1990). Despite the short section in their book allotted to this important and highly frequent structure in English, Quirk et al. provide a list of possible eventive objects for the verbs: *do, get, give, have, make, offer, pay, put* and *take*. Quirk et al.'s study is considered one of the early corpus studies that examined GVs according to a corpus-based approach by considering the importance of frequency and its effect on meaning. It also reflects on how the meanings of these verbs change according to the patterns they occur.

After Quirk et al.'s study, attention was drawn to the use of corpus-based approaches in analysing language, more specifically GVs patterns. Stein (1991) examined GVs, but he did not consider all the cases of this structure, instead limiting the scope of his study to *take, have,* and *give + a + Vn*. Stein limits the object to a subset of nouns derived from verbs without any affix. Based on the analysed data, *have* is used to express casual activities while *take* is more directed and purposed, such as to *take an investigation* (p. 22). Stein notices that for all verbs, the ditransitive was more frequent in the corpus data than the monotransitive. In addition, he distinguishes the verb *give* semantically, based on the ditransitive and monotransitive conditions. In the ditransitive case, it reflects involuntary action, whereas in the monotransitive condition it reflects that something is caused. In addition, Stein (1991) argues that in colloquial dialects, the meaning of the structure of the verb + noun

combination is completely different from the verb if it is used alone or in another structure, such as *make love ≠ to love*. Stein (1991) categorises *take*, *have*, and *give* semantically; however, these semantic relations cannot be generalised because the sample used in the analysis was limited to the register of fiction.

Stein believes in close relations between grammatical patterns and meaning, by which the grammatical pattern can add to the meaning. In fact, Stein raises an important issue by considering that GVs are verbs with a specific function, more than "empty verbs", as Live (1973, p. 31) described them. In Stein's (1991, p. 15) view, GVs add "specific" meaning to the construction even if their meaning differs from the same full verb. In other words, GVs are not, as previously believed, weak or empty verbs, but they have special meanings that enhance the meaning of the noun (object) by combining with it. Hence, those verbs should be studied from the phraseological point of view using corpus-based approach.

Stein adds an important contribution by relating the items (GVs) to the patterns within which they co-occur and which enhance their meaning. This connection between pattern and meaning is based on CL principles in which GVs are studied within the context in which they co-occurr. Stein (1991) disagrees with Quirk et al. (1985) regarding the difference in using *take* and *have* verbs. Quirk et al. refers to the regional variety in using *take* and *have*. While Stein (1991), on the other hand, discusses semantic relations, especially those in novels written by American authors. Stein (1991) did not deny the regional variety but assigned other causes for different uses instead of merely attributing regional differences to the use of *take* instead of *have* and vice versa.

Although Stein (1991) reviews most of the literature related to the GVs and issues in terminology, he does not justify his exclusion of other types of structures. Although Stein compiles a corpus, its representativeness is questionable because it consists of 15 novels. Therefore, the register was confined to fiction, which could be the reason that he limited the scope of the study to one type of object. Nevertheless, Stein's study provided insight into GVs by clarifying how these verbs added meaning to the structure where they occurred, promoting meaning that is "uniquely determined" by the verb (p. 27) . Stein believes that GVs have their own functions and bring specific meaning to the pattern where they occur; for example, *have* can add

"interpersonal courtesy" to the pattern as shown in (a) where the use of *have + a smoke* is "adequate" usage for a formal situation (such as social engagement) and, as Stein states, "the only plausible form":

(a) Would you like to have a smoke before we go?
(b) Would you like to smoke before we go?

Hence, the term (delexical verb) that was previously used to describe these verbs is not precise enough. However, the study is still limited in scope because it covers GVs in only fiction and stylistic writing.

Another study which examines GVs syntactically and semantically based on using a corpus-based approach is Alego's (1995), which uses the Brown and the LOP (Lancaster-Oslo/Bergen) corpora. Alego identifies GVs based on the frequency criterion, believing that frequency is an important characteristic of GVs, however, he is more interested in the phraseological behaviour of the pattern. Alego (1995, p. 204) uses the term "expanded predicate" to refer to GVs, which he describes as "semantically general" and the object as "semantically specific". Hence, he does not reject the semantic weight of the verb, instead explaining that it is important to study this structure because it has been mistreated at different levels, such as in grammar and dictionaries. In analysing the corpus data, he finds that each verb collocated with certain nouns (object), which indicates the restriction of the verb towards the object. Furthermore, no detailed study has explained those restrictions. Alego refers to the restrictions as the idiomatic behaviour of some verbs when they are used with certain nouns. Alego distinguishes between the core-expanded predicate and the pseudo-expanded predicate by setting conditions. Verbs that follow all the conditions can be considered core-expanded predicates, whereas verbs that do not follow all the conditions are pseudo-expanded predicates (pp. 205-8). These conditions actually limit GVs to an extreme. Alego (1995) limits the core predicate to only the four most frequent verbs of general meaning: *give, have, make,* and *take*. He argues that the object has to be morphologically identical or semantically similar to a simple verb, such as *investigation = investigate.* The object has to be an indefinite noun because the *V + ing* structure, for example, is widely spread in grammatical constructions but not for lexical reasons. In other words, he excludes all objects that are not indefinite

nouns because they were selected based on grammatical rules and not for semantic reasons, such as *take one's pick*. Any other structure that fulfils some of the conditions is not a core predicate but a pseudo predicate with a focus on the eventive object condition.

The study argues that the regional variety is based on distribution rather than categories, which means that both verbs are used in both varieties, but more frequently in one variety than another. Interestingly, he observes that GVs are more frequent in BrE than in AmE. In addition, the differences between the varieties are statistical because of differences in frequency. Despite the detailed analysis of GVs in two corpora, the results are still not definite, as Alego states (1995). Although Alego indicates the rhetorical reasons behind using GVs instead of the simple verb, he does not explain them in detail. The article gives several reasons for the importance of studying the GVs, without including its implications for language learning. However, he agrees with Stein (1991) that GVs are far from being semantically empty.

In the same category, another study that uses an integrative approach is Akimoto's (1989) study, which provides a detailed investigation of GVs using a corpus-based approach. He uses a significant procedure in selecting and examining the collocational behaviours of verbs, although objects were limited to the deverbal noun (*V =N, V + suffix = N, V + particle = N*). In addition to using a corpus, he uses informants (testing of native speakers) to judge the acceptability of using GVs with different deverbal nouns. Akimoto tracks the syntactic and semantic behaviour of verbs.

Akimoto (1989) selects 710 deverbal nouns from a dictionary (*Longman's Dictionary of Contemporary English*, 1978) and a corpus (compiled of different sources, such as newspapers and novels). Akimoto attempts to find a suitable classification for GVs by first finding the possible collocate (the noun) of a particular verb and then predicting other collocates of the verb by gathering the synonyms of that noun. Hence, he argues the possibility of classifying GV collocations based on the synonyms of the deverbal noun that collocates with the GV. For example, *give* collocates with *answer*, so based on his approach, *give* can collocate with *reaction* and *reply*. In the analysis of the corpus, Akimoto tackles three issues: passivisation, modification, and complementation (pp. 178-195). Regarding passivisation, the verb

make is the most frequent verb in the passive form, whereas *have* never occurs in the passive form. Modification frequently accompanies the deverbal nouns, and the most frequent modifier is the adjective. Complementation is specific to what relates to the head noun (deverbal noun). Four types of complements co-occur with deverbal nouns: *to-inf, of-ing/, of NP, that-clause*. In fact, Akimoto calls these issues "related problems" (p. 178).

Akimoto (1989, p. 161) states that some GVs are idiomatic, based on his criteria, which can be summarised in two parts: semantic and syntactic. Semantic idioms, such as *take an oath*, are non-transparent, reject substitution, and they cannot be translated. On the other hand, idioms, such as *take place*, reject any syntactic transformation. Based on the findings, Akimoto's (1989, p. 175) study concludes that GVs are characterised by some idiomatic criteria, which leads to placing them on a "fossilisation scale". Therefore, GVs are challenging for both learners and researchers. Akimoto (1989) agrees with Wierzbicka (1982) that any classification of GVs should consider the syntactic and semantic relations in the whole structure and not only in one element, such as classifying the noun in isolation from the verb.

Akimoto's study is therefore an important contribution due to the integrative approach that is based on a corpus as well as performs a syntactic-semantic analysis. Despite the differences in the sizes of the corpora used in Quirk et al.'s and Akimoto's research, Akimoto's study is more comprehensive than Quirk et al.'s, being that Akimoto investigates GVs based on their frequency and attempts to classify GVs by detecting the patterns within which they occur. He tries to capture all GVs patterns and finds that there is a close relationship between GVs patterns and meanings (e.g., different words (objects) can be part of particular patterns based on their meaning). This review of how GVs patterns are analysed through the use of corpus-based approach leads us to the second section which presents how GVs appear in different varieties and across languages.

2.2.2. Comparative and cross-linguistic studies of GVs patterns

Research is limited on another sub-category of studies that investigate GVs using a corpus-based approach which focuses only on language varieties. Perhaps the only corpus-based study that compares four English varieties is conducted by Smith (2009),

who investigates the GV uses of *give*, *have*, *make* and *take* using American (AmE), New Zealand (NzE), British (BrE) and Australian (AusE) English. He focuses on examining regional and registered differences of general verb use. In the investigation, he relies on two types of sources: primary and secondary. The primary sources include dictionaries (L1, L2) and the international corpus of English (ICE). Secondary sources include spoken material. Smith finds that the verb *have* is more preferred in BrE, AusE and NzE than in AmE. Also, in L2 dictionaries, *take* was presented as an equivalent alternative for *have*. Smith reports that GVs are used more frequently in spoken English than in written English. He notices that dictionaries express a preference for the verb *take* as a GV in AmE, while *have* is preferred in BrE. I include this study to justify my choice of the BNC because the participants of Study One used BrE, which differs from AmE in its use of GVs.

An important study that investigates GVs phenomena using different sets of verbs, which are less frequent but have similar characteristics of the GV, is conducted by Verde (2003). She attempts to investigate the delexicalization phenomena of a set of verbs: *shed*, *cast* and *throw*. A significant point is the application of Sinclair's ELU model in the study by describing the verbs that she has examined. She argues (2003, p. 867) that Sinclair's model is "very fitting" to explain and determine the functions of the GVs, as this model provides an opportunity to examine the meanings and functions of general structure beyond the straightforward meanings of its components. She believes that defining or listing the nouns that collocate delexical uses of verbs are useless and eventually will be "doomed to fail" in capturing all of the meanings (Verde, 2003, p. 866).

A comparative study that inspects GVs from a translation perspective is conducted by Vrbinc (2005), who compares GVs patterns in English and Slovene. Vrbinc prefers categorising these verbs depending on the type of object that they are associated with or co-occur with, as Quirk et al. (1985) have classified them as *verb + eventive object*. Vrbinc does not use a corpus in the study, although it was based on dictionaries which have been compiled using corpora, such as *Collins COBUILD English Language dictionary*. Vrbinc (2005) explains that GVs patterns (*verb + noun)* cannot be translated to Slovene as it is expressed in English. It is translated as a single verb only. Sometimes, the translation from English to Slovene uses a combination of

two verbs instead of the *verb + noun* structure. Vrbinc's study demonstrates the difficulty of GVs when translating English to other languages (i.e., Slovene). Therefore, we can anticipate the difficulty of GVs when learning English as a FL. The following section explains these difficulties by reviewing studies that investigate learners' use of GVs.

2.3. The use of GVs patterns in the classroom

This section presents studies that focus on learners' use of GVs using corpus-based approach for analysis. Most corpus-based studies that assign GVs as target items in their research focus on the corpus output rather than the input, which is the aim of the current section. The first study that will be reviewed is Nesselhauf's (2004) study, which is one of the most comprehensive corpus-based studies. The focus of the study is analysing the difficulties that advanced learners have with GVs (the support of verb constructions (SVCs), as Nesselhauf called them), which are *give, have, make,* and *take*. Nesselhauf (2004) uses a sub-corpus of the international corpus of learner English (ICLE) that consists of written essays by German learners and extracts of all GVs. The verb *make* is the most error-prone among them, followed by *give* and *take*. The verb *have* is the least error-prone among GVs in her sample. In addition, it has been revealed that six types of difficulties have been identified through the analysis: using the wrong verbs, the wrong nouns, a GV instead of a single verb, a wrong complementation, a wrong determiner, and the wrong syntactic structure are all common mistakes (Nesselhauf, 2004). The most serious difficulty participants have is choosing the right verb for construction. Furthermore, Nesselhauf (2004) emphasises the importance of analysing the mistakes found in the learners' writing with caution, as the sample is small. Nesselhauf (2004) recommends important applications for language teaching, which can be summarised in two points: first, frequency is an important criterion when selecting what to teach regarding native-speaker usage. Second, GVs are highly frequent and have high error rates, so there is "indeed a need" to improve teaching of those verbs, as it has been demonstrated in the study that advanced learners have serious difficulties using them (Nesselhauf, 2004, p. 120). Hence, she suggests that collocation usage must be taught as a whole (pattern of

collocation, restriction on determiners, i.e., usage and not only verbs or nouns), which can be achieved by using corpora through concordance lines.

Nesselhauf (2004) identifies limitations with the methodology which she employs in the judgement of the verbs. First, the acceptability of GVs' combinations may differ from one native-speaker to another, but she uses the judgment as an indication of the acceptance of that construction, regardless of the degree of acceptance. Second, the investigation only contains four verbs, although there are other verbs that share the same characteristics as the selected verbs. Hence, the analysis cannot capture all the senses of GVs. Third, the research has analysed a small corpus, which made this study preliminary without any generalisations. The analysis reveals that about 23% of all GVs usage was wrong. In fact, the difficulty of those constructions is based on an "impressionistic observation" that has not been tested (Nesselhauf, 2004, p. 110). The study is more analytical and wider in covering high-frequency verbs than other studies (e.g., Altenberg and Granger, 2001) and it has significant importance for analysing the difficulties of GVs for advanced EFL learners (German speakers). The learner corpora have many benefits in analysing learners' usages, especially if this analysis is translated to the practical applications for language teaching, which is an aim of the current thesis (see Part Two, Chapter 3).

Another significant and detailed study which also focuses on corpus output is conducted by Altenberg and Granger (2001) in which they investigate only one verb: *make*. The study investigates learners' uses of the high-frequency verb *make* by comparing non-native speakers' and native speakers' uses of this verb using the ICLE database. The focus of the study is investigating the use of the verb *make* as a representative of high-frequency verbs. The non-native speakers group consisted of two samples: French and Swedish learners who wrote essays about 170,000 words in length. The control group is comprised of American students and the written essay was about 170,000 words in length. The authors use the Louvain Corpus of Native English Essays. The learners were advanced, in either the second or third year of an English degree. The French learners underused the verb *make*, which supported Sinclair's (1991) claim, while the Swedish learners used it with insignificant difference. The verb *make* has similar uses in all three groups, which was classified into eight categories. Two of them are important, as they are more common than the

other categories, which are the causative and delexical uses. Regarding the delexical uses, both French and Swedish learners underuse the verb *make* in its delexical sense. The Swedish learners overuse the verb as a high-frequency verb, while the French learners underuse the verb in its overall sense. In addition, another difference between native speakers and non-native speakers is that the latter misuses *make*, as this verb collocates with nouns of speech actions, such as *point* or *statement*, while the non-native speakers use the verb *do* to express speech actions instead of using *make* (Altenberg & Granger, 2001).

To conclude, Altenberg and Granger's study reaches a significant result, as EFL learners at the advanced level have difficulty using the high-frequency GV *make*. The study supports Sinclair's (1991) claim regarding learners' underuse of high-frequency verbs, especially in their delexical uses. The study sheds light on the importance of focusing on teaching high-frequency verbs through their grammatical and lexical patterning. Although the study investigates only one verb *make*, it includes two samples of learners and compares the effect of L1 on the production of *make*.

Another important direction of GVs studies investigates how textbooks treat and classify GVs. The reviewed study which is conducted by Gouverneur (2008) is considered representative of this category because of the perspectives (viewing the verbs as phraseological) and methodology (corpus-driven) it follows. It investigates the high-frequency verbs in popular general EFL textbooks using a corpus-driven approach. The investigation focuses on the phraseological uses of high-frequency verbs, particularly *make* and *take*. The methodology used is a mixed approach which starts with a quantitative method, frequency and extraction, then a qualitative method, patterns and exploitation. Gouverneur (2008) investigates the phraseology treatment in general EFL textbooks, as learners often face difficulty in using phraseological patterns productively. Therefore, she selects two high-frequency verbs to be examined through three textbooks at two levels: *Cutting Edge, Inside Out* and *New Headway.* All three books that have been analysed show a wide range of "pedagogical choices" such as exercise focus, learning activities, and lexical focus (Gouverneur, 2008, p. 223). This study provides an annotated corpus of textbook material corpus (TeMa) available for other investigations in textbooks, as it is similar to the learner corpora. The TeMa corpus can be a great addition to the many benefits of corpus applications.

The results are interesting because they reveal that GVs are treated differently at the advanced level from the intermediate level.

Nesselhauf (2004) finds that advanced learners misuse GVs and have problems in using them productively, and emphasises the need to improve teaching materials. Conversely, Gouverneur (2008, p. 235) finds that these restricted collocations "high frequent verbs patterns" appear in the intermediate-level textbooks more often than in the advanced-level texts. Therefore, these patterns are taught explicitly only at the intermediate level, whereas they are being "relegated" to learners' backgrounds or memories at the advanced level (p. 235). These results have helped to shed light on the difficulty in using these patterns for advanced learners, in which there is a lack of a direct focus on presenting GVs patterns. Dealing with the high-frequency verbs as acquired knowledge for advanced learners will only lead to misuse. High-frequent verbs are learnt at an early stage, but this is does not mean that they cannot be taught at the advanced level. The high-frequency verbs are important to be included at both the intermediate and advanced levels, as intermediate-level learners learn a verb's meaning and usage, but they can also acquire its collocations at this stage (restricted collocations, see section 3.3.3). Therefore, such verbs need to be taught to advanced learners as less restricted collocations, as it can be beneficial at this point in increasing their proficiency. Gouverneur uses the term phraseological interchangeably with the term delexicalised. This indicates the necessity to treat GVs as chunks or part of phraseology because the current treatment results in a gap in GVs acquisition. The findings of Gouverneur's study support my point that the reason for difficulty, misuse and the overuse of GVs by EFL learners is caused by the lack of a smooth transition from one proficiency level to another, in terms of teaching materials.

There are studies that investigate GVs as part of other types of collocations such as Chan and Liou's (2005) study, which selects the *verb + noun* structure as target form in the study (see section 1.2.3.). Finally, Juknevicine's (2008) study attempts to duplicate Nesselhauf's study with a slight difference in the sample (size and L1) and by adding the verb *do*. Juknevicine investigates GVs uses for *make*, *give*, *take*, *have* and *do* in a Lithuanian corpus and a native speakers corpus. The results indicate a misuse of the verbs because of L1 influence. The learners avoid using these

verbs, preferring to use well-known words to avoid errors. The translation from L1 to the English language affects the learners' ability to differentiate between *do* and *make*.

The review of these studies reveals differences between the corpus approach and the non-corpus approach. The corpus approach appears more effective than non-corpus approaches because it allows for the generalisation of patterns and provides an integrative approach to GVs. In addition, the corpus-based approach supports empirical attitudes in language research. The data is based on real language, and they include frequency in the step towards the integrative approach, thus capturing most aspects of GVs (e.g., Quirk et al., 1985; Akimoto, 1989; Stein, 1991; Alego, 1995).

Corpus-based studies that cover all GVs thoroughly are rare. With the exception of Akimoto (1989), other corpus-based studies were limited in scope and covered limited sets of GVs and/or limited sets of nouns (objects). The reviewed studies that investigate learners' use of GVs through investigating learners' output by analysing their production using learner's corpus (i.e. Nesselhuf, 2004; Altenberg & Granger, 2001), both focus on advanced learners, so no study targets intermediate level leaners. In addition, reviewing Gouverneur's (2008) study draws attention to the differences between intermediate and advanced level textbooks in teaching GVs, which may have impact on the misuse of GVs in learners' productions. It is clear, after this review, how CL provides an insightful addition to the description of language. The reviewed literature on GVs thus reveals a clear gap in the current knowledge related to the lack of an operationalisable definition of GVs for classroom application. This current research addresses this gap by utilising a corpus-based approach (multi-level approach) to define and identify GVs.

PART TWO: Study One

Most studies that investigate the uses of the DDL approach and tools in the classroom do not provide sufficient training on the use of corpus tools (see Chapter 1 for a detailed review). In addition to the lack of training, there is an evident gap in our knowledge of learners' independent corpus use, and although we can find a limited number of studies that attempt to address and fill this gap (e.g. Pérez-Paredes et al., 2011), they are not conducted adequately. These studies provide training as an introduction before learners perform tasks, which leads, in most studies, to insignificant results or less positive attitudes for supporting the DDL approach in the language classroom (e.g., Cresswell's 2007 study).

Study One aims to fill this observed gap in the existing literature by building upon the foundations established by the studies reviewed in the previous chapters. To this end, the current investigation aims to provide sufficient training for learners before starting any tasks or activities, then continues the training while learners perform the tasks (I call this type of guidance 'exemplar guidance' throughout this thesis).This experiment utilises tracking software, which is an innovative methodology that provides a rich account of the learners' engagement with corpus-based activities and tools.

The primary aims of Study One are to investigate the effectiveness of the DDL approach in the Saudi Arabian classroom where English is taught as a FL, and using GVs as target items in a case study. The experiment also aims to evaluate the effectiveness of the training on the use of the DDL approach and corpus tools.

Chapter Three: Selection Criteria for General Verbs

In this chapter, I present a case study on GVs as part of investigating how the DDL approach can be used in the classroom for learning GVs. Accordingly, I define and identify GVs within the context of a corpus-based approach as an operationalisable concept in the classroom in sections 3.1. and 3.2., then select identifiable criteria for using GVs in the EFL context in section 3.3. This thesis does not delve into the concept of GVs but operationalises the concept for application in the classroom. The criteria for defining and identifying GVs for the present study have been selected according to a multi-level approach, which will be explained later in this chapter in section 3.3.

3.1. Definition of GVs

GVs patterns are phrases or constructions that consist of a GV + (*a, an, + adjective*) + noun. GVs are lexico-grammatical constructions where the verb carries a general semantic meaning, whereas the noun denotes a specific meaning (Algeo, 1995), (see Chapter 2). The structure of GVs (verb + noun) conveys abstract and concrete meanings as one unit (Francis et al., 1996). Because of their combinatory behaviour, GVs gain new meanings that are not listed as primary senses in dictionaries. In this thesis, I use the term 'node' to refer to a GV, 'collocate' to refer to a noun, and 'GV pattern' to indicate a GV + a/an + noun construction.

GVs patterns can also be considered as a type of collocation, which is an important concept in corpus and phraseological based studies. A collocation, according to Firth (1957, p. 196), is "an abstraction at the syntagmatic level and is not directly concerned with the conceptual or idea approach to the meaning of words" (Firth, 1957, cited in Partington, 1998, p. 15). Sinclair develops the concept further by defining collocation as "the occurrence of two or more words within a short space of each other in a text" (Sinclair, 1991, p. 170). Sinclair et al. (2004, p. 10) later define a node (GV) and a collocate (noun object) as follows:

> A node is an item whose total pattern of co-occurrence with other words is under examination; a collocate is any one of the items which appears with the

> node within a specified span. Essentially there is no difference in status between the node and the collocate; if word A is a node and word B one of its collocates, when word B is studied as a node, word A will become one of its collocates.

This definition is insufficient because it fails to differentiate true collocations (restricted collocations, figurative idioms, pure idioms) and false collocations (free combinations). False collocations is a term mentioned in Evert (2004, 2009) and Pecina (2010). True collocations is a broad term used to refer to expressions that demonstrate collocational behaviour either in restrictedness or meaning opacity, while false collocations are equivalent to non-collocations. In other words, depending only on Sinclair's definition for GVs will result in including false collocations because GVs are among the most frequent verbs in English. Stubbs (1995) recommends using statistical measurements to measure collocation strength, which can then be used to assist the identification of true collocations.

GVs are flexible in that they allow for the elaboration of their literal meanings; hence, GVs are frequently used in everyday language. The meaning of GVs is affected by frequency, which leads to the expansion of their meaning from a single verb to a whole pattern (see Chapter 2 for a detailed discussion). This expansion from the literal meaning of the verb is possible because GVs gain new meanings through their combination with nouns. Frequency is an indication of the different meanings a word can express: if the word is more frequent, it has many meanings and occurs in almost all texts. For example, *make* can mean *form* or *create* as in *she makes a cake,* and can also mean *reasonable* as in *make sense.* These verbs tend to collocate with large sets of nouns, often formulaically, such as *make a splash*. The frequency of a GV also enhances the description of its meanings by creating observable patterns. In addition, frequency leads to the identification of meaning based on the relationships among the items of particular patterns.

Furthermore, to accurately understand the meaning of GVs, it is important to look at patterns where they co-occur. The fact that they lose some of their meaning should not be interpreted as a lack of meaning or a lack of potential for gaining new meanings. After all, a unit of meaning not only assumes that meaning is related to a word itself but also extends to other elements that shape the meaning of the unit.

Frequency plays a main role in defining GVs, as it allows for the detection of patterns where GVs repeatedly co-occur. Therefore, frequency serves as the first benchmark for identifying GVs patterns in this thesis.

The focus on GVs in this work is rationalised below:

1. Many studies (e.g., Altenberg and Granger, 2001; Nesselhauf, 2005) show that GVs usage is highly problematic and confusing for learners. For this reason, this thesis contributes to resolving this difficulty by operationalising the concept of GVs for application in the classroom to lessen the confusion for learners.
2. In her review of EFL textbooks, where she concentrates on the verbs *take* and *make*, Gouverneur (2008) indicates that little attention is paid to GVs patterns in primary language learning series, such as *Cutting Edge*, *Inside Out* and *New Headway*. The result indicates that these patterns are taught explicitly at the intermediate level and relegated to learners' memories at the advanced level, raising the argument that more attention should be paid to GVs patterns in both the intermediate and advanced levels, as the problem of misusing these patterns is still being discussed (see section 2.3). In other words, what is difficult for advanced learners presumably remains difficult for intermediate level learners as well.
3. To the best of my knowledge, no attempt has been made to operationalise GV use in the classroom even though numerous studies (e.g., Nesselhauf, 2005) identify the difficulties of using GVs as part of verb + noun collocations in written discourse (see Chapter 2). It is recommended by many scholars (e.g., Nesselhauf, 2005) to operationalise GVs use in the classroom, so in the following section I will discuss the issue in detail.

3.2. Operationalisation of GVs in the classroom

This section discusses the identification of an operationalisable concept of GVs for use in the classroom; such operationalisation is missing in previous studies. The previous literature on the description and acquisition of GVs shows a lack of systematicity in identifying and defining GVs and GVs patterns, with Quirk et al. (1985) focusing on the nouns to study GVs patterns and Stein (1991) focusing on the

verbs to study the patterns (see section 2.2.1 for additional studies). To start addressing the gap, I review two streams of research: studies that focus on the description of GVs, and those that centre on the acquisition of GVs.

The review of descriptive studies indicates that the majority of scholarship utilises different approaches and criteria for identifying GV patterns. Quirk et al. (1985), for instance, refer to only GVs in discussing object types, specifically eventive objects. The authors define GVs as "common verbs of general meaning" (p. 585) and select verbs on the basis of frequency. The focus is directed towards the object, and the classification of the GVs on their list is based on the object and not on the verb. Quirk et al. (1985) also note that an eventive object (e.g., *they are having an argument*) enhances the lexical meaning of a general verb structure more strongly when used in combination with a GV than when used alone. Because the authors' work focuses on nouns (i.e., eventive objects), they identify GVs but they do not discuss the characteristics or descriptions of GVs in depth.

By contrast, Akimoto (1989) comprehensively investigates GVs by using a corpus-based approach monitoring the syntactic and semantic behaviours of *give*, *have*, *make* and *take*. His selection of these verbs is based on his research aim of exploring de-verbal nouns, and he treats the verbs as the most frequently collocating verbs with de-verbal nouns. Akimoto aims to identify all the de-verbal nouns that can collocate with any of the selected verbs and to clarify all the collocational structures of verb + deverbal nouns on syntactic and semantic bases. It also endeavours to ascertain the degrees of idiomaticity of these collocational patterns. A limitation of his study, however, is that it does not present implications for the classroom. Akimoto (1989) investigates GVs' phraseological behaviour thoroughly but does not suggest how to include those patterns in teaching, or how knowing the phraseological behaviour of GVs can be helpful to overcome the difficulties that learners face with those verbs.

Stein's (1991) study also examines GVs and provides insight by clarifying how these verbs are added to a structure where they occur and accordingly promote meaning that is determined by the verbs. Another study conducted by Algeo (1995) includes only four verbs, *have*, *make*, *take*, and *give*, as core-expanded predicates because they are the most frequently occurring verbs in the data that he examines and because they are the semantically lighter verbs amongst expanded predicates (*be,*

come, do, get, give, have, make, pay, put, take). His selection is therefore grounded in the general meaning that a verb carries in relation to an eventive object. Although Algeo (1995) points to the importance of this construction for non-native speakers, he does not discuss implications for teaching GVs.

Sinclair (2011, p. 156) views GVs as delexical verbs with "little meaning". GVs have been described as common verbs that are used with their objects to convey performance of actions. Sinclair (2011) establishes a GVs list comprising of *give, take*, *make*, *have, do, hold, keep* and *set*. In the delexical structure, focus is directed towards an event, which appears as a finished event. The following examples illustrate this focus:

"*I looked around the room.*" = The focus is the act of looking.

"*I have a look*". = The focus is the event of looking, which is complete.

Sinclair (2011) thus restricts the structure of GVs to GV + singular, plural, uncountable noun or noun with no equivalent verb. This noun is sometimes modified by an adjective. Sinclair (2011) lists possible nouns after each GV, with no explanation of the reason for the selection of the examples. He states in the introduction of his book that the examples that best explain grammatical points will be provided from the Collins corpus.

An issue worth considering is that most of the reviewed research on GV descriptions select frequency as the only criterion for studying GVs such as Quirk et al. (1985), Stein (1991), and Algeo (1995). So the focus has been only on describing the most frequently occurring verbs in English, without additionally considering the criteria for narrower contexts of their use.

The second stream of research investigates GVs acquisition and the difficulties that learners may encounter if they use these parts of speech. Most studies select target items in accordance with different criteria, such as the restriction or figurative meanings of GVs, with selection typically based on phraseological criteria. The studies that examine the acquisition of GVs in the literature also vary in their investigative focus. Bahns and Eldaw (1993) identify a more systematic approach to incorporating this structure in classroom lessons because teaching all the collocations related to the most frequently used verbs is impossible. The authors consider a noun as

the node (the searched word) and a verb as the collocate, and examine the potential difficulty and susceptibility to error manifested in these collocations by analysing learners' productions in translation tasks. The authors argue that the selection of the verb + noun collocation for instruction must be based on the difficulty with which target items are paraphrased. They also recommend selecting patterns based on translation equivalents; their criteria depend on L1 influence, which is impractical for material designers because they need to work with every language to determine the collocations that lack equivalents in a universal EFL context. Chan and Liou (2005) also investigate how different types of verb–noun collocations are differentially acquired by learners. They select GVs (*make* and *do*) as one type of verb–noun collocation in one of the experiment sessions. This selection is according to non-congruency and semantically unmotivated collocations (arbitrary collocations), with the choice of *make* and *do* based on the researchers' preference.

Other studies approach GVs patterns by examining learners' production of GVs patterns. For example, Nesselhauf, (2004) and Altenberg and Granger (2001) investigate learners' use of GVs by analysing their output and production using a learners' corpus with both studies focusing on advanced learners. Other studies review textbooks, such as Gouverneur (2008), who highlights the differences in textbooks between intermediate and advanced levels in teaching GVs, which may impact the misuse of GVs in learners' productions (see section 2.3.3. for a full review).

The aforementioned researchers employ two main approaches to GVs selection: frequency and phraseological approaches. Previous work on classifying GVs has been thorough (e.g., Akimoto, 1989), but no study has delved into the application of classifications in the classroom (specifically, the EFL classroom). The majority of studies do not provide clear selection criteria for teaching GVs in the classroom and some scholars disagree as to what items should be included and excluded as GVs patterns (e.g., Algeo, 1995; Stein, 1991). Yet other studies focus on a phraseological perspective, For example, Nesselhauf (2005) provides different recommendations on GVs instruction in the classroom. Her suggestions are based on the restrictedness of the elements of a given pattern, as restrictedness can be used to determine degrees of difficulty. All the previous studies reviewed emphasise the importance of teaching GVs. In these studies, the definition of GVs is either corpus

based (frequency based) or phraseology based (based on restrictedness and transparency classifications).

A currently unaddressed limitation in the literature is the lack of any attempt to operationalise GVs for use in the classroom, to present a direct application of GVs instruction, or at least to identify a systematic approach to selecting and classifying GVs for pedagogical purposes. Using both parameters (frequency and phraseology) as complementary approaches is critical to defining and identifying GVs patterns. The frequency-based approach is helpful in collocate (object) selection but cannot elucidate why such collocations are difficult for learners. Thus, resolving this deficiency necessitates a second level of selection based on the phraseological approach, which also advances the classification of GVs for classroom application.

The current research intends to fill the gap between work done in studying and classifying GVs and what should be done in teaching GVs. GVs used in this study are chosen on the basis of the previous literature, and these serve as the nodes from which I initiate my investigation.

3.3. Multi-level approach

To operationalise GVs use in the classroom, I adhere to a multi-level approach to GVs selection. The multi-level approach consists of three levels: the first is corpus based, the second is phraseology based and the third is pedagogical in nature. The choice of this method of selecting GVs for the language classroom is crucial, as explained in the following sections.

3.3.1. Previous classifications of GVs

Table 2 presents GVs derived from previous literature on the basis of my definition of these parts of speech, as determined from the review of the literature (see Chapter 2 for a full review).

Table 2. *Previous classifications of GVs in the literature*

Study/year	Classification of GVs	Listed verbs	Num.
Quirk et al (1985)	General verbs	***Do, get, give, have, make, offer, pay, put, take***	9

Akimoto (1989)	Light verbs	*Have, make, give, take*	4
Sinclair (2011)	Delexical verbs	*Give, take, make, have, do,* ***hold, keep, set***	8
Stein (1991)	General verbs	*Take, have, give*	3
Algeo (1995)	General verbs–core-expanded predicates[3]	*Have, make, take, give*	4
Biber et al. (2002)	Multi-word, verb constructions (verb + noun phrase combinations)	*Take, make, have, do*	4
Altenberg & Granger (2001)	High-frequency verbs[4]	*Have, go, take, do, say, look, know, see, give, think, come, find, get, make, use*	15

In Table 2, the words written in bold typeface (12 in all) are listed in the literature as GVs[5], but these words are not the only GVs in English. Other verbs tend to assume the function of GVs when they collocate with specific nouns. In her analysis of *throw*, *cast* and *shed*, Verda (2003) observes that these words only carry general meanings when they collocate with specific nouns. These verbs are infrequent and collocate with a few nouns; *throw*, for example, is used as a GV at minimal frequency, with five percent of its co-occurrences manifesting as GVs patterns (Verda, 2003). This phenomenon is extensively addressed by Sinclair (1991, p. 113), who refers to a tendency where frequently used words lose some of their meaning and independence through "progressive delexicalization" (see section 2.1.3). Progressive delexicalisation can apply to any word which carries a less independent meaning or loses a considerable proportion of its meaning to other words in a phrase.

As stated earlier in this chapter, this study does not comprehensively examine the concepts of GVs but centres on operationalising them for classroom instruction. The selection of GVs is therefore grounded on previous classifications of these parts of speech (see Table 2) and the most frequently used verbs (list generated from previous studies) indicated in the British National Corpus (hereafter, BNC) (see Table 3).

[3] Algeo (1995) adds another classification for GVs, which is the pseudo-expanded predicate group. It is a broader definition of core-expanded predicates (1995, p. 208). A review of the study is provided in Chapter 2.

[4] They select *make* as the most representative verbs for delexical use.

[5] I exclude Altenberg and Granger's (2001) list because they include the most frequent verbs with no mention of their general meanings or relationship to objects.

Table 3. *GVs' ranking from the BNC (written discourse)*

	GV	Original rank in the BNC	Observed frequency	Relative frequency
1	have	2	1113264	1.113%
2	do	3	365811	0.3658%
3	make	8	190610	0.1906%
4	take	10	152773	0.1528%
5	get	13	117885	0.1179%
6	give	16	111352	0.1114%[6]
7	put	36	48786	487.9 pmw[7]
8	hold	38	44413	444.1 pmw
9	keep	40	41736	417.4 pmw

I choose the top seven GVs (see upcoming section 3.2.1. for the justification for the selection of this number of GVs) to determine the means of operationalising GVs for use in the classroom. These GVs have been selected according to their frequency in the BNC from amongst the generated list of GVs in the existing GVs scholarship featured in Table 2.

The BNC is a large corpus of written and spoken British English containing 100 million words, providing a rich source of data for this study and the large body of text that is necessary for effective research (Sinclair, 1991). The BNC was built in the late twentieth century using a wide variety of genres, and it consists of 4,000 texts. Ninety percent of these texts is written discourse, and about ten percent is spoken discourse. The BNC serves as the data source because the curriculum of English language instruction in the institution within which this research is conducted uses British English. This is a key aspect of the present study, as American and British English differ in terms of GVs usage (see Smith, 2009).

The selection of GVs collocates and concordance lines is limited to the written component of the BNC because the current curriculum of the case institution revolves around improving writing skills. Furthermore, the written component of the BNC in

[6] Frequencies in normalised (percentage) form.

[7] Frequency per million words.

general provides richer examples than those offered by the spoken component; this data source is expected to facilitate the development of teaching materials that are suited to the proficiency levels of the target students.

This exclusion is based on the relatively small size of the spoken BNC, which would not produce enough materials (i.e., a high enough number of concordance lines) to teach GVs patterns in the classroom experiment. The spoken corpus also contains abbreviations, misspellings, and colloquial language, which may increase the difficulty for the participants because they are FL learners of an intermediate level. Also after deciding to use the Log Likelihood measure for generating GVs patterns (see section 3.3.1.), the values for the patterns are low which means that the patterns are not repeated frequently in the corpus.

A systematic multi-level approach to the selection of GVs patterns for intermediate-level learners was designed. The following sections discuss the three levels of the approach and provide an illustration of how it is employed. I use the GV *make* to show the steps taken in employing the multi-level approach. (See Appendix 1 for a list of the other GVs used in this study).

3.3.2. First-level (corpus-based approach)

Given that this thesis is a corpus-based study, a frequency-based approach is the first step in GVs patterns selection. Accordingly, this is also suitable due to the high number of occurrences of GVs usage in English. Most of the GVs in Table 2 are amongst the most frequently used verbs in general, according to the BNC and COCA; those selected for this thesis are amongst the most frequently used verbs in the BNC (see Table 3), which lists GVs under the most frequent 1,000 verbs in English (1K grad) [8].

I use frequency as the basis for choosing GVs and log likelihood (LL) for choosing GV collocates. This approach in defining GVs patterns is useful because it identifies the frequent usage of a word in a language. The frequency-based approach is also helpful in extracting the recurring collocates of each GV. For reasons of

[8] I use the Lexis Tutor website to verify the frequency band of GVs.

practicality, the present study follows the recommendations of most researchers (McCarthy, 1990; Nation, 1990; Richards, 1974) in beginning with frequency as the first criterion for selecting vocabulary to teach.

Sinclair et al. (2004) outline that a collocate must occur within a specific span and that a collocation (two words or more) must be examined to determine whether it is significant. To this end, three parameters require specification: "the length of the text in which the words appear, the number of times they both appear in the text, and the number of times they occur together" (Sinclair et al., 2004, p. 28). By collocation significance, Sinclair et al. (2004) refer to the use of statistical measurement (empirical evidence). McEnery and Hardie (2012, p. 126) state that few neo-Firthian linguists or linguists who follow Firth in adopting collocation concepts (e.g., Hunston, 2002; Krishnamurthy, 2000; Sinclair, 2004) support the use of significance as a statistical concept in identifying collocations. The use of the significance concept means that the results are unlikely to occur randomly or by chance. For other schools of corpus linguistics (such as the tradition in Lancaster), the dependence on statistical measurements in identifying collocations is a more predominant practice.

In this thesis, I adhere to Sinclair's (1991) view that in a verb + noun collocation, the verb is the key component. This evaluation is motivated by the fact that the combinatory behaviour of a verb produces the collocation. As well, the focus of this thesis is identifying an effective approach to teaching GVs. Thus, considering the verb as the key component of the collocation will help in facilitating a systematic approach to identify GVs.

The measures of association strength between verb + noun in GVs patterns are based on the comparison of the observed and expected frequencies of the two items (Evert, 2009). Two types of measures are generally used. The first is the effect-size measure (e.g., MI), which focuses on measuring the effect size of a collocation depending on expected frequency (Evert, 2009) and evaluates the association strength of two words regardless of sample size. This type of measure is "unreliable" for low-frequency collocations (Evert, 2009, p. 1234). The second type of measure is the significance measure (e.g., LL, t-score, z-score), which calculates the observed frequency of a collocation in a data set (Evert, 2009). Z-score is affected by the normal approximation which can cause violation of the normality assumption, so it is

similar to MI in counting low-frequency bias. In addition, Evert (2004) considers t-score inapplicable to frequency-based co-occurrence data because it is based on the mean of normal distribution.

Evert (2009, p. 1237) argues that LL provides an excellent approximation, which makes it "an appropriate and convenient measure" in the significance group. Other researchers (e.g., Daille, 1994, as cited in Evert, 2009) similarly regard LL as the most appropriate association measure for extracting multiword expressions and compound nouns. One of the essential characteristics of LL is that it provides results on what is observed and not what can be expected from data. Hoffmann et al. (2008) argue that LL does not assign high scores to low-frequency collocations, which is crucial in the current study, given that target students are of intermediate proficiency and therefore may struggle with relatively infrequent collocational patterns. Because this research investigates GVs patterns for intermediate learners, an appropriate measure is a significance measure, such as LL, which is prone to high-frequency bias. For example, MI shows the infrequent lexical collocates for *make* such as *bee-line*, while LL shows more frequent function and lexical collocates for *make*, such as *sure*, *clear*, *decision* (frequent).

LL facilitates the selection of a huge number of frequent collocations for intermediate learners and eliminates rare collocations. Using statistical measurements presents advantages in terms of saving time and effort, especially with large datasets. At the same time, criteria must be precise and explicit to guarantee reliable results. In other words, a statistical measurement must precisely determine a threshold and explicitly include or exclude any elements based on that measurement.

Apart from frequency and LL criteria, other variables such as window span and span position can affect the selection of GVs patterns. Span position refers to the right and left regions of a node. The span of a window can be extended to 10 words to the left and right of a node, depending on the aim and the scope of the study. In an interview conducted by Teubert, Sinclair (2003, p. xxvii) observes that "we must realise that the wider the span, the lower is the significance in general. The span ±2 can still be very powerful, but once we come to ±4 or ±5, significance will decrease". Sinclair et al. (2004) argue that results will be less significant under a wide span than under a narrow span. A wider span shows false collocations as well as true

collocations, besides revealing grammatical and lexical collocations, which is beyond the scope of this study.

For the purposes of this study, the span position is restricted to the right direction from the node, in accordance with Francis et al. (1996). Francis et al. (1996) advise that if a node is a verb, investigating the aforementioned position is favourable because this position exhibits the strongest patterns. With regards to window span, I found that a span of +5 produces collocates of low significance such as *make tea* (N. 1), *make behalf* (N. 4), *make trouser* (N. 6). I thus reduced this value to +3 so that I can capture more significant collocates, given that nouns operating as direct objects generally appear within a span of +1, +2 or +3. A span of +3 also generates collocates that are part of grammatically difficult phrases, such as *make it give way*. Those phrases may be difficult in identifying the first and second object. So, a span +3 presents GVs patterns with more variable elements which are *definite/indefinite articles* and *modifier/quantifier/ qualifier + nouns*. A final window span of +1 is chosen to obtain significant collocates and resolves the difficulty that participants encounter when they use the concordancer, which pertains to variable elements (definite/indefinite articles and modifier/quantifier/qualifier) that appear between a verb and a collocate. A +1 span is selected for the purpose of deriving a fixed pattern (see section 3.3.4., third level of analysis, for more details).

The rationale for selecting a +1 span is based on a pilot study that was first conducted to examine the software and the technical aspects of the research, such as a suitable tracking software and the training steps involved in using the corpus analysis tool AntConc (see section 4.4.4). In the first pilot study, most of the participants experienced difficulty in determining collocates due to complications in distinguishing between first- and second-position collocates. The following Table 4 shows the collocates of *make* under span of +1.

Table 4. *Collocates of* make *in BNC according to log-likelihood measure under no restriction and span of +1*

	Word	**Expected collocate frequency**	**Observed collocate frequency**	**Log-likelihood value**
1	a	3724.64	21447	41548.48
2	sure	35.21	4417	35155.84

3	it	1522.58	12383	30972.87
4	up	327.90	5261	19608.43
5	me	197.06	2698	9212.12
6	them	256.21	2891	8831.05
7	him	265.17	2874	8565.52
8	sense	37.45	1527	8472.63
9	her	547.26	3727	8029.49
10	by	941.04	4738	7828.96
11	an	602.99	3765	7552.67
12	no	317.48	2486	5948.63
13	available	49.34	1191	5358.49
14	clear	44.10	1055	4727.34
15	love	37.49	891	3980.12
16	his	751.24	2973	3774.54
17	any	201.32	1543	3628.21
18	use	107.42	1185	3561.54
19	their	458.13	2112	3173.42
20	redundant	2.09	332	2818.87
21	decisions	13.45	434	2201.22
22	some	278.60	1327	2059.14
23	your	199.16	1077	1891.36
24	contact	18.89	394	1658.81
25	explicit	3.46	245	1637.69
26	mistakes	2.71	231	1636.86
27	us	124.15	796	1623.75
28	the	10712.46	14924	1576.22
29	possible	61.06	573	1551.59
30	amends	0.35	138	1516.93
31	good	122.23	752	1481.23
32	such	198.34	904	1338.59
33	things	56.00	486	1247.62
34	you	758.80	1915	1243.60
35	money	56.94	467	1151.87
36	arrangements	10.38	248	1109.46
37	out	318.02	1062	1079.39
38	representations	2.49	164	1071.49
39	its	298.27	1013	1053.66
40	recommendations	4.42	177	974.83
41	for	1544.01	2814	848.65

42	progress	14.79	229	832.61
43	himself	53.30	374	820.15
44	more	366.20	998	741.72
45	my	234.08	757	734.81
46	provision	15.49	210	710.73
47	enquiries	2.88	124	700.58
48	herself	29.32	261	681.70
49	friends	25.58	240	649.43
50	little	101.61	451	648.45

LL illustrates the importance of showing frequent collocates, and it can also facilitate the production of a list of many function words. For this reason, I restrict the search to lexical words (more precisely, nouns) because these serve as objects of the studied GVs. For example, a list without a noun restriction includes *a*, *it* and *up* (grammatical words), amongst other content words, whereas a list with noun restrictions includes only content words, such as *sense* and *difference*.

Apart from the importance of restricting collocates to nouns to exclude function words, it also supports syntactic co-occurrence, which describes collocation from a different perspective (Evert, 2009, p. 1222). Syntactic co-occurrence describes the frequency of a collocation by the existence of a direct syntactic relationship between the node and the collocate. In the case of GVs, there is a syntactic relationship between the node and the collocate, since the collocates appear in object slots. In generating collocates, I therefore restrict my search to nouns from amongst the generated content words. Table 5 shows collocates of *make* under a span of +1 with noun restriction.

Table 5. *Collocates of* make *in the BNC according to log-likelihood measure under noun restriction and span of +1*

	Word	**Expected collocate frequency**	**Observed collocate frequency**	**Log-likelihood value**
1	sense	36.34	1527	8566.20
2	use	56.41	1180	4978.52
3	love	24.55	891	4731.24
4	decisions	13.45	434	2201.22
5	contact	11.43	394	2049.88

6	mistakes	2.69	231	1640.38
7	amends	0.32	138	1568.21
8	things	56.00	486	1247.71
9	money	56.94	467	1151.87
10	arrangements	10.38	248	1109.46
11	representations	2.49	164	1071.49
12	recommendations	4.42	177	974.83
13	progress	13.75	229	864.46
14	provision	15.49	210	710.73
15	enquiries	2.88	124	700.58
16	friends	25.58	240	649.43
17	matters	14.04	187	626.63
18	public	16.67	199	626.36
19	comparisons	2.35	106	609.13
20	excuses	1.01	76	517.34
21	life	98.72	384	474.67
22	notes	9.66	132	448.60
23	ends	4.94	103	433.38
24	choices	3.18	89	426.02
25	judgements	1.64	72	410.19
26	inquiries	1.63	70	395.10
27	plans	17.17	150	386.68
28	concessions	2.01	72	380.47
29	fun	5.75	92	340.17
30	films	6.18	88	306.03
31	inroads	0.34	38	290.65
32	jokes	1.92	57	279.73
33	changes	33.29	165	265.92
34	statements	7.42	80	236.60
35	headway	0.46	34	230.96
36	predictions	1.46	45	224.05
37	tea	11.81	93	222.63
38	facilities	13.53	97	216.29
39	profits	10.55	82	194.30
40	peace	15.87	98	193.47
41	plain	1.99	44	190.25
42	coffee	10.15	79	187.45
43	adjustments	1.28	38	186.41
44	payments	8.24	72	185.64

45	room	50.16	173	183.35
46	connections	3.89	53	179.89
47	allowances	2.11	42	173.09
48	reference	14.34	88	172.76
49	speeches	1.82	40	172.30
50	demands	9.17	72	171.87

Table 5 shows the first 50 *make* collocates, which are identified using the frequency approach. LL is used to determine the collocates of each GV under a window span of +1, a span position to the right of a node and utilising noun restriction. Given constraints in time and space, the list contains only the top 50 collocates of each GV. For the six verbs, I investigate a total of 300 collocates (50 collocates for each verb) to enable some latitude in classifying each collocate in the second and third levels of the analysis (see section 3.3.3 & 3.3.4). These 50 collocates provide a space for applying the three levels of the selection criteria, as only six collocates are needed from the 50 collocates of each GV. A sample of 50 collocates is reasonable in cases where some collocates are excluded in the second and third levels of the multi-level approach. The same criteria are applied to the rest of GVs; that is, selection is restricted to the top 50 collocates (see appendix 1).

This leads to the second level of the analysis of the items, where the collocates are filtered in accordance with phraseological criteria. Such criteria are employed in this instance because the frequency approach alone cannot explain the characteristics of GVs patterns. The frequency-based approach is helpful in collocate selection but cannot elucidate why such collocations are difficult for learners. Resolving this thus necessitates a second level of selection based on phraseological analysis, which also leads to the classification of GVs patterns that are suitable for classroom application.

3.3.3. Second-level analysis (phraseological approach)

The frequency-based approach determines what items to include as frequent collocations for teaching. Its drawback is that it fails to exhaustively explain the combinatory behaviours of GVs, the greater difficulty of certain collocations, and the degree of difficulty of each collocation. It is also unable to specify the type of collocation, that is, whether a collocation is free, restricted or idiomatic in nature,

which is very important for language teaching to decide what to teach for each proficiency level. Howarth (1998, p. 26) emphasises that depending on frequency alone can drive focus towards "completely transparent collocations". Under this possibility, a second-level of analysis is required to classify GVs and their collocates from a phraseological point of view.

The phraseology-based approach treats collocations from different angles than the frequency method, which enables the classification of GVs based on more than just frequency. An orientation towards phraseology promotes a close examination of combinations that facilitate the formulation of criteria for a three-angled categorisation: "semantic specialization, syntactic restriction, and the blocking of lexical substitution" (Howarth, 1998, p. 27). Howarth (1996, p. 47) presents a comprehensive collocation classification based on the semantic characteristics, opacity and commutability of the elements of a collocation. Howarth (1996) uses this classification to delve into the verb + noun collocations in native speakers' and non-native speakers' productions. Table 6 depicts this classification (adopted from Howarth (1998, p. 28), following Cowie (1992)).

Table 6. *Classification of collocations*

Collocation	**Free combinations**	**Restricted collocations**	**Figurative idioms**	**Pure idioms**
Lexical composites (verb + noun)	Blow a trumpet	Blow a fuse	Blow your own trumpet	Blow the gaff

The present research classifies GVs by using two phraseological criteria, namely *commutability* (degree of restrictedness) and *transparency*. Commutability and transparency are the most common criteria in examining and classifying the collocations and also in identifying various types of collocations – idioms, figurative collocations, and restricted collocations (Nesselhauf, 2005). These criteria are reconsidered for the items in this study in cases where they conflict with pedagogical considerations for teaching GVs in the classroom in the third-level of analysis.

Commutability refers to the condition wherein the substitution of combined elements is restricted, as well as the extent of its restriction (Cowie, 1981). The most comprehensive classification of verb–noun collocations linked with commutability is

established by Howarth (1996, p. 102), who classifies them into five levels of restrictedness:

1. Freedom of substitution in the noun: some restriction on the choice of verb
    - an open set of nouns
    - a small number of synonymous verbs
    - *Adopt/ accept/ agree to a proposal/ suggestion/ recommendation/ convention/ plan etc*.
2. Some substitution in both elements

- a small range of nouns can be used with the verb in that sense
- there are a small number of synonymous verbs
- *Introduce/table/bring forward a bill/an amendment*.

3. Some substitution in a verb; complete restriction on the choice of the noun

- no other noun can be used with the verb in that sense
- there are a small number of synonymous verbs
- *Pay/take heed*.

4. Complete restriction on choice of the verb;

- Some substitution of the noun
- a small range of nouns can be used with the verb in that sense
- there are no synonymous verbs
- *Give the appearance/impression*.

5. Complete restriction on choice of both elements

- No other noun can be used with the verb in the given sense
- there are no synonymous verbs
- *Curry favour*.

Howarth (1996) argues that GVs patterns can be classified at level 3 or 4, but initiates classification at level 3, justifying this decision on the basis that a noun in a GVs pattern is equivalent to a lexical verb (e.g., *make a decision – decide*). By this rationale, no other noun can be used with the verb in that sense (meaning). The author also explains that a GVs pattern can be classified at level 4 because substituting a GV

with another verb and retaining the same sense is impossible. More importantly, Howarth (1996, p. 115) recognises the difficulty of classifying GVs patterns: "there is an inherent indeterminacy in a description of their degree of restrictedness resulting from their particular internal semantic structure and the very wide range of noun collocates". Howarth provides numerous examples to support his argument for classifying GVs at levels 3 and 4:

- *Make a decision/resolution*: substitution for verb is not possible; substitution for noun is possible (Level 4).
- *Make/reach/take a decision*: substitution for verb is possible; substitution for noun is not possible (Level 3).

Nesselhauf (2005) also offers a classification for verb–noun collocations, which she defines thus:

> The noun can be used without arbitrary restriction in the sense in which it is being used, but the verb is, in the given sense, to some degree arbitrarily restricted to certain nouns. (2005, p. 33)

Nesselhauf's categorisation does not count noun restrictedness, as Howarth (1996) does, but focuses on the verb because its combinatory behaviour leads to the creation of a collocation. I agree with this perspective, considering the behaviour of verbs and the flexibility of a verb in carrying a general meaning produced in combination with a noun. GVs are well recognised for their receptiveness to elaboration on the basis of their literal meanings; such receptiveness typically enables verb co-occurrence with certain nouns as very frequent collocations. Nesselhauf (2005, p. 30) distinguishes five groups:

1. Verbs combinable with (virtually) every noun
   Example: *Want something, or somebody* (*want a pen, a car, a baby, peace, fun,* etc.)
2. Verbs combinable with numerous nouns
   Example: *Kill* + [+ *ALIVE*] (*kill a man*, but not *kill a corpse, kill a chair*)
3. Verbs combinable with a small but well-delimitable semantic groups of nouns
   Example: *Catch* + [means of public transportation] (*catch a bus*, but not *catch a bike*)
4. Verbs combinable with a sizable group of nouns but with exceptions

Example: *Commit* + [something wrong or illegal], but not *commit a lie, commit deceit, commit delinquency*.

5. Verbs combinable with a small set of nouns

   Example: *Purse one's lips/mouth.*

Nesselhauf's (2005) classification does not provide a method for defining small or large groups of nouns. She also regards groups 1 to 3 as free combinations because the restrictions are semantically motivated, whereas the restrictions imposed on groups 4 and 5 are to a certain extent arbitrary. Nesselhauf (2005) makes a fundamental distinction in classifying collocations from Howarth (1996), because she focuses on the restriction imposed on a verb without considering its paired noun. She argues for considering verb restrictedness on the basis of only two points: (1) the commutability of a verb with certain nouns (arbitrary combinability) which leads to collocations, and (2) other classifications (such as those in Howarth, 1996) that consider verb–noun restrictedness but do not count noun restriction in a free combination.

Nesselhauf's (2005) classification does not count noun restriction in both free combinations and collocations. The method may be valuable in classifying GVs patterns because it underscores verb restrictedness rather than noun restrictedness; this emphasis is motivated by the fact that verb behaviour leads to collocations. My research focuses on a verb as a fixed component of a pattern, for which the student-participants explore GVs by searching and analysing concordance lines. Therefore, choosing a classification that supports noun restrictedness will prove inefficient because the focus of this study prohibits the substitution of GVs.

The evaluation of the aforementioned classifications leads me to deem Howarth's (1996) classification of GV patterns difficult; Howarth also acknowledges this difficulty. As previously indicated, my argumentative stance aligns with the idea that a verb's combinatory behaviour produces collocations. I also consider verbs to be the pivotal point of the analysis and cannot include the possibility of verb substitution for pedagogical reasons; specifically, allowing for substitution causes fossilisation in capturing collocation concepts in the classroom and will be very difficult to consider verbs and noun substitutions. In Howarth's (1996) approach, all GVs can be classified at level 4 (complete restriction on choice of verb; some substitutions of nouns), but I

adopt Nesselhauf's (2005) classification, which prescribes the allocation of GVs to groups 4 (verbs combinable with a sizable group of nouns with exceptions) and 5 (verbs combinable with a few nouns).

From my own perspective, another level can be incorporated into Nesselhauf's (2005) classification: a verb that can be combinable with only one noun. This level indicates that no other noun can be used with a verb in the given sense (e.g., '*give birth*'). I am aware that Nesselhauf does not consider noun substitution to convey the same meaning sense, but she utilises semantic fields (or categories) when investigating the possible collocates of each verb. Accordingly, I endeavour to reflect Nesselhauf's (2005) and Howarth's (1996) classifications in producing my own categories for the current study. The substitution of nouns to convey similar meanings will not be discussed in detail, but I need to set a basis for combinatory behaviour, as in groups 4 and 5 of Nesselhauf's (2005) classification. To conclude, the restrictedness criterion employed in this chapter is characterised by the following conditions:

1. Verbs combinable with one noun, no possible substitution of a noun in the given sense (e.g., *give birth*), termed as RC1
2. Verbs combinable with a small set of nouns (two to five nouns), possible substitution of a noun, which can be used with a verb in the given sense (e.g., *make decisions/choices/resolutions*), termed as RC2
3. Verbs combinable with a sizable group of nouns (more than five), possible substitution of a noun, which can be used with a verb in the given sense (e.g., *perform a task/ test/ experiment/ action/ function/ deed, but not perform a survey*[9]), labelled as RC3.

As can be seen, three degrees of restrictedness are established through these categories. To evaluate the extent of restrictedness, four native speakers were enlisted to help assess the combinatory behaviour of a verb. These native speakers are current second and third year PhD students studying at the University of Nottingham in the School of English. For each participant, I produced a list for each GV based on the first level (50 collocates). Then, I asked them to rate the collocation based on three

[9] Examples from Nesselhauf (2005).

degrees of restrictedness (see Appendix 2. A. for instructions). Each participant signed a consent form. They spent about 1.5 to 2 hours rating six GVs, and received financial compensation for their participation.

Using the assistance of native speakers is necessary because the total number of collocates of all GVs used in this study is large. Other studies have also used informants to rate target items, such as Akimoto (1989), who uses informants (number of informants unknown) to test the acceptability of verbs that appear with certain deverbal nouns. After all the native speakers submitted their rating tasks, I ran inter-rater reliability test and Cronbach's alpha was α=0.68. I then compared their evaluations. In the case of full agreement, I considered their evaluation unquestionable. But in the case of disagreement I considered two cases: (a) if the majority agreed on one type, I accepted their rating and did not consult the corpus. One example is *make payments*: three native speakers agreed on type RC1 and one native speaker agreed on type RC2 (*make payments, make deposits*); b) If the participants could not reach an agreement on one type, I consulted the BNC to check whether the native speakers' evaluations (disagreements) corresponded with the corpus results (I considered only the fully restricted collocations RC1, because I included only this type in the final list). For example, for *make representations*: two agreed on RC1 type and two agreed on RC2 (*make purpose, make images*). After consulting the BNC, I found that *make representations* is from type RC1, because we cannot substitute *purpose* and *images* to give the same or similar meaning of *make representations*, as can be observed in the following examples from the BNC:

- *Shanaz's relations asked their MP to intervene, and while he **made representations** to the Minister with special responsibility for Immigration (Shirley Summer skill, Britain's representative at the United Nations Status of Women Conference) she was kept in detention.*
- *Files concerning his case and the unwillingness of the neutral Irish government to **make representations** are buried in the vaults of the Irish Foreign Office while Joyce scholars patiently await publication under new public record arrangements.*

Table 7 shows the results produced from the application of the restrictedness criterion to the verb *make*.

Table 7. *Classification of* make *pattern according to restrictedness criterion*

	Word	**Type of restrictedness**
1	sense	RC1
2	use	RC1
3	love	RC1
4	decisions	RC2
5	contact	RC1
6	mistakes	RC2
7	amends	RC1
8	things	RC2
9	money	RC2
10	arrangements	RC2
11	representations	RC1
12	recommendations	RC2
13	progress	RC2
14	provision	RC2
15	enquiries	RC2
16	friends	RC2
17	matters	RC1
18	public	RC2
19	comparisons	RC1
20	excuses	RC1
21	life	RC1
22	notes	RC2
23	ends	RC1
24	choices	RC2
25	judgements	RC2
26	inquiries	RC2
27	plans	RC2
28	concessions	RC2
29	fun	RC1
30	films	RC2
31	inroads	RC2
32	jokes	RC1
33	changes	RC2

34	statements	RC2
35	headway	RC2
36	predictions	RC2
37	tea	RC2
38	facilities	RC2
39	profits	RC2
40	peace	RC1
41	plain	RC2
42	coffee	RC2
43	adjustments	RC2
44	payments	RC1
45	room	RC2
46	connections	RC2
47	allowances	RC1
48	reference	RC1
49	speeches	RC1
50	demands	RC1

After discussing the restrictedness criterion and the manner by which it is applied, an equally important requirement in GVs analysis is to clarify how transparency (the other criterion used in this study) is employed. Cowie (1992) defines collocations by considering restrictedness and opacity. Howarth (1996) adheres to this method and applies the restrictedness criterion only in data analysis intended to identify free combinations and true collocations (Nesselhauf, 2005). Both criteria play a key role in identifying collocations, but applying them at the same level can be problematic. Nesselhauf (2005, p. 26) discusses three practical problems in identifying collocations:

1. If a collocation is classified through opacity of meaning, free combinations, such as those featuring *face*, may occur; such combinations carry figurative denotations but are unrestricted with respect to commutability.
2. Certain collocations are restricted (both elements) but have literal meanings, as in the case of *commit a crime*.
3. Certain collocations carry figurative or non-literal meanings but also exhibit a substantial degree of commutability (flexible in combination with other items

that can have similar meanings). This case holds for expressions such as *take steps* and *take action*.

To overcome this problem, Nesselhauf (2005) recommends selecting one criterion as the basis for classification, as in Howarth (1996) and Nesselhauf (2005). For the aforementioned problems, I use the restrictedness criterion to classify GVs patterns as the first step in the second-level analysis. I then adopt transparency as another criterion to determine the meaning of a collocation and, in turn, ascertain the pattern suitable for the context of the study.

Transparency (transparency describes GVs + collocates) refers to whether the elements (both or one of the elements) of combinations have literal or non-literal meanings (Nesselhauf, 2005). The criterion is divided into a non-literal sense, wherein both elements carry figurative meanings (e.g., *make love*) and a literal sense, in which at least one element denotes a literal meaning (e.g., *make a mistake*). A node (GV) in all cases have a non-literal meaning (broad or figurative meaning, abstract meaning) because considering a verb as a GV necessitates a verb that can denote an abstraction, as in *make cake*, which has a concrete meaning, and *make love*, which carries a figurative meaning. The semantic characteristics of GVs are described by Cowie (1991) as grammaticalised meanings; thus, GVs also have non-literal denotations. Collocates, meanwhile, can have literal or non-literal meanings depending on their phraseology-based classifications.

Transparency is classified into five types on the basis of Cowie's (1991) categorisation of the semantic transparency of collocations. This classification comprises: free combination, restricted collocation, figurative idiomaticity and pure idiomaticity. The following table (8) shows the classification, with relevant examples.

Table 8. *Cowie's (1991) categorisation of the semantic transparency of collocations (Adopted from Nesselhauf, 2005, p. 14)*

Classification	**Restriction on substitution**	**Transparency**	**Example**
Free combinations	Based on sematic grounds	Literal sense of both elements	Drink tea
Restricted collocations	Arbitrary limitations on substitution	Literal sense of one element, non-literal sense of the other element	Perform a task
Figurative idioms	Substitution is seldom	Figurative meaning of combination with literal interpretation	Do a U-turn

Pure idioms	Substitution is impossible	Figurative meaning of combinations without literal interpretation	Blow the gaff

I exclude free combinations and pure idioms from my classification for two reasons. First, the verb in a free combination does not have GV characteristics, as defined earlier (e.g., *make a cake*). Second, the pure idioms have different characteristics that do not serve the aim of this thesis. Pure idioms are known for their opacity of meaning. Their meanings cannot be deduced from patterns, which makes them very difficult to teach at the intermediate level. They also have fixed syntactic patterns, which increases the difficulty involved. The transparency criterion employed in this chapter for GVs patterns is divided as follows:

1. T1: A pattern has a semi-literal meaning (GV has a non-literal meaning, collocate has a literal meaning; e.g., *make a decision*).
2. T2: A pattern carries a non-literal meaning, and both elements have non-literal meanings, but a literal interpretation of the pattern persists (e.g., *give birth, make love*).
3. T3: A pattern has an element of semantic opacity, which means that meaning cannot be deduced as a function of the meanings of constituents (e.g., *blow the gaff*).

This grouping establishes three degrees of transparency. To evaluate the extent of transparency in these patterns I enlisted the help of six raters – three native speakers and three non-native (Arabic) speakers – in assessing the degree of transparency of the pattern and asked them to evaluate the degree of transparency of the list I produced for the first level (50 collocates for each GV). All the raters are current second and third year PhD students studying at the University of Nottingham in the School of English (see Appendix 2.B for task instructions). Each of them signed a consent form and spent about 1 to 1.5 hours rating six GVs. After all the participants submitted their rating tasks, I ran the inter-rater reliability test and Cronbach's alpha was α=0.65.

I think that the non-native and native speakers' evaluations can be equally important. As judging the degree of transparency is very subjective and affected by frequency and proficiency (Sonbul, 2015), including non-natives beside the natives was determined to help in providing firmer opinions on judging the degree of

transparency. Given the subjectivity associated with transparency, I could not check an outside source; so in the case of disagreement I chose the opinion of majority. Additionally, if the three could not agree on a degree, I discarded the item, as seen with number 17 – there was disagreement on classifying the degree of transparency (native speaker judgment), and number 23 showed disagreement from non-native speakers. Table 9 shows the responses of both native and non-native participants. I wrote the degree of transparency according to the majority opinions (majority as defined by agreement between two native and two non-native speakers). In cases of disagreement (between native and non-native speakers), all participants' responses are included.

Table 9. *Classification of* make *pattern according to transparency criterion*

	Word	**Native speaker**	**Non-native speaker**
1	sense	T1	T1
2	use	T1	T1
3	love	T2	T2
4	decisions	T1	T1
5	contact	T1	T1
6	mistakes	T1	T1
7	amends	T1	T1
8	things	T1	T2
9	money	T1	T1
10	arrangements	T1	T1
11	representations	T2	T1
12	recommendations	T1	T1
13	progress	T1	T1
14	provision	T2	T1
15	enquiries	T1	T1
16	friends	T1	T1
17	matters	T1, T2, T3	T2
18	public	T1	T1
19	comparisons	T1	T1
20	excuses	T1	T1
21	life	T2	T1
22	notes	T1	T1
23	Ends	T1, T2, T3	T1,3

24	choices	T1	T1
25	judgements	T1	T1
26	inquiries	T1	T1
27	plans	T1	T1
28	concessions	T2	T2
29	fun	T2	T2
30	films	T1	T1
31	inroads	T2	T2
32	jokes	T1	T1
33	changes	T1	T1
34	statements	T1	T1
35	headway	T2	T2
36	predictions	T1	T1
37	tea	T1	T1
38	facilities	T1	T1
39	profits	T1	T1
40	peace	T1	T1
41	plain	T2	T2
42	coffee	T1	T1
43	adjustments	T1	T1
44	payments	T1	T1
45	room	T3	T2
46	connections	T2	T2
47	allowances	T2	T2
48	reference	T1	T1
49	speeches	T1	T1
50	demands	T1	T1

The phraseological characteristics applied to the GVs in this study are regarded as classifications of GVs patterns, which provide a comprehensive view with which to categorise GVs for the purposes of this study. At the second level, the phraseological approach considers three types of restrictedness (RC1, RC2, RC3) and three types of transparency (T1, T2, T3). I refine the list generated in the first level (i.e., top 50 collocates of each verb) and apply the phraseological criteria, which are filtered further on the basis of the third level (pedagogical approach) for the purpose of operationalising the use of GVs in the classroom. At the end of the third-level

examination (see the next section), only six collocates were ultimately selected for each GV.

3.3.4. Third-level analysis (pedagogical approach)

The majority of research on collocations in general, and GVs in particular (examining the acquisition of collocations and describing collocations) does not shed light on implications for teaching. Scholars have thus far been content to acknowledge the importance of teaching collocations (Nesselhauf, 2005). Many researchers have different recommendations on teaching various collocations, with some based on empirical evidence and others grounded in anecdotal evidence. Howarth (1996), for example, recommends adopting teaching collocations in general as an important activity without specifying individual collocations. Bahns and Eldaw (1993) recommend teaching verb–noun collocations that cannot be easily paraphrased after translation. Alzahrani (1998) suggests teaching collocations that differ in L1 and L2 (non-congruence). Other researchers (e.g., Carter, 1998; Hill, 2000; Hill et al., 2000) advocate the teaching of collocations that are associated with high-frequency verbs depending on "anecdotal evidence" (Nesselhauf, 2005, p. 254). Some scholars suggest teaching high-frequency verbs with medium-strength collocates (e.g., Hill, 2000; Lewis, 2000). Quoting Howarth (1998), Nesselhauf (2005) highlights the continued gap in compiling a list of individual collocations that are worth teaching and learning. Nesselhauf (2005) adds that no researcher has compiled a list of useful collocations for teaching purposes since the second interim report on English collocations (IRET 1933).

Compiling lists for teaching collocations in the classroom remains a difficult task because an excessive number of variables needs to be controlled. Attempts to create a list of specific verb–noun collocations for teaching purposes are equally scarce. There are some available lists, such as Martinez and Schmitt's PHRASE list (2012), containing phrasal expressions for pedagogical use. The list consists of 505 non-transparent multi-word expressions aimed at integrating the multi-word expressions into teaching materials. The PhAVE list of phrasal verbs has also been produced by Garnier and Schmitt (2015).

The reviewed literature (see Chapter 2) provides no clear criteria for selecting GVs patterns for instruction; studies offer only general criteria for selecting vocabulary for teaching. Richards (1970), for instance, constructs a list of criteria for selecting vocabulary for EFL instruction. Although his standards are too general, they remain fairly comprehensive in their focus on frequency, "centers of interest", availability and familiarity (1970, p. 91). These criteria have since expanded to include coverage and meaning priorities (Richards, 1974, p. 79).

McCarthy (1990, p. 79) also develops a modified list shorter than Richards' (1970, 1974), comprising only of "frequency and range, learnability, learners' needs". Nation (1990, p. 21) additionally suggests a list of criteria based on Richards' list which addresses "frequency, range, language needs, availability and familiarity, coverage, regularity, and ease of learning or learning burden", which are explained in greater depth below.

1. Frequency is an important criterion for selecting vocabulary for teaching because it arranges vocabulary according to descending frequency in a language and arranges words according to "their degree of generality or grammaticality" (Richards, 1970, p. 2). Depending on frequency alone in selecting vocabulary produces a list of grammatical words. The pedagogical usefulness of creating frequency lists was acknowledged by many scholars but depending on frequency solely was questioned by some scholars, such as Richards (1974). Other criteria must therefore be considered.
2. Range pertains to word usage and whether a word frequently occurs across registers or is restricted to a specific register. The range criterion is extensively used in dictionaries and is well presented in corpora; most large-scale corpora such as the BNC provide full information about word division across registers.
3. Availability and familiarity of words signify that some words are accessible from our cognitive stores when they are needed regardless of their frequency. These words are related to concrete rather than abstract objects, enabling recall when they are needed in given a context or situation. Familiarity of words is thus related to both word frequency and cultural context (Richards, 1970). Put differently, a word can be familiar because it is frequently used in a language

and appears in most texts, or because it is used in daily routines even if it is not frequently utilised.

4. Coverage pertains to how many words are needed to comprehend a text; this issue is associated with frequency. Selecting words according to frequency is helpful in constructing a list of words that cover those that are most needed to understand a text. Most studies link coverage to frequency levels.
5. Meaning priorities indicate the relative frequency of the meanings associated with a word. Richards (1974, p. 79) observes that no work has been done with this criterion, so West's General Service List of English Words (1953) can work as a guide for this criterion.
6. Language need depends on a learner's proficiency level and the aims of a course; these variables should be determined on the basis of the course. Although no well-defined list of language needs exists, learner requirements can be related to a student's grade level, proficiency level or course aims if a course is General English or ESP. Language need is applied in most course books, such as the *New Headway* series.
7. Learning burden refers to the ease or difficulty with which a word is learned. This criterion is problematic because it presents no clear limits with respect to measuring learning difficulty. It is also does not necessarily correlate with frequency; some infrequent words are easily learned, whereas frequent words are difficult to acquire and vice versa (summarised from McCarthy, 1990).

McCarthy (1990), Nation (1990) and Richards (1970, 1974) collectively establish criteria for general vocabulary teaching and provide little insight on teaching collocations. Previous works' criteria are established for the selection of single words, whereas the focus of the present study centres on collocations and not GVs as single lexemes. The present study is not intended to create a list of GVs patterns for intermediate-level students, but does aim to identify criteria for selecting GVs patterns that can be used in a classroom context.

Nesselhauf (2005) offers a set of criteria for teaching collocations, specifically verb–noun collocations. Her criteria are based on the analysis of the productions (learner corpora) of advanced German speakers. Nesselhauf cautions, however, that the results of the collocation analysis are applicable only to her chosen context and

may require further research before they are applied more broadly. These criteria are "frequency, degree of difficulty and degree of disruption" (p. 257). Frequency is the most important for choosing collocations, but depending only on raw frequency can result in many grammatical collocations. In the present research, additional measures (such as imposing noun restrictions) are taken in the first-level analysis to overcome the problem. Degree of difficulty is also critical to teaching collocations. This degree manifests in two ways: (1) it is reflected in susceptibility to deviation, in which collocations are used in an unusual manner; sometimes deviation occurs in one element of a collocation, thereby affecting all combinations. Deviation in verb use is high because it is restricted to nouns in usage (Nesselhauf, 2005). Degree of difficulty is also manifested in (2) degree of disruption, which pertains to the inappropriate use of an expression resulting in misunderstanding. In this case, a collocation may be correct but also incongruent with its given context.

To a great extent, degree of difficulty of learning is subjective, thus prompting Nesselhauf (2005) to define it by analysing learner corpus. She concludes that collocations with high error rates are difficult collocations. Nevertheless, one can argue that what is difficult for advanced learners is more challenging for intermediate learners in most cases. Nesselhauf observes that less-restricted collocations are more difficult than restricted ones and that non-congruent collocations are more challenging than congruent ones. Table 10 illustrates Nesselhauf's (2005) degrees of difficulty.

Table 10. *Difficulty of collocation based on Nesselhauf (2005)*

	Complete restriction	**Less restriction**
Congruent	Less difficult	Difficult
Non-congruent	Difficult	Most Difficult

Nesselhauf (2005, pp. 264-71) proposes the following recommendations for selecting and teaching collocations in EFL classrooms:

1. Educators should teach common collocations instead of unusual ones.
2. Degree of restriction is an important condition that can determine the difficulty of a collocation.

3. Non-congruent collocations are more difficult than congruent collocations.
4. Collocation instruction must be systematic (Nation, 1990, cited in Nesselhauf, 2005).
6. Foregrounding the exact meaning and usage of a collocation, not only form, is essential. This reveals restrictions on modifications or nouns and even semantic prosody.
7. Suggestions on verb–noun collocations should be designed to provide nouns in gap-filling exercises and not the opposite.

In the present study, the pedagogical principles for teaching GVs patterns are a combination of the criteria put forward by McCarthy (1990) and Nesselhauf (2005); these are frequency, degree of difficulty (learnability) and learners' needs. I include Nesselhauf's criteria because she focuses on the types of difficulty related to teaching collocations. Her criteria are specific to the context of my work in teaching GVs patterns. She also adopts a phraseological view in classifying the difficulties encountered in teaching collocations. For example, she found that restricted collocations are less difficult than less-restricted collocations for advanced-level students (see Table 10).

In selecting GVs patterns, I consider the proficiency levels of the participants (i.e., intermediate). This being the case, I account for a fixedness condition in the previous level of analysis, first level, (i.e., use of a fixed pattern, GV + noun, with no variables elements, such as *definite articles, prepositions* or *adjectives*) to limit potential susceptibility to deviation. In Nesselhauf's (2005) study, the degree of deviation is spread amongst all the elements of GV patterns, including verbs, nouns, determiners and adjective use. I set fixedness as a selection criterion for GVs pattern selection in the first-level analysis to suit the intermediate level and overcome the problems presented by variable elements in GVs patterns.

Identifying learners' needs is based on knowing what an intermediate-level student hopes to achieve and on studies that examine course books in an effort to identify the lack of materials for teaching GVs and their patterns (e.g., Gouverneur, 2008). In her review, Gouverneur finds that these materials focus on the restricted collocations of *make* and *take*. This may support my point of view that for

intermediate students, teaching restricted collocations is more appropriate than teaching less-restricted collocations. She also reveals that all three series exhibit a reduced proportion of restricted collocations for GVs and diminished direct focus of exercises on GVs. Her findings suggest that material designers treat *make* and *take* as high-frequency verbs, thus neglecting their phraseological patterns. This approach prompted the designers to include them as explicit and implicit focus (direct and indirect focus in exercises) for intermediate and advanced students, respectively. As revealed by Gouverneur, intermediate learners need to focus on the restricted collocations of frequently occurring verbs.

To sum up, the third-level of analysis takes into account the following criteria:

1. Frequency (McCarthy, 1990; Nesselhauf, 2005), which is accounted for in the first-level.
2. Degree of difficulty, learnability, (McCarthy, 1990; Nesselhauf, 2005). I account for it at the second level.
3. Learners' needs, (McCarthy, 1990; and Nesselhauf, 2005), which is accounted for in the third level.

I add congruency in the third-level because of the specific nature of the context of this study. Despite the fact that the congruency criterion can increase the degree of difficulty of learning collocations and it is more related to the second-level, I include it in the third-level. Congruent collocations can be different from one study to another according to the L1 of the learners. For this reason, I think congruency criterion should be included in the third-level (pedagogical approach) of selecting GVs patterns in this study.

So, the third-level will account for congruency as part of the learners' needs criterion. Collocations must be congruent because incongruent collocations have been indicated in many studies as problematic for EFL learners (Juknevičienė, 2008). To account for congruency, I sought assistance from three Arabic speakers who are PhD students at the University of Nottingham. All of them have the overall score of 7 or above in IELTS and they taught English as a foreign language. Each was asked to rate the collocations according to congruency criteria (see Appendix 2.B for instructions).

Each of them signed the consent form, and spent about 1 hour rating six GVs. There was absolute agreement among the raters regarding GVs patterns congruency.

To conclude, this multi-level analysis takes into account frequency, degree of difficulty, learners' needs and congruency. The frequency is chosen following a corpus-based approach and the degree of difficulty is chosen according to a phraseological-based approach. The degree of difficulty in learning is measured according to restrictedness, transparency and congruency. The degree of difficulty is selected in a manner that appropriately reflects the requirements of intermediate students. Under this backdrop, GVs patterns are fully restricted and classified as having either T1 or T2, seeing as T3 is the most difficult amongst the three transparency levels. I believe that concordance lines promote the understanding of meaning, whether such meaning is figurative or semi-transparent.

I organise the pedagogical choices in this level (the pedagogical approach) according to importance:

1. Degree of difficulty is selected in accordance with intermediate level students' requirements.
    1.1. Restrictedness: A pattern must be fully restricted.
    1.2. Transparency: A pattern must be one of the following: (1) A pattern carries a semi-literal meaning (GV carries non-literal meaning, collocate has literal meaning) (T1; e.g., *make amends*); (2) A pattern has a non-literal meaning; both elements have non-literal meanings but a literal interpretation of the pattern persists (T2; e.g., *give birth*).
    1.3. Congruence: the pattern must be congruent to L1.
2. Learners' needs are determined on the basis of Gouverneur (2008); that is, intermediate students need direct focus on restricted collocations.

After analysing the GVs and their collocates, I find that congruency cannot be distributed equally amongst all the verbs. An example is *have*, for which there are only two congruent collocations (e.g., the verb *have* in its GV pattern is translated into Arabic as a preposition, so it is difficult to find congruent collocations for the *have* pattern). The distribution of congruent collocations is therefore expected to be unequal across the sessions. This issue prompts the inclusion of only incongruent collocations in the study.

After selecting the criteria from the multi-level approach, I piloted the items with two participants (high-intermediate to advanced) who attended a full session (the same as the second training session). The participants found the collocations of the second type of transparency (e.g., *make love*) difficult to comprehend. I thus revised the transparency criteria and included only collocations of the first type of transparency (T1).

Tables (11, 12, 13, & 14) show how the degree of difficulty is applied to the list of *make*.

1.1. Restrictedness: A pattern must be fully restricted. Both RC2 and RC3 (if found) are excluded.

Table 11. *First choice in the third-level: Fully restricted patterns*

	Word	**Type of restrictedness**
1	sense	RC1
2	use	RC1
3	love	RC1
5	contact	RC1
7	amends	RC1
11	representations	RC1
17	matters	RC1
19	comparisons	RC1
20	excuses	RC1
21	life	RC1
23	ends	RC1
29	fun	RC1
32	jokes	RC1
40	peace	RC1
44	payments	RC1
47	allowances	RC1
48	reference	RC1
49	speeches	RC1
50	demands	RC1

1.2. Transparency: A pattern must be of the T1 or T2 type. The patterns of T2 are initially included, but the second pilot study shows that the participants experience difficulty in comprehending T2 collocations. I therefore excluded both T2 and T3 collocations. Table 12 shows transparency degree of collocations.

Table 12. *Second pedagogical choice in the third-level: Fully transparent patterns*

	Word	**Native speaker**	**Non-native speaker**
1	Sense	T1	T1
2	Use	T1	T1
4	Decisions	T1	T1
5	Contact	T1	T1
6	Mistakes	T1	T1
7	Amends	T1	T1
9	Money	T1	T1
10	Arrangements	T1	T1
12	Recommendations	T1	T1
13	Progress	T1	T1
15	Enquiries	T1	T1
16	Friends	T1	T1
18	Public	T1	T1
19	Comparisons	T1	T1
20	Excuses	T1	T1
22	Notes	T1	T1
24	Choices	T1	T1
25	Judgements	T1	T1
26	Inquiries	T1	T1
27	Plans	T1	T1
30	Films	T1	T1
32	Jokes	T1	T1
33	Changes	T1	T1
34	Statements	T1	T1
36	Predictions	T1	T1
37	Tea	T1	T1
38	Facilities	T1	T1
39	Profits	T1	T1
40	Peace	T1	T1
42	Coffee	T1	T1
43	Adjustments	T1	T1
44	Payments	T1	T1
48	Reference	T1	T1
49	Speeches	T1	T1
50	Demands	T1	T1

The following Table 13 includes both the fully restricted and T1 collocates of *make*.

Table 13. *Application of Restrictedness and transparency on* make *pattern*

	Word	**Type of restrictedness**	**Transparency**
1	Sense	RC1	T1
2	Use	RC1	T1
5	Contact	RC1	T1
7	Amends	RC1	T1
19	Comparisons	RC1	T1
20	Excuses	RC1	T1
32	Jokes	RC1	T1
40	Peace	RC1	T1
44	Payments	RC1	T1
48	Reference	RC1	T1
49	Speeches	RC1	T1
50	Demands	RC1	T1

1.3. Congruence: A pattern must be incongruent with L1. The congruent collocations are excluded.

Table 14. *Third pedagogical choice in the third-level: Incongruent patterns*

	Word	**Type of restrictedness**	**Transparency**	**Incongruence**
1	Sense	RC1	T1	Incongruent
2	Use	RC1	T1	Incongruent
5	Contact	RC1	T1	Incongruent
7	Amends	RC1	T1	Incongruent
19	Comparisons	RC1	T1	Incongruent
20	Excuses	RC1	T1	Congruent
32	Jokes	RC1	T1	Incongruent
40	Peace	RC1	T1	Congruent
44	Payments	RC1	T1	Incongruent
48	Reference	RC1	T1	Incongruent
49	Speeches	RC1	T1	Incongruent
50	Demands	RC1	T1	Incongruent

3.3.5. Final list of *make*

Once the final list is generated, I needed to select the final set of collocates and a set of concordance lines to be included in the classroom materials. For the final *make* list, I selected the top six items from Table 15 according to the established criteria. First, I generated concordance lines (randomly) and selected ten lines for each GV + collocates. I used ten lines each time to save the consultants' time and make the task more manageable for them. I then consulted two non-native speakers to eliminate the difficult lines, depending on the data, because some lines are too difficult to include for instruction to intermediate students (either too short to express a pattern, or present numerous difficult words). If the consultants found five lines suitable to be used in the study, I proceeded to the next verb. But if they could not find five suitable lines, I would use another ten lines until I had five lines for each GV pattern.

The selection of concordance lines was based on readability (Kuo et al., 2001) and usefulness (Tribble, 1997). Readability means that all concordance lines could be read by the students and were not too difficult (avoiding lines with difficult words such as medical terms or abbreviations). For examining readability, I asked two students (intermediate level) to read the concordance lines for each GV pattern and judge the degree of readability. Regarding usefulness, I judged (as an EFL teacher with seven years' experience) how useful the concordance lines were in presenting GVs patterns. The judgment on usefulness was based on the clarity of the sentence and the placement of clues in the lines to help participants understand the target items. Usefulness was based on the ability to present a clear pattern of GVs, as well as level of interest for the participants and related to their study field. Finally, I included five lines for each GV pattern. After creating the final list (see Table 15) and preparing the concordance lines, I consulted two teachers to ensure that all the selected patterns, as well as the clarity of the concordance lines (not including too many technical words), were equal in terms of difficulty for each session. The teachers agreed regarding the concordance line selections for each session. The decision to consult teachers was driven by the need to guarantee equal difficulty across the sessions in two respects: GVs patterns and the concordance lines in which these GVs patterns are featured. I ensured that differences amongst the sessions were resolved by consulting the two

teachers to eliminate factors that may affect the performance of the participants. For all other GVs, see Appendix 1.

Table 15. *Final list for* make

Order in the BNC	**Word**	**Restrictedness**	**Transparency**	**Incongruence**
1	sense	RC1	T1	Incongruent
2	use	RC1	T1	Incongruent
5	contact	RC1	T1	Incongruent
7	amends	RC1	T1	Incongruent
19	comparisons	RC1	T1	Incongruent
32	jokes	RC1	T1	Incongruent
44	payments	RC1	T1	Incongruent
48	reference	RC1	T1	Incongruent
49	speeches	RC1	T1	Incongruent
50	demands	RC1	T1	Incongruent

Chapter Four: Research Methodology

4.1. Research questions

The study was designed to investigate the effectiveness of the DDL approach in the Saudi Arabian classroom where English is taught as a FL. This section presents the research questions which targeted Saudi students at university level. The following questions are addressed in this study:

1. Have intermediate Saudi students learned how to use the DDL approach independently in the language classroom for learning GVs?
2. Is there a link between the participant's use of the DDL approach and the successful completion of tasks? If so, what is that link?
3. Does the participant's ability to use computers have any effect on their use of the corpus resource?
4. What are the participants' overall evaluations of the use of the DDL approach and the corpus resource in the language classroom?

4.2. Participants

The participants for this study were female students at the Northern Borders University (NBU) in Saudi Arabia. After introducing myself and the study's aims, 83 students volunteered to take part. These participants were Arabic-speaking undergraduates at NBU and participated in exchange for course credit. Eight students withdrew from the study after the first week due to the longitudinal nature of the research. Nine participants did not attend the second testing session, so their results were excluded. Sixty-six participants attended all the sessions, however ten of them did not have tracking logs for the first testing session because of the security system on the computers – the software was running but computers did not keep the tracking logs – so these were also excluded. Of the remaining 56 participants, one was excluded because of system flaws. Finally, after inputting the data, I found that four participants had used Google Translator to translate GVs patterns, so these results were also excluded. Thus, the final pool of participants used in this study consisted of 51 participants who each completed three training sessions and two testing sessions.

According to the university placement test, the 51 participants were intermediate level EFL, students in their foundation year, majoring in one of four medical fields: medicine (N=21), laboratory medicine and pathology (N=13), nursing (N=11), and pharmacy (N=6). According to my experience and familiarity with the students, I would suggest that their level is B1 which equal to a band score of 4-4.5 on the IELTS test. However, according to the self-report questionnaire, 19.6% rated themselves as beginner, 58.8% as lower-intermediate, and only 21.6% as intermediate level. The participants were between the ages of 18 and 25 and they had studied English in school for approximately seven years. I was unable to obtain official proficiency measures for the participants, but all were successfully enrolled in university-level English classes. These participants were divided into two groups, with 25 in the first group and 26 in the second group. The study ran for six weeks for one group; the second training session was divided into two short sessions due to a scheduling conflict, which meant that the participants could not attend the sessions for more than 30 minutes each week. For the other group, the study took five weeks as planned. These sessions were held for one hour each week as part of the English curriculum as extracurricular activities. The participants attended 15 hours/week and followed the *New Headway* series.

Six participants volunteered to take part in the interview part of the study. I used a variation sampling strategy for selecting participants, in which the participants differed in terms of major and proficiency level as well as whether they liked and/or disliked the experiment. Thus, when I recruited participants I went to each class and I asked for volunteers from different majors as well as whether they liked or disliked the experiment and interviewed all the participants who volunteered. Four students rated their proficiency at a low-intermediate level; three of them were nursing students and one majored in pathology. The two remaining participants rated their proficiency as intermediate level; one was a medical student and the other was a pharmacy student. Each of these students volunteered to take part in the recorded interview.

4.3. Design

This experiment examines the effectiveness of training for the use of the DDL approach in the classroom, which is absent from the current literature. Despite the short period of the treatment in this experiment (three weeks), it was accompanied by extensive guidance and supported by a hand-out and PowerPoint presentation (PPT).

The experiment was divided into two sections: training sessions and testing sessions. Each session was held in a computer laboratory for an hour. The training sessions focused on how to use the corpus tool, AntConc (specifically its concordancer), with the aim of achieving the outcomes listed in section 4.4.2; full details of the training sessions and participants' hand-out are included in Appendix 3 (A & B). These three training sessions included a short introduction to CL and how it is used in language analysis. During the training sessions, the participants were trained to use AntConc to investigate GVs patterns following Sinclair's model (2003). The trackers recorded their actions during their investigation.

During the testing sessions, participants were asked to perform tasks similar to the training sessions but with different items, thus following the same procedure set in the training sessions. Data was collected from the testing sessions in two ways: (a) completing activities by answering set questions, and (b) the information generated from the tracker (tracking logs). These testing sessions were conducted in the same way as the training sessions but the participants received no guidance: since the main aim of these sessions was to examine learners' ability to use the tool, they completed the activities on their own. In addition to the tracker logs (from the training and testing sessions) and the tasks (from the testing sessions), the participants who attended all the sessions completed a reflective form about their experience using the DDL approach and the corpus tool (see Appendix 4). Some of the participants also voluntarily took part in post-activity interviews (see Appendix 5).

4.4. Materials

4.4.1. Reading concordances procedure

I have adopted Sinclair's (2003) model, which is both comprehensive and detailed. It can serve many purposes for analysing concordance lines (e.g., hidden meanings,

semantic prosody, and deduction of pattern) (Tribble, 2012a). I chose this framework because it encourages three major cognitive processes in learning vocabulary: noticing, retrieval, and creative use. Sinclair's model (2003) for reading concordance lines offers an "excellent starting point" for investigating data (Tribble, 2012a, p. 178). Sinclair's (2003) framework informed the design for the teaching materials used in this experiment, and the activities were divided according to the framework. It consists of seven steps: initiate, interpret, consolidate, report, recycle, result, and repeat (Sinclair, 2003, pp. xvi-xvii).

Step 1: Initiate, which is a process of looking at the words that occur to the left and right of the node to find repeated patterns, orienting focus on the words showing the strongest patterns.

Step 2: Interpret, which investigates the strongest pattern of repeated words to form a hypothesis by which they are connected, such as word class.

Step 3: Consolidate, in which one looks for further evidence to support one's hypothesis by investigating other variations in the pattern. One must always use the same criterion of adjacency to the node and be prepared to loosen this criterion.

Step 4: Report, in which the results of the investigation are written after investigating the pattern thoroughly and revising the hypothesis.

Step 5: Recycle, which is similar to steps 1, 2, and 3, in that other repetitions and patterns are investigated. This stage can also provide an evaluation of the context in which the node is found.

Step 6: Result, which lists the hypothesis and the observations of the node and the context in which it is found.

Step 7: Repeat, as the name suggests, replicates the process with a new set of data.

This framework seems to be designed for use by researchers more than learners, as it is time consuming, which may demotivate learners based on the number of steps appearing in each session. Concordance line analysis can generally be difficult for FL learners because of sentence cuts and borders. Thus, I have modified the design slightly so it could be used in the classroom, with the revised model

consisting of the following components: initiate, interpret, consolidate, and report. I excluded the recycle and repeat steps because I used a pre-prepared set of data in the training session, which does not allow for more investigation. I also used guided training, which did not give participants much space to conduct free investigation. The reason behind these decisions was to create manageable tasks for the participants in light of the time available to conduct the study. The result step was incorporated with the report step to save time. The steps were called throughout the session as follows: *observe* (initiate), *investigate* (interpret and consolidate), and *report*. The participants were guided and provided with direct instructions throughout the training sessions. They were asked to observe the patterns of the target item, then to investigate these patterns using a generalised hypothesis. They then tested the hypothesis and reported the results.

This study included the seven verbs *have*, *do*, *make*, *take*, *give*, *get*, and *put.* The verb *put* was used only as an example in the introductory session. Each session included three verbs and three collocates for each verb. The testing sessions were duplicates of the training sessions, except for the collocates of each verb, and there was no intervention or guidance from the teacher. Table 16 shows GVs and their collocates used for each session.

Table 16. *GVs patterns featured in training and testing session*

Session	**1st GV**	**2nd GV**	**3rd GV**
1st training session	**Make** (sense, use, contact)	**Have** (fun, nightmares, dealings)	**Give** (birth, notice, effect)
2nd training session	**Take** (place, advantages, care)	**Do** (justice, homage, battle)	**Get** (permission, access, dark)
1st testing session	**Make** (amends, comparisons, jokes)	**Have** (hysterics, priority, similarities)	**Give** (chase, offence, interviews)
2nd testing session	**Take** (hold, effect, office)	**Do** (penance, homework, deals)	**Get** (revenge, ideas, leave)

As the focus of the research is to teach learners how to investigate GVs within the DDL approach, 15 concordance lines are selected for every GV (five lines for every collocate). Their selection was determined according to a pilot study in which two GVs and six collocates were used for each verb, with four to seven lines for each

collocation. The participants were Arabic speakers (intermediate), who spent an hour and ten minutes studying those patterns. As the participants in the present study were at the intermediate level, three collocates were selected for each GV along with five concordance lines for each collocate to give them enough time to be able to read the lines within the time constraints set by the sessions. In total, each session contained 45 lines, which means, if anticipating 30 seconds to a minute was spent reading each concordance line, that approximately 40–45 minutes was needed for reading, which left about 15 minutes for the activities.

Tribble and Jones (1997, p. 39) used five lines in their example showing how to deduce the meaning of a keyword. It is preferable to provide 30 random lines for investigating a specific word or feature (Hunston, 2002), as 30 lines can provide useful information about the keyword. Although Hunston (2002) emphasises selecting random lines, that is not applicable in this study as the selection of the concordance lines was pre-planned according to the collocates, which are selected according to specific criteria (see Chapter 3, section 3.3) and were suitable for the intermediate level.

The materials in this study are divided along the following lines:

- *The introductory session* (technical stage): procedures and steps in using corpus analysis tools (first training session) (see Appendix 3.A).
- *Training sessions* (linguistic stage): language deduction and analysis, the product to be reached by the learners (teaching materials, including activities and tasks). The main goal of this stage was to teach the learners to use a concordancer to identify GVs patterns and encourage learners to focus on patterns and the unit of meaning (sessions two and three) (see Appendix 3.B).
- *Testing sessions* (assessment stage): the completion of the tasks (in sessions four and five) (see Appendix 3.C).

In the following sections, I explain each session in detail. As the introductory session was part of the training, I explain this in the training section.

4.4.2. Training sessions

The first session included the introduction to basic corpus skills, using *put* as an example. In the second session, I introduced nine patterns (verb + noun). Each

collocation was introduced through exploring five concordance lines. The third session was similar to the second but with a new set of items and new concordance lines.

The activities

The activities are based on encouraging three cognitive processes (noticing, retrieval, and creative use) because the use of the concordance line can stimulate these cognitive processes (Nation, 2013).

The activities are divided into three themes:

1. Generating the concordance lines
2. Searching or investigating the keywords
3. Understanding the meanings of the keywords from the context (through reading the concordance lines for each collocation)

The tasks are divided into three sections: noticing the pattern, form recognition, and meaning recognition.

Noticing the pattern

This type of task includes activities that encourage participants to notice the repeated pattern of the verb and its collocates. For example:

1. How many times does *make* appear in the concordance lines?
2. Look at the word immediately following *make*. What do you notice?

Form recognition

This type of task includes activities that encourage the student to notice the form of the collocations through reading the concordance lines. For example:

1. Look at the words immediately to the right of *make* (position N+1). Write a list of the repeated words.
2. List the repeated word forms that come after *make* (noun, verb, preposition). Can you put them into groups according to their forms? What is the largest group?
3. Can you write three repeated patterns with the verb *make*?

Meaning recognition

This type of task encourages participants to determine the meaning of each collocation by reading the concordance lines; they are then asked to produce the meaning of the

collocation by explaining the differences between each verb pattern. They then write the explicit meaning of the collocation (either in English or in Arabic). For example:

1. Does *make* mean the same thing in each line? Give examples from the concordance lines.
2. Can you write three repeated patterns with the verb *make* with their meanings (either in Arabic or English)?
3. Can you explain whether *make* in the concordance lines has the same or different meaning than *make* on its own as one verb?

Each participant has an activity sheet for each testing session that is collected after the end of the session to be analysed.

The learning outcomes

The training session's outcomes are as follows:

- Launch AntConc
- Download data file
- Type in the keyword
- Generate the concordance lines
- Search the keyword
- Sort concordance lines
- Investigate these concordance lines to identify patterns

The activities' outcomes are as follows:

- To investigate a corpus to retrieve data, evidence, that is relevant to the enquiry
- To interpret the results of queries in order to postulate a pattern for the GV
- To present a report on the findings

4.4.3. Testing sessions

The fourth and fifth sessions are testing sessions, which test 1) whether the training was successful and whether the participants use the concordancer as they had been taught, 2) whether they are able to identify patterns relevant to GVs, and 3) whether the correct use of the DDL approach is linked to the successful completion of the tasks. According to the aims of the testing sessions, the participants are asked to

investigate the same six GVs from the training sessions but with different collocates (i.e., with a new data set). In each testing session, they investigate GVs in the same way as they investigate GVs in the training sessions. The role of the teacher in the testing sessions is observation without intervention or assistance.

4.4.4. The software

AntConc

AntConc software is used as the corpus analysis tool in the study, based on its many advantages. It is a freeware application designed specifically for use in the classroom (Anthony, 2004), also works on multiplatform and is user-friendly. It has many functions, but more specifically, AntConc is a powerful concordancer. The interface includes all the main operations for handy use, the window adjuster is easy to use, and it has an interface similar to other common applications.

Tracking software

The purpose for using tracking software is to ascertain if the training is successful, if the participants use the concordancer in the way they are taught, and if they can deduce the correct GV pattern using set strategies. Through the tracking software, I aim to retrieve the following data:

1. The activation of the tracking logs after downloading AntConc.
2. When the user logs in (exact date and time) and at what time the user logs out.
3. The number of trials used to download the data file of the verb (i.e., *make*), and if the user succeeded or failed in downloading the file. The tracker should record whether the download attempts were successful. If not, the tracker should provide the number of attempts. The data should also show if the user did not complete the task or was not actively working on the task for an extended period of time. The data will also show if the user succeeded in closing the data file.
4. Whether the user keys in the target verb in the search box, as well as the number of searches for each verb.
5. How many times the concordance lines have been generated for each verb. I expect the data to show me if the user clicks on the *start* button to generate the lines, and how many times this is done for each verb. That means the output of

the tracker feature appears in a yes/no format and shows how many times the start button has been clicked for each verb.

6. The tracker should show if the user clicks on the *sort* button first and if the user clicks on *sort* after selecting the levels (0, L, R) to arrange the concordance lines.
7. The tracker should show how many times the user clicks on the searched verb line to view its file, and when this occurs.
8. The logs should provide the exact time spent on all the steps in active use (there is active use of the mouse and the keyboard during the session) or in inactive use (there is no movement of the mouse or the keyboard during the session). In addition, the logs should show at which step there is active use and inactive use.

After deciding which functions I need from the tracker software, I began the piloting process on the available software. I have piloted six trackers, and in the following section, I will explain each one and the type of the data they provide.

4.5. Piloted software

Since April 2015, I have piloted six trackers for this study. In this section, I summarise the difficulties and the advantages of those trackers as well as my justification for the tracker chosen for this study which is All-In-One Keylogger.

- The first software is Net-support school, which is useful for observing students' actions live, but not for recording purposes. It can record keyboard strokes, but this must be activated each time one wants to record, so it is not an automatic feature. It also recorded only part of the sessions when I piloted it (it does not record the whole session, and needs someone to sit and activate every feature when needed, which is not possible when conducting a study with a group of learners). It is very helpful when observing students live, but, in my study, I need records to compare students' performances during and between each session.
- The second software is Fiddler, which records the webpage only and cannot capture any interaction with applications such as AntConc. Therefore, I decided to exclude it.

- The third software is T4W, which is used in the workplace (offices, companies), and it provides a detailed overview of the websites and applications used by each employee. It is good software for analysing the time spent on computers or certain applications, but it is not appropriate for the purpose of this study. It provides detailed records while using the computer in general, however it does not record actions when using AntConc. I find it an interesting and very detailed analyser; however it is not suitable for this study.
- The fourth software is My Screen Record, which is a regular desktop recorder (video) that captures all interactions that occurs on desktops with textual data. It is a good choice but analysing the data is time-consuming, hence its exclusion from the present study.
- The fifth software is Keylogger (the basic version), which records every keystroke and all applications used, but it fails to record mouse clicks (which are important to find out if the participants use the features in AntConc).
- The sixth software, which was selected for the present study, is All-In-One Keylogger. This is similar to the basic version of Keylogger but with more features, which include visual, audio, and textual logs that can be extracted via text file or HTML file. It provides all the necessary features that help in recording the interaction during the sessions. The drawback is that the visual logs are comprised of a screenshot every second, which will generate a massive amount of data, but is also easily annotated. To track the participant's behaviour and actions in the sessions, All-In-One Keylogger tracking software was used because it is effective in capturing screen activities. It generates two types of data: screenshots and textual data that display every movement either by the mouse or the keyboard. The software runs in the background on the user's computer, which allowed me to conduct unobtrusive observation of the participant's behaviour.

4.6. Data Collection

Data collection was conducted using a mixed-methods design in order to answer the research questions. Each data source is discussed in detail in the following sections.

4.6.1. Tracking logs

The All-In-One Keylogger software was installed on all the computers in the English lab. At the end of each session, I logged on as an administrator and extracted the data files (screenshots and textual logs) for each participant and saved it on a hard-disk according to the number given to each participant. Each participant had two data files for each session. Because the software started recording as soon as the computer logged on, I had to clean the data for each participant by deleting all the information that was not part of the session. Figure (2) is a screenshot of the data retrieved from the tracker, while Figure (3) features an example of the textual data retrieved from the tracker.

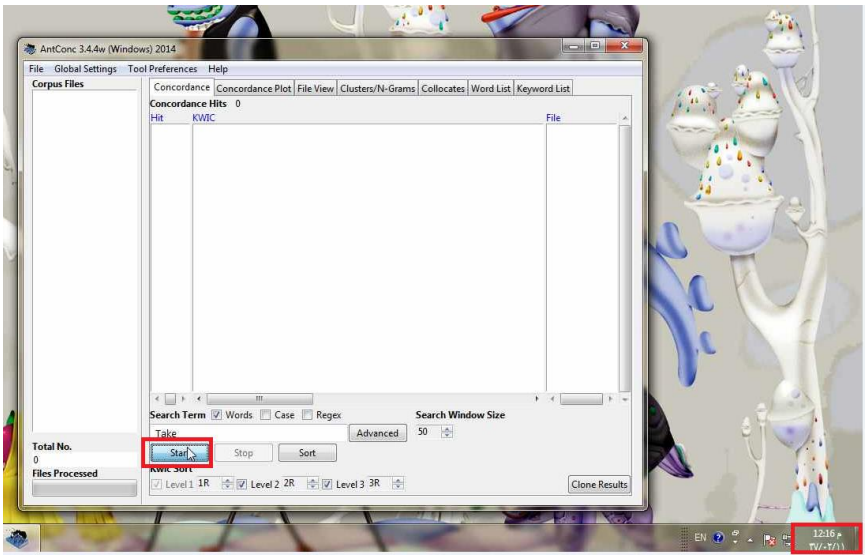


Figure 2. Screenshot of participant's computer screen

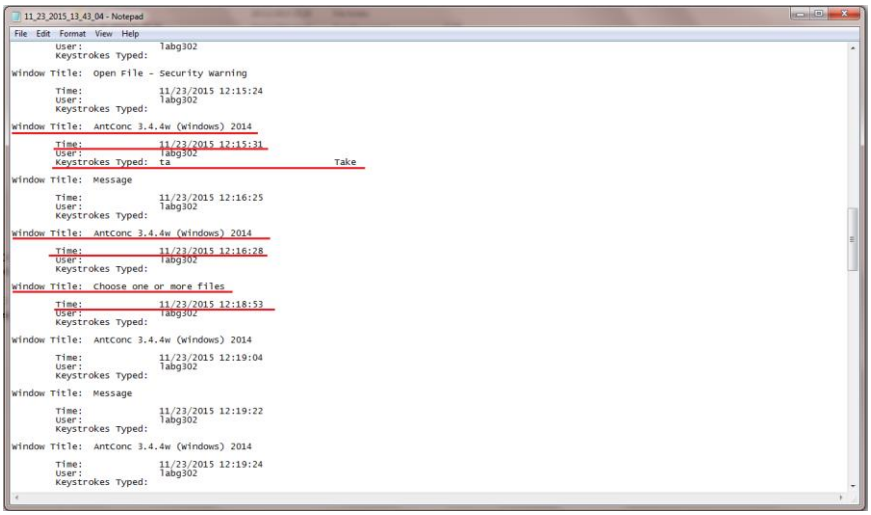


Figure 3. Textual log of participant

4.6.2. Tasks

The participants performed a set of tasks during their use of the corpus resource (AntConc) in all sessions. I only analysed the task data from the testing sessions because the participants used the corpus tool independently, and that use reflected whether the training was helpful in completing the tasks.

4.6.3. Reflective form

At the end of the study, the participants were surveyed on their background information (country of origin, major, age, number of years studied, and proficiency, computer literacy, and familiarity with corpus tools). A reflective form was also administered to elicit the participants' evaluations in using the concordancer in the tasks such as how easy the corpus was to use, how helpful was the approach they followed in reading the concordance lines was, the advantages and the potential disadvantages of using the DDL approach for learning language, and whether they would use the corpus tool after this study. The reflective form contained open-ended questions which comprised a qualitative data source. The reflective form used in this study was designed based on the forms used in Varley's study (2009) with modifications.

4.6.4. Interviews

The interview's aim was to provide an overall evaluation of the experiment. The interviews were semi-structured to offer a space for the participants to further comment on their evaluations and attitudes towards the DDL approach and tool. The semi-structured interview aimed to ensure that the interview was focused on the target topic and controlled to target a well-defined area from the topic. The interviews relied on set of pre-prepared questions yet was flexible in adding follow-up questions to elaborate on the answers of the participants as and when necessary.

This interview format assisted the researcher in following the themes systematically by covering the interview agenda for each participant through the interview guide (i.e., the pre-prepared set of the questions). The interview questions were guided by the reflective form themes and according to Varely's article (2009). The interview guide consisted of initial questions about computer literacy, then

questions addressing the students' experiences and attitudes towards the DDL approach, the tasks, and the concordancer tool (see appendix 5. for the interview guide). All interviews were done in Arabic and audio recorded using a digital recorder. For the interview transcription a software called Express Scribe was used which has features such as variable speed playback, uses hotkeys (shortcuts) to control playback while typing into Word. The interviews (Arabic) were transcribed verbatim. Willig (2013, p. 31) said "it is sufficient to transcribe what is being said (the words)", if the researcher's aim was the content. Thus, the non-linguistics features of the speech were excluded and the content (the words) only was transcribed. Richards (2003) advises creating a set of transcription symbols before starting transcribing or at least when transcribing the first interview which will help in holding a systematic approach for the transcription process. However since only words were transcribed, I only used the square brackets to refer to researcher's descriptions rather than transcriptions. I also used this phrase whenever the participants interrupted me [interrupted me]. Each interview was fully transcribed and then subsequently translated into English. Despite of the advantage of being an Arabic native and from the same city of the participants (thus grasping the cross-cultural meanings and able to cope with Arabic dialect of the participants), I went through the English versions and checked their accuracy against the recordings. Each participant was given a different name to keep her anonymous.

4.7. Procedures

Before conducting the study, I applied for ethics approval from University of Nottingham and received approval (relevant documentation available upon request). The study commenced the first week of November 2015 at NBU. Upon arrival, I contacted the information technology department to install the tracker and pilot it on the computers. This step took about one week; after that, I started recruiting participants. All the participants read and signed the consent form allowing them to participate in the study.

All the sessions were self-conducted in a computer lab. In the first session, I introduced myself, outlined the aims of the study, and provided a definition of corpus

linguistics and its main concepts (frequency and pattern with examples). I also described the corpus analysis tool (AntConc). After the introduction, we began the training on AntConc using *put* as the example, and this session ran for an hour (see section 4.4.2). The participants practiced using AntConc and demonstrated that they could read and analysis concordance lines. I used a PPT presentation to present all the information from the hand-out and to create an interactive learning environment. The training was not only concerned with how to use the software, but also how to read concordance lines and to investigate patterns in these concordances, though greater focus was placed on the technical features of the software than the linguistic analysis.

The second and third sessions focused on the techniques of reading concordance lines and linguistic analysis using Sinclair's (2003) model. All participants attended and successfully completed the second and the third training sessions. I used a PPT presentation in the second and the third training sessions to help the participants perform the steps. After eliciting the participants' answers to the tasks, I showed them examples of possible answers to facilitate an interactive environment. I used a projector to show them my computer screen while performing technical steps (e.g., the sorting function). All the training went smoothly, with some repetition of certain steps, including how to download data files and distinguishing between the start and sort buttons. Each session took approximately 60-70 minutes.

In the fourth and fifth sessions (the testing sessions), the participants performed the same steps they practiced in the training sessions independently without the teacher's assistance. After the study finished, I asked the students to fill in the reflective form. I then requested to interview some of the students and informed them that their interviews would be recorded. Six students volunteered to take part in the interviews and signed a consent form before starting the interviews. These interviews took place at NBU in the first week of December in my office, lasting approximately 7 to 10 minutes for each participant.

4.8. Data Analysis

After collecting the data, I divided it into the following: tracking logs, tasks, reflective form, and the interviews. The tracker log data was used to examine participants'

interactions with the corpus resource (AntConc) and measured the technical skill that participants learnt in the study (run AntConc, download data files, type target item, click on start, click on sort, assign the level of sort, read concordance lines, redo the same steps with other verbs in each session, then exit AntConc). The logs also provided information regarding the time spent on each session and with each verb. The tasks data examined the participant's performance in answering the questions from the tasks as a result of consulting AntConc. It also provided an overview of how successfully the reading model worked for each task. It also gave an indication of how well the participants were able to gain knowledge of the items based on the training sessions (e.g., typing the verb, noticing the patterns, observing the differences in meaning based on the collocates, writing the meaning of the patterns, etc.). The data from the reflective form showed the participants' background information, their experience using a computer, and their reflections towards using the DDL approach in a language classroom. The data from interviews provided a deeper interpretation of the reflection form data.

I grouped the themes of the analysis based on the research questions as the following:

1. Have intermediate students learned how to use the DDL approach independently in the language classroom for learning GVs?

   I looked at the tracker logs to:

   - Determine if the participants followed the steps I taught them and/or if they found their own ways for using the tool. I looked first at the training session logs, then at the testing sessions, and I compared the training and testing sessions to see if there were any differences or similarities in terms of the time spent in each session and for each verb.
   - Examine the steps followed in each session, to determine whether or not there were any significant differences.

2. Is there a link between the participants' use of the DDL approach and the successful completion of the tasks? What is that link?

   I looked at the testing session logs and the tasks to:

   - Compare the successful completion of the tasks for each participant and the steps used to complete those tasks in order to determine if there

was any correlation between the training that participants received and their ability to complete the tasks successfully.

3. Does participants' ability to use computer have any effect on their use of the corpus resource?
   I looked at the reflective form to find out:
   - If the participants' computer literacy had any effect on their attitudes towards, or their performance in the sessions.
4. What are participants' overall evaluations of the use of the DDL approach and the corpus recourse in the language classroom?
   I looked at the reflective form and the interview to:
   - Provide an overview of the overall evaluations towards the use of concordancer in the classroom.
   - Evaluate the procedure for reading and analysing the concordance lines.

4.8.1. Scoring data

Three types of quantitative data were collected: the logs, the tasks, and the reflective forms, while the qualitative data included the interviews and the open-ended questions (from the reflective form). A systematic coding scheme was created to prepare data for inputting. The following section details the coding process for the logs, the tasks, and the reflective form.

The tracking logs (training and testing sessions)

I assigned the variables and their values from the logs according to the steps of the training participants received, the time spent on each step and on each session. The following Table 17 shows the variables and their values and whether or not the participant succeeded in performing the step; a successful response counts as a yes (value = 1), while an unsuccessful performance is counted as a no (value = 0). The records of all participants were coded according to Table 17 with simple differences based on each session (for example, in session three and four, the symbol * was used after *get* and *have*). The time spent on each session and for each verb was coded as a score in minutes (e.g., participant 2 spent 23 minutes on analysing *make* in the second training session).

Table 17. *Variables of the tracking logs*

	Variable	Code
1	Run AntConc	Yes (1). No (0).
2	Download data file	Yes (1). No (0).
3	Type in 1st verb	Yes (1). No (0).
4	Click on start	Yes (1). No (0).
5	Generate lines	Yes (1). No (0).
6	Time spent between typing 1st verb and click on sort	Minutes
7	Sort	Yes (1). No (0).
8	Use the default setting	Yes (0). No (1)
9	Use R1	Yes (1). No (0).
11	Time spent between clicking on the line and back click	Minutes
12	Time spent on analysing 1st verb	Minutes
13	Type in 2nd verb	Yes (1). No (0).
14	Click on start	Yes (1). No (0).
15	Generate lines	Yes (1). No (0).
16	Time spent between typing 2nd verb and click on sort	Minutes
17	Sort	Yes (1). No (0).
18	Use the default setting	Yes (0). No (1)
19	Use R1	Yes (1). No (0).
20	Use * after the verb	Yes (1). No (0).
21	Click on start	Yes (1). No (0).
23	Generate lines	Yes (1). No (0).
24	Time spent between typing 2nd verb and click on sort	Minutes
25	Sort	Yes (1). No (0).
26	Use the default setting	Yes (0). No (1)
27	Use R1	Yes (1). No (0).
29	Time spent between clicking on the line and back click	Minutes
30	Time spent on analysing 2nd verb	Minutes
31	Type in 3rd verb	Yes (1). No (0).
32	Click on start	Yes (1). No (0).
33	Generate lines	Yes (1). No (0).
34	Time spent between typing 2nd verb and click on sort	Minutes
35	Sort	Yes (1). No (0).
36	Use the default setting	Yes (0). No (1)
37	Use R1	Yes (1). No (0).
39	Time spent between clicking on the line and back click	Minutes
40	Time spent on analysing 3rd verb	Minutes

41	Time spent on the session	Minutes

The tasks (testing sessions only)

The data from the tasks examined linguistic skills (reading and analysing the concordance lines). This process is similar to what I did for the logs, marking the tasks on participants' hand-outs according to a systematic scoring system. The scoring system considered partial knowledge in the tasks (answers that were partially correct). The following checklist in Table 18 outlines the scoring system followed for the tasks.

Table 18. *Variables of the tasks*

#	**Variables**	**Marking and coding**	Additional notes
1	Number of occurrences of *GV*.	Correct answer (1) Wrong answer/ no answer (0)	
2	What do you notice after *GV*?	Correct answer (1) Wrong answer/ no answer (0)	
3	Write a list of the repeated words.	Correct answer (1) Wrong answer/ no answer (0)	I expect them to write three answers. Every correct answer gets 1, with a score of 3 for this question.
4	Does *GV* mean the same thing? Examples.	Correct answer (1) Wrong answer/ no answer (0) Partial knowledge (.5)	They have to explain the difference by providing examples from the concordance lines. Partial knowledge means that they wrote that there is a difference but without examples.
5	The form of the repeated words after *GV*.	Correct answer (1) Wrong answer/ no answer (0)	
6	*GV* pattern 1 & meaning.	Correct answer (1) Wrong answer/ no answer (0) Partial knowledge (.5)	The pattern will be marked as (1) and the meaning also (1). Partial knowledge is given if they could give a close meaning.
7	*GV* pattern 2 & meaning.	Correct answer (1) Wrong answer/ no answer (0)	

8	Pattern 8. *GV* pattern 3 & meaning.	Correct answer (1) Wrong answer/ no answer (0)	
9	Explain if *GV* in the lines has the same of different meaning from verb on its own.	Correct answer (1) Wrong answer/ no answer (0) Partial knowledge (.5)	They have to explain the difference by providing examples from the concordance lines. Partial knowledge means that they wrote that there is a difference but without examples. Each example will be marked as (1), and the verb meaning as (1).

The reflective from

The closed-ended questions were coded as scores, while the open-ended questions were coded according to the themes that emerged from the data. The following checklist (Table 19) explains the system in coding this type of data.

Table 19. *Variables of the reflective form*

#	**Variables**	**Code**
1	Country of origin	Saudi Arabia (1)…..etc.
2	Programme of study is	Medical (1) Nursing (2) Pathology (3)
3	Age group	Below 25 (1) 25 to 34 (2) 35 to 44 (3) 45 or over (4)
4	Studied an English course before enrolling in your programme	Yes (1) No(2) Please specify: Seven years (1) etc.
5	Proficiency:	Beginner (1) Low-intermediate (2) Intermediate (3) High-intermediate (4)
6	Rating ability to use a computer	Very competent user (1) Quite competent user (2) Not very competent user (3)

7	An easy access to a PC at home	Yes (1) No (2)
8	Have you used corpus resources before?	Yes (1) No (2)
9	How easy was the use of corpus in the tasks?	Very easy (1) Quite easy (2) Easy (3) Not easy (4)
10	The approach I followed to analyse the concordance lines is helpful for intermediate language learners like myself:	I strongly agree (1) I agree (2) I agree to some extent (3) I disagree (4)
11	I think the following are advantages for the use of corpus approach (the procedure you follow) for language learning	Themes are grouped and coded
12	I think the following are disadvantages for the use for corpus approach for language learning	Themes are grouped and coded
13	Do you think that you will use the concordancer (AntConc) after this experiment has finished?	Yes, definitely (1) Probably (2) Possibly (3) No, probably not (4)
	Please comment on why or why not:	Themes are grouped and coded

The interview

The data obtained from the interviews was analysed qualitatively by drawing themes and mapping participants' responses. Dörnyei (2007) describes two approaches to analysing interviews: the use of specific methodology (grounded theory), and the use of a more general methodology (the generic approach). Most published research favours the generic approach, which is "qualitative content analysis" (Dörnyei, 2007, p. 245). I therefore applied the generic approach to analyse the data, as grounded theory is always used to generate or delimit a theory, and the interviews in this study were constructed for exploratory purposes.

Dörnyei (2007) mentions four phases in the analytical process of the generic approach: transcription, pre-coding and coding, growing ideas or memos, and interpreting the data. The transcription phase includes transcribing the data by listening to the recordings and typing all the interviews. The second phase, pre-coding and coding, consists of three levels: initial coding, second-level coding, and using a template of codes. I excluded this third level because it requires a predetermined code template, which contradicts the more flexible nature of the interviews. Therefore, the first level was the initial coding of the data, then the codes were clustered into categories and finally factoring levels. The third phase, growing ideas or memos, was performed at the second level during hard copy transcription. The fourth phase, interpreting the data, is found in sections 5.3 and 5.4. The interviews with the students were conducted in Arabic to ensure that the students were able to fully express themselves. Interviews varied between 7-10 minutes in length, with the analysis emphasising common factors and themes and by producing frequency scores of the given answers. A necessary step in the analysis of qualitative data is to thematically organise answers prior to summarising the data; this step is important if useful conclusions are to be drawn from qualitative data (Moore, 2000; Cohen et al., 2011). Once each type of data was coded, I inputted the coded data into an Excel spreadsheet (the record logs for the training sessions and testing sessions, the tasks of the two testing sessions), then imported it into IBM SPSS (22.0) for analysis.

Chapter Five: The Results and Discussion

Multiple analyses were conducted in an attempt to answer the research questions, which were both quantitative and qualitative in nature. The results of these analyses were presented in relation to each of the research questions set in section 4.1.

5.1. Exploring the learning process of the DDL approach in learning GVs patterns

The first research question was aimed at assessing participants' use of the DDL approach in the classroom. In order to examine whether the participants had learnt how to independently use the DDL approach following the two guided sessions, the participants' tracking logs were examined via a comparison of the logs from the training and testing sessions. These logs were compared according to two main variables: 1) participants' successful completion of the steps required to complete the tasks (henceforth known as '*process'*), and 2) the time participants spent completing the different stages of the process during each session (henceforth known as '*time spent'*). The comparison of the process was based on the steps that were taken to investigate each GV in each session. A comparison of the training session logs and the testing session logs ascertained if the training was successful and if participants were able to work independently during the testing sessions to complete the tasks.

To this end, two possible hypotheses were considered. The first hypothesis posited that the successful functioning of the provided training would result in higher scores for the '*process'* variable during the testing sessions (i.e., a higher number of successfully completed steps might indicate that the participants have learnt to use the same process they were taught) and a shorter time spent completing the different stages of the process during the testing sessions. The second hypothesis suggested that the participants would get lower scores in the testing sessions than the training sessions, which would indicate that they were not able to complete the steps in the manner that they were taught and according to the researcher's guidance and instructions; such lower scores would suggest that the participants have not learnt to use the same process they were taught, or perhaps less effectively than anticipated (not necessary that learning did not take place). The following variables were examined in

an attempt to answer the first research question: one independent categorical variable (session type: first training session, second training session, first testing session, and second testing session), and two dependent continuous variables (‘*process’* and ‘*time spent’*).

The use of the process

To compute the ‘*process’* variable, one point was recorded each time a participant correctly completed a step, and zero points were awarded if the step was not executed; this process was repeated for each verb, with a total of 13 points possible to be awarded per session. Table 20 illustrates the means and standard deviations of the scores during each stage of the process and for each session; additionally, the total scores according to session type are also shown.

Table 20. *Means (M) and standard deviations (SD) of the process during each stage and for each session*

Steps	**Training 1**		**Training 2**		**Testing 1**		**Testing 2**	
	M (Max=3)	SD	M	SD	M	SD	M	SD
Type	3.00	0.00	2.98	0.14	2.84	0.37	3.00	0.00
Start	3.00	0.00	2.98	0.14	2.84	0.37	3.00	0.00
Sort	2.96	0.20	2.98	0.14	2.78	0.42	2.98	0.14
R1	2.75	0.59	2.94	0.31	2.27	1.00	2.53	1.03
Total of the four steps per session	11.71	0.79	11.88	0.73	10.75	2.15	11.51	1.17
Total session score + the score from the download corpus file	12.7	0.67	12.90	0.62	11.70	1.62	12.50	1.08
Total per session type	M (25.6) SD (1.29)						M (24.2) SD (2.70)	

As indicated by Table 20, the process scores from the first training session, second training session and the second testing session showed similar mean values, while the second testing session demonstrated a high standard deviation, indicating greater variance. While the first testing session reflected the lowest mean and a high

standard deviation, the general performance of the entire process was better in the training sessions than in the testing sessions, with a 1.4 difference in mean values. As Table 20 illustrates the detailed tendencies of each step of the process during each session, it is important to show the general tendency of each step of the process according to session type.

Table 21 demonstrates the means and standard deviations of the steps according to session type (each session's steps were considered to calculate all scores for the three verbs). In addition to mean and standard deviation, Table 21 presents the median value for each step across the four sessions.

Table 21. *Means, standard deviation, and median values of each step according to session type*

Steps	Training sessions		Testing sessions		Total sessions		
	M (Max=6)	SD	M	SD	M	SD	Median
Type	5.98	0.14	5.84	0.37	11.90	0.38	12
Start	5.98	0.14	5.84	0.37	11.90	0.38	12
Sort	5.94	0.24	5.77	0.47	11.80	0.50	12
R1	5.69	0.65	4.80	1.47	10.40	1.55	11

As each of the four steps must be followed during each session and for each verb, the means for all steps should very similar. However, it is clear from Table 21 that a difference occurred during step 4 (R1); this difference was observable in both session types and was accompanied by a high standard deviation among participants.

Prior to data analysis, the normality distribution of the two dependent variables (i.e., the process and the time spent on each session) was checked. The Shapiro-Wilk test showed a non-normal distribution of the process across the four sessions (p=.000). As a result, the Friedman test (the non-parametric alternative to one-way ANOVA) was conducted to examine the differences in '*process'* scores across the four sessions (the two training and two testing sessions); for reference, see the mean, standard deviation values in Table 20. The results of the Friedman test indicated that there was a statically significant difference in the followed processes across the four sessions

(first training, second training, first testing, second testing, x^2(3, n=51) = 31.42, *p*<.001). The median values showed a decrease in the followed steps for the first testing session (Md=12), while the first training, second training and second testing sessions displayed similar values (Md=13).

After establishing the presence of a statistically significant difference somewhere among the four sessions, a Wilcoxon test was used as a follow-up to these findings (pairwise comparison of Bonferroni adjusted p-values). This test showed that there was a statistically significant difference between the scores of the first testing session and the training sessions. The first testing session had the lowest score, therefore signalling the fewest number of steps completed (see Figure 4).

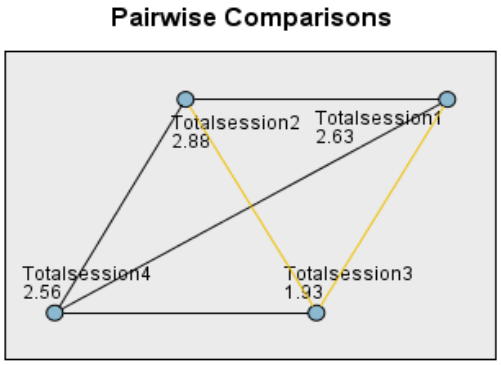


Figure 4. Pairwise comparison of the followed processes during the four sessions

As indicated by Table 22, the significant difference between the first testing session and the first training session was (*p*=.039), while it was (*p*=.01) between the first testing session and the second training session. Other comparisons failed to show significant differences.

Table 22. *Pairwise comparison values*

Sessions	**Test Statistic**	**Std. Test Statistic**	**Sig.**	**Adj. Sig.**
1st testing session–2nd testing session	-0.63	-2.45	.014	.085
1st testing session–1st training session	0.70	2.72	.006	.039*
1st testing session–2nd training session	0.95	3.72	.000	.001*
2nd testing session–1st training session	0.69	0.27	.788	1.000
2nd testing session–2nd training session	0.32	1.27	.206	1.000
1st training session–2nd training session	-0.26	-1.00	.319	1.000

* p<.05

The above analysis showed the overall trends and the general differences across the testing and training sessions. In order to further explore the data, the descriptive statistics for each step and for each verb were also examined. This closer examination revealed which steps presented participants with greater difficulty, and identified the reasons for the lower scores showed in the first testing session. Table 23 displays the percentage of participants who successfully completed each step for each verb in each session with subsequent discussion explaining the patterns revealed in the Table 23.

Table 23. *The percentage of participant completion of all steps for each verb (all sessions)*

	1st training session			**2nd training session**			**1st testing session**			**2nd testing session**		
Steps	Make	Have	Give	Take	Do	Get*	Make	Have*	Give	Take	Do	Get
Type in GV	100%	100%	100%	100%	100%	98%	98%	86%	100%	100%	100%	100%
Start	100%	100%	100%	100%	100%	98%	98%	86%	100%	100%	100%	100%
Sort	100%	100%	96%	100%	100%	98%	94%	84%	100%	98%	100%	100%
Use R1	100%	90%	84%	100%	98%	96%	72.5%	68.6%	86%	82%	84%	86%

1st training session

The participants investigated three GVs (*make, have, give*) under the guidance of the researcher and followed the required steps. Some participants did not use the R1 feature with the second and third verbs; this may have been because they felt it unimportant or forgot how to execute it. The steps followed by participants during this process are outlined in Table 23; results are presented in percentages (there were 51 total participants). Participants' application of the sort and R1 features clearly was reduced over the course of the session (see appendix 3.B, hand-out, pp. 333).

2nd training session

Although all sessions were designed in a similar manner, a wildcard (* is a symbol that can be used for searching words of unspecified prefix or suffix, e.g., *-ed*) was included in the second training session (the 3rd verb *get*) and the first testing session (the 2nd verb *have*) to determine whether participants could properly utilise a

wildcard during their investigation (see appendix 3.C, hand-out, pp. 343). However, during the second training session, one participant did not use the wildcard. This indicated that she did not discover all patterns related to *get* (if the wildcard * was not used in the search, only some of the concordance lines would appear, as seen in the screenshot taken of Participant 43's work, see Figure 5). Additionally, another participant did not use the R1 feature. Aside from these deviations, the majority of the participants followed the required steps (see Technical difficulties section).

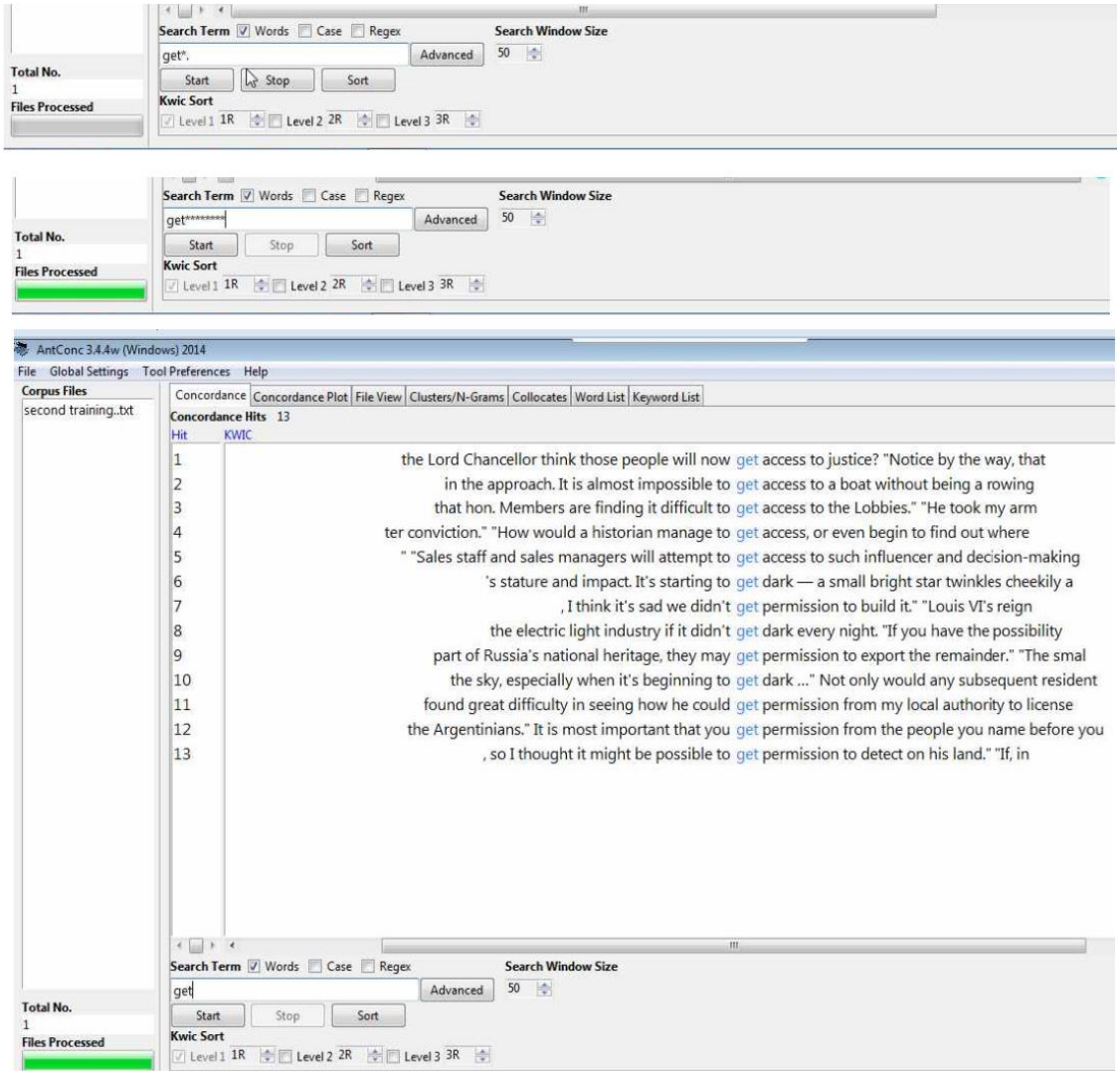


Figure 5. The screenshot taken of Participant 43's work

1st testing session

During this session, participants did not receive any direct guidance from the researcher. Participants engaged in the activities independently based on the instruction they received during the training sessions. Participants had to use a wildcard for the second verb *have*, as specified in the provided handout for the session. Table 23 presents a comparison of the steps followed during their investigation of three GVs. The participants did not appear to perform well when dealing with the 2nd verb, which can be explained by their apparent difficulty with the wildcard (*). Some participants did not utilise the R1 feature, perhaps because they were able to determine the pattern without it, which rendered the step unnecessary.

2nd testing session

The participants' performance, as measured by the use of the required steps, improved during this session. Participants did not receive any direct guidance during this session but rather worked independently. As noted in the first testing session, some participants did not use the R1 feature during this second testing session. As received in Table 23, the participants' performance was similar across all three verbs.

As a difference was noted in the number of utilised steps across the sessions, it was important to determine whether this difference was significant. Therefore, a Friedman test was conducted to compare the use of each step across sessions. The independent variable represented the type of session, and the dependent variables signified the steps (type, start, sort, R1) across the four sessions.

The utilisation steps across the sessions

Type

The results of the Friedman test indicated that there was a statically significant difference in the 'type' step across the four sessions (first training, second training, first testing and second testing, $x^2(3, n=51) = 19.889$, $p<.001$). It can be seen clearly from Figure 6 that the difference appeared in the first testing session where the participants worked independently for the first time.

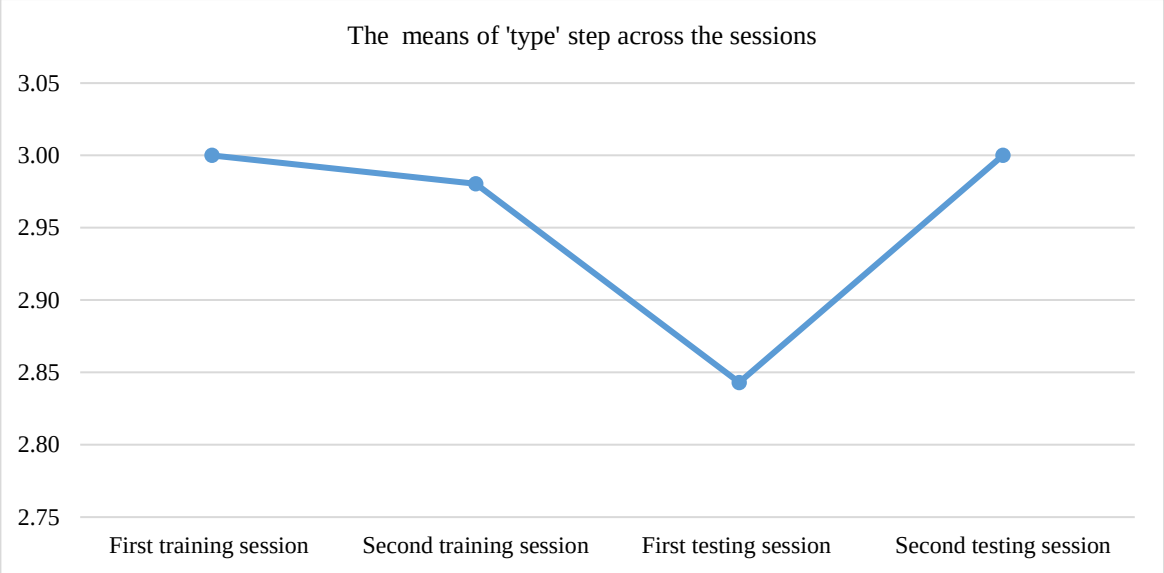


Figure 6. Means of 'type' step across the four sessions

After establishing the existence of a statistically significant difference somewhere among the four sessions, a paired sample T-test was used to follow-up these findings. There was a statically significant decrease in the step 'type' from the first training session (M=3.00, SD=0.00) to the first testing session (M=2.84, SD=0.37), t (50) =3.05, p=.004 (two tailed). Similarly, there was a significant decrease in the step 'type' from the second training session (M=2.98, SD=0.14) to the first testing session (M=2.84, SD=0.37), t (50) =2.45, p=.018 (two tailed). In contrast, there was a statically significant increase in the step 'type' from the first testing session (M=2.84, SD=0.37) to the second testing session (M=3.00, SD=0.00), t (50) =3.05, p=.004 (two tailed). While there was no significant difference in utilising this step among other sessions.

Start

Similar to 'type' step, a Friedman test was conducted and indicated that there was a statically significant difference in the 'start' step across the four sessions, x^2(3, n=51) = 19.89, p<.001). The following Figure 7 shows that the means dropped in the first testing session which was very similar to the 'type' step.

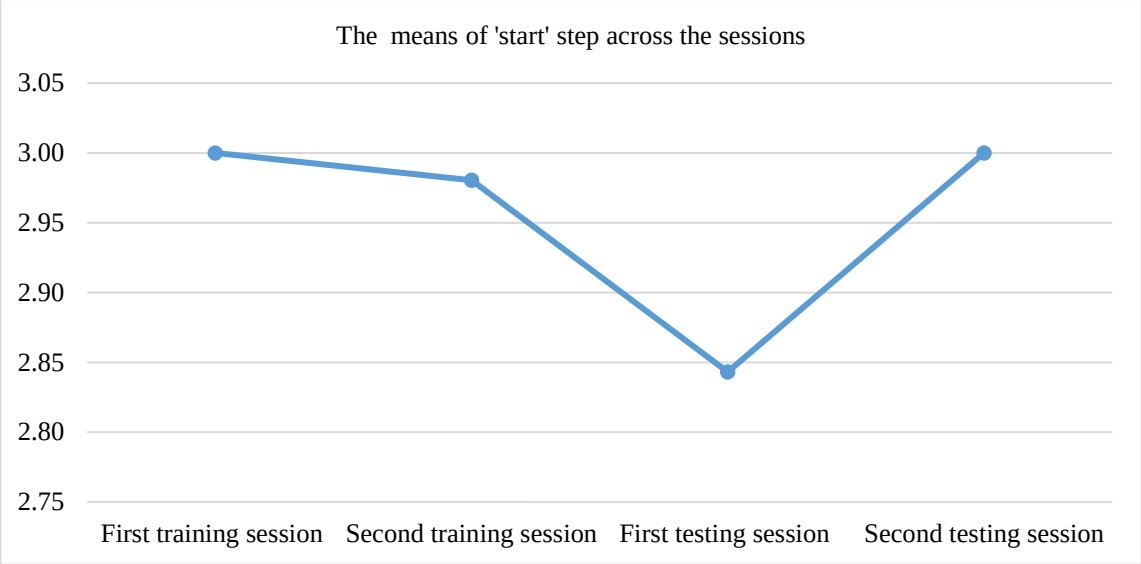


Figure 7. Means of 'start' step across the four sessions

I conducted a paired sample T-test to find out where the significant differences across the sessions were. The significance difference was only found between the first testing session and all other sessions. A decrease was found in the mean of the 'start' step from the first training session (M=3.00, SD=0.00) to the first testing session (M=2.84, SD=0.37), t (50) =3.05, p=.004 (two tailed). Similarly, there was a significant decrease in the step 'start' from the second training session (M=2.98, SD=0.14) to the first testing session (M=2.84, SD=0.37), t (50) =2.45, p=.018 (two tailed). In contrast, there was a statically significant increase in the step 'start' from the first testing session (M=2.84, SD=0.37) to the second testing session (M=3.00, SD=0.00), t (50) =3.05, p=.004 (two tailed). There was no significant difference in utilising this step among other sessions.

Sort

As the following Figure 8 shows, the utilisation of this step was lower than the previous steps across all sessions. The results of the Friedman test indicated that there was a statically significant difference in the 'sort' step across the four sessions, x^2(3, n=51) = 19.74, p<.001). Thus, a paired sample T-test was conducted to find out where the significant differences were across the sessions. Similar to 'type' and 'start' steps, the differences were only found between the first testing session and all other sessions. There was a decrease in the mean of the 'sort' step from the first training session (M=2.96, SD=0.20) to the first testing session (M=2.78, SD=0.42), t (50) =2.64,

p=.011 (two tailed). Similarly, there was a significant decrease in the step ‘sort’ from the second training session (M=2.98, SD=0.14) to the first testing session (M=2.78, SD=0.42), t (50) =3.13, p=.003 (two tailed). On the contrary, there was a statically significant increase in the step ‘sort’ from the first testing session (M=2.78, SD=0.42) to the second testing session (M=2.98, SD=0.14), t (50) =3.49, p=.001 (two tailed). There was no significant difference in utilising this step among other sessions.

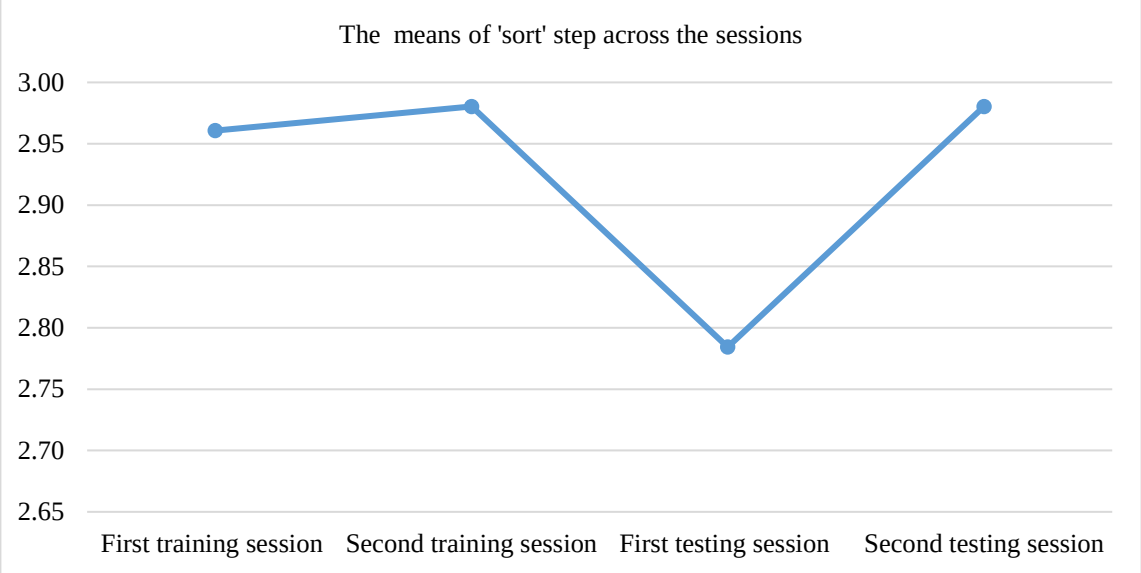


Figure 8. Means of ‘sort’ step across the four sessions

R1

The utilisation of this step was the lowest among all other steps. Figure 9 below displays a clear trend between the training sessions and the testing sessions, as the training sessions have higher means than the testing sessions. The results of the Friedman test indicated that there was a statically significant difference in the ‘R1’ step across the four sessions, x^2(3, n=51) = 21.81, p<.001). After establishing that a statistically significant difference existed somewhere among the four sessions, a paired sample T-test was used to follow-up these findings. Interestingly, there was a slight increase in the mean of the ‘R1’ step from the first training session (M=2.75, SD=0.59) to the second training session (M=2.94, SD=0.31), t (50) =2.02, p=.049 (two tailed). There was a decrease in the mean of the ‘R1’ step from the first training session (M=2.75, SD=0.59) to the first testing session (M=2.27, SD=1.00), t (50) =2.83, p=.007 (two tailed). Similarly, there was a significant decrease in the step ‘sort’ from the second training session (M=2.94, SD=0.31) to the first testing session

(M=2.27, SD=1.00), t (50) =4.70, p=.000 (two tailed). Also, there was a significant decrease in the step ‘sort’ from the second training session (M=2.94, SD=0.31) to the second testing session (M=2.53, SD=1.03), t (50) =2.68, p=.010 (two tailed).

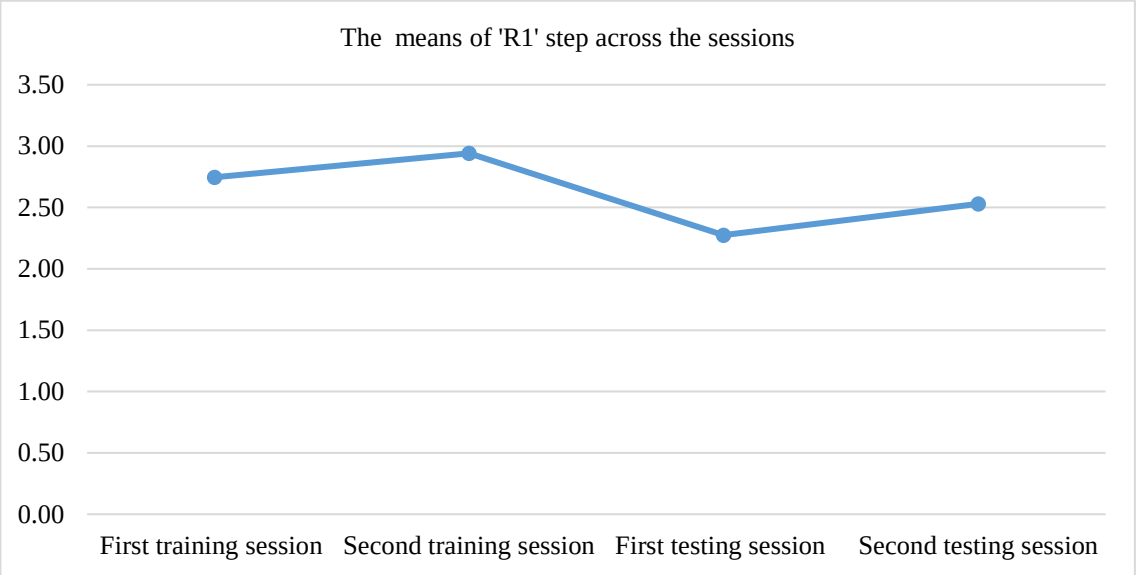


Figure 9. Means of ‘R1’ step across the four sessions

From the above results, it seems that the participants’ performances fluctuated in the first testing session where they worked independently for the first time for all the steps ‘type, start, sort, R1’, but by the second testing session they regained the same performance as the one displayed in the first training session. These results emphasised the need for more time and practice so the learners able to use corpora independently. It can be seen that the same pattern was found in the three steps ‘type, start, sort’ except the fourth step ‘R1’, which was more complicated. The participants needed practice in the training sessions that was reflected in the improvement in the second training session after they were familiarised with the DDL approach and the corpus tool (AntConc). Similar to the training sessions, the participants improved in the second testing session, as the first testing session displayed the lowest performance. In the same way as the other steps, the second testing session already showed improvement, and the trajectory is repeated from the training sessions to the testing sessions which would have brought them back to a better performance.

Technical difficulties

Moreover, as a component of exploring the participants’ use of the DDL approach, it is essential to discover any technical difficulties participants may have experienced

during the sessions. Two technical points were noticed in this study: the downloading of the data file in each session, and the use of the wildcard (*) during the second training session and first testing session. Tables 24 and 25 illustrate the participants' attempts to utilise these technical aspects that may have an effect on the overall process. All participants were able to download the data file, even if some required several attempts; however, one participant failed to use the wildcard during the second training session, and seven failed to use it during the first testing session.

Table 24. *Attempts to download the data file*

Session	**Attempts to download the data file**				
	1st attempt	2nd attempt	3rd attempt	4th attempt	5th attempt
1st training	86.3%	13.7%	0	0	0
2nd training	76.5%	19.6%	0	2%	2%
1st testing	54.9%	39%	2%	2%	2%
2nd testing	74.5%	19.6%	5.9%	0	0

Table 25. *Attempts to use the wildcard* *

Session	Attempts made to use *				
	1st attempt	2nd attempt	3rd attempt	4th attempt	Failed to use
2nd training	90%	3.9%	5.9%	0	2%
1st testing	74.5%	5.9%	15.7%	3.9%	13.7%

After reviewing the processes followed in each session and for each verb, it became evident that the difference occurred during the first testing session—more specifically, during attempts to use the second verb, where participants did not follow the steps they had been taught. It should be noted that some participants did not use the sorting and R1 features even during the training sessions in which they received direct guidance. Thus, the lower scores for the R1 step could be explained in two ways: either the participants did not think it was important, or because the step was more difficult for them. In terms of the steps required to successfully complete the process, participants tended to use all steps in the testing sessions except for the R1 feature and the wildcard; the wildcard in particular seems to have been difficult for the participants, despite the fact that it was included in one of the training sessions. Thus,

while the training was determined to be effective, the R1 feature posed problems for a number of participants.

Time spent on the process

As previously stated, the second step required to answer the first research question involved an examination of the time spent on each session. Significant differences in the time spent by participants on the various sessions could serve as an indication that using the concordancer became easier, grew more difficult or maintained the same level of ease. Other factors were examined to determine whether use of the tool was difficult or easy, including downloading the file, establishing the sorting level. Table 26 demonstrates the means and standard deviations of the time spent on each verb, as well as the time spent on the entire session.

Table 26. *Descriptive statistics of time spent on each verb and on each session*

Session	**Verbs per session**	**Mean (min.)**	**Std. Deviation**
1st training session	Time spent on *make*	30.67	7.43
	Time spent on *have*	13.24	3.20
	Time spent on *give*	13.94	6.84
2nd training session	Time spent on *take*	16.31	5.51
	Time spent on *do*	10.14	1.25
	Time spent on *get*	15.10	3.81
1st testing session	Time spent on *make*	11.63	4.63
	Time spent on *have*	14.24	6.05
	Time spent on *give*	15.24	7.16
2nd testing session	Time spent on *take*	11.92	3.89
	Time spent on *do*	9.67	3.62
	Time spent on *get*	17.18	3.98
Time spent on the 1st training session		57.84	9.29
Time spent on the 2nd training session		41.57	7.15
Time spent on the 1st testing session		41.51	7.17
Time spent on the 2nd testing session		38.96	7.03
Time spent on all training sessions		99.50	10.15
Time spent on all testing sessions		80.50	9.50

As illustrated above, the mean values showed a decrease in '*time spent'* from the first training session (M=57.8) to the second training session (M=41.6). Moreover,

'*time spent'* decreased between the first testing (M=41.5) and second testing sessions (M=38.9) (see Table 26). It was clear that, of all sessions, the first training session demonstrated the highest '*time spent'*. It must be noted that while both training sessions were instructor facilitated with the same guidance provided during each session, participants spent a greater amount of time on the first training session. It should be noted that the total elapsed time was measured for each verb from when the participants typed each verb to the time until deletion was recorded. The calculated time spent on each verb was thus considered the time spent on the entire session.

The results of the normality test (the Shapiro-Wilk test), which evaluated the time spent on sessions, showed a normal distribution (p=.679). Therefore, a one-way repeated measure (ANOVA) was conducted to compare the time devoted to each session, with 'time spent on each session' as the dependent variable and 'type of session' as the independent variable. The means and standard deviations are presented in Table 26. A significant effect was found for the spent time on each session, Wilks' Lambda=.22, f(3,48)=56.2, p<.001, multivariate partial eta squared=.78. The effect sizes were large (.78) according to Cohen's (1988, pp. 284-7) criteria of .01=small, .06=moderate and .14=large effect.

Table 27 shows a significant difference between the time spent on the first and second training sessions (M=16.275, *p*=.000), the first training and the first testing sessions (M= 16.3, *p*=.000) and the first training and the second testing sessions (M=18.88, *p*=.000). The adjusted p value of the pairwise comparisons of was *p*=.008 (p=.05 divided by the number of comparisons, 6, is .008). There was no significant difference, however, in the spent time between the second training, first testing and second testing sessions.

Table 27. *Pairwise comparison values for the time spent on each session*

(I) Time	(J) Time	Mean Difference (I-J)	Std. Error	Sig.[b]
1	2	16.275*	1.837	.000
	3	16.333*	1.551	.000
	4	18.882*	1.539	.000
2	3	.059	1.395	1.000
	4	2.608	1.342	.346
3	4	2.549	1.471	.536

Based on estimated marginal means

*. The mean difference is significant at the .05 level

b. Adjustment for multiple comparisons: Bonferroni

An examination of Table 27 clearly indicates that the time spent on the first training session was significantly different than the results of all other sessions, as the participants spent more time on the first training session than on the other sessions. The p values (see Table 30) suggested significant differences between the first training session and other sessions; this significance was calculated as <.05.

To facilitate a deeper investigation of the testing sessions wherein participants were independent and received no guidance, inferential tests were conducted to discover whether there were any differences between the testing sessions in terms of the process and the time spent on each step. Paired-sample T-tests were also conducted to uncover any significant differences in time spent during each testing session. The results indicated that there was no significant difference in 'time spent' between the testing sessions. In fact, the mean value of time spent on the first testing session (M= 41.5, SD= 7.165) was similar to that of the time spent on the second testing session: (M= 38.9, SD= 7.03), t (50)=1.73, p>.05 (p=.089). Thus, participants were shown to have spent similar amounts of time on both testing sessions.

A comparison of each verb used in the training sessions with the same verbs in the testing sessions indicated that the participants spent more time on first verbs during both training sessions than during testing sessions (*make*=30.67/ *make*=11.63; *take*=16.31/ *take*=11.92); the opposite trend was seen with the second and third verbs, as participants spent more time on these verbs during testing sessions than during training sessions. To compare the amount of time spent on each verb in both training and testing sessions, paired-sample T-tests were additionally conducted to uncover significant differences. There were significant statistical differences in the time spent for three verbs only: *make, take,* and *get*. The following table shows these differences.

Table 28. *Results of paired t-tests and descriptive statistics for the time spent on* make, take, *and* get

	Time spent	**Mean**	**Std. deviation**	**t**	**df**	**Sig. (2-tailed)**

Pair 1	*Make* (1st training)–	30.67	7.43	16.58	50	.000
	Make (1st testing)	11.63	4.63			
Pair 4	*Take* (1st training)–	16.31	5.51	4.56	50	.000
	Take (1st testing)	11.92	3.89			
Pair 6	*Get* (1st training)–	15.10	3.81	-2.93	50	.005
	Get (1st testing)	17.18	3.98			

Comparing the time spent on each session and on each verb per session revealed important differences; likewise, comparing the time spent on the process per verb provided statistically significant findings.

To this end, Table 29 depicts the means and standard deviations for each step and each verb. To calculate the time spent on each step, one value was calculated for each set of two steps; these sets included 1) the time spent on the 'type' and 'start' steps and 2) the time spent on the 'sort' and 'R1' steps. This consolidation was conducted for two reasons. The first reason was that the software records minutes rather than seconds; since the time spent on the 'type' step was counted in seconds, the 'type' and 'start' steps had to be counted together in order to produce an appropriate value. The second reason for the consolidation stemmed from the fact that most participants clicked 'sort' and immediately proceeded to click 'R1'; thus, only a few seconds were spent on the 'sort' feature. Because the software does not record seconds, 'sort' and 'R1' were calculated together in order to generate an adequate value. Furthermore, participants were required to set 'R1' for the first verb at the beginning of the session, after which point the R1 feature was established as a default. Therefore, there was no way to calculate the time spent on R1 except to count its first use in each session.

Table 29. *The overall time spent on each step for each verb per session*

The step	**The step**	**Mean**	**Std. Deviation**
1st training session	Time spent on 'type' and 'start' steps / *make*	10.88	3.46
	Time spent on 'type' and 'start' steps / *have*	1.71	1.47
	Time spent on 'type' and 'start' steps / *give*	0.57	0.90
2nd training session	Time spent on 'type' and 'start' steps / *take*	3.69	2.31
	Time spent on 'type' and 'start' steps / *get*	1.20	1.27

	Time spent on 'type' and 'start' steps / *do*	1.04	1.43
1st testing session	Time spent on 'type' and 'start' steps / *make*	1.37	2.69
	Time spent on 'type' and 'start' steps / *have*	0.35	1.13
	Time spent on 'type' and 'start' steps / *give*	0.16	0.67
2nd testing session	Time spent on 'type' and 'start' steps / *take*	.67	1.28
	Time spent on 'type' and 'start' steps / *do*	0.25	0.91
	Time spent on 'type' and 'start' steps / *get*	0.10	0.41
1st training session	Time spent on sorting / *make*	19.78	6.04
	Time spent on sorting / *have*	11.53	2.91
	Time spent on sorting / *give*	12.65	7.27
2nd training session	Time spent on sorting / *take*	12.63	4.70
	Time spent on sorting / *do*	9.10	1.54
	Time spent on sorting / *get*	13.51	4.72
1st testing session	Time spent on sorting / *make*	9.84	4.93
	Time spent on sorting / *have*	12.25	7.98
	Time spent on sorting / *give*	15.08	6.93
2nd testing session	Time spent on sorting / *take*	11.14	3.97
	Time spent on sorting / *do*	9.41	3.71
	Time spent on sorting / *get*	17.08	4.13

As revealed in Table 29, the time spent on the 'type' and 'start' steps decreased from the first verb to the third verb in each session, whether training or testing. However, the 'sort' step saw different results showing greater variety in the amount of time spent on each verb and on each session. The noted tendency in the first and second training sessions suggested that the 1st verb required more time than other verbs, while the 2nd verb needed less time than all other verbs. The trend revealed while examining the testing sessions was quite different; here, the 1st verbs consumed less time than all other verbs, while the 3rd verb consumed more time than the other verbs.

After reviewing the differences in total time spent across the sessions, it was necessary to investigate the time spent on the individual steps, and for each verb, in order to develop more detailed results. First, ANOVA tests (4x4) were conducted to compare the time spent on each step during each session. For each session, the independent variable was 'session type' and the dependent variable was 'time spent on each step'; the results of this analysis are outlined in the following sections.

Type and start

A significant effect was demonstrated for the time spent on each session: Wilks' Lambda=.113, f(3,48)=125.5, p<.001, multivariate partial eta squared=.887. The effect sizes were large (.88). Pairwise comparisons of the adjusted p value was *p*=.008 (p=.05 divided by the number of comparisons, 6, is .008). There was a significant difference between the time spent on the 'type' and 'start' steps during the first and second training sessions (M=7.24, *p*=.000), the first training and the first testing sessions (M= 11.28, *p*=.000), the first training and the second testing sessions (M=12.14, *p*=.000), the second training and the first testing sessions (M=4.04, p=.000), and the second training and the second testing sessions (M=4.90, p=.000). There was no significant difference, however, in the time spent on the 'type' step and 'start' steps during the first and second testing sessions.

Sort and R1

A significant effect was found for the time spent on each session: Wilks' Lambda=.053, f(3,48)=125.5, p<.001, multivariate partial eta squared=.947. The effect sizes were large (.95). Pairwise comparisons of the adjusted p value was *p*=.008 (p=.05 divided by the number of comparisons, 6, is .008).There was a significant difference between the time spent on the 'sort' and 'R1' steps in the first and second training sessions (M=9.06, *p*=.000), the first training and the first testing sessions (M= -22.02, *p*=.000), the first training and the second testing sessions (M=6.94, *p*=.000), the second training and the first testing sessions (M=-31.08, p=.000) and the first and second testing sessions (M=28.96, p=.000). There was no significant difference, however, in the time spent on the 'sort' and 'R1' steps during the second training and the second testing sessions.

To compare the amount of time spent on the steps for each verb in both training and testing sessions, paired-sample T-tests were additionally conducted to uncover significant differences. The results of this analysis are provided in the following section.

Type and start steps

As displayed in Table 30, there were significant statistical differences in the time spent on the 'type' and 'start' steps for all verbs (*make, have, give, take, do* and *get*), with p=.000; (*give*) with p=.012.

Table 30. *Results of paired T-tests and descriptive statistics for the time spent on the 'type' and 'start' steps*

	'Type' and 'start' steps	**Mean**	**Std. deviation**	**t**	**df**	**Sig. (2-tailed)**
Pair 1	*Make* (1st training)–	10.88	3.45	15.135	50	.000
	Make (1st testing)	1.37	2.69			
Pair 2	*Have* (1st training)–	1.71	4.47	6.194	50	.000
	Have (1st testing)	.35	1.12			
Pair 3	*Give* (1st training)–	.57	0.90	2.592	50	.012
	Give (1st testing)	.16	0.67			
Pair 4	*Take* (2nd training)–	3.69	2.31	7.634	50	.000
	Take (2nd testing)	.67	1.27			
Pair 5	*Do* (2nd training)–	1.04	1.42	4.647	50	.000
	Do (2nd testing)	.25	0.91			
Pair 6	*Get* (2nd training)–	1.20	1.26	6.032	50	.000
	Get (2nd testing)	.10	0.41			

Sort and R1 steps

As displayed in Table 31, there were significant differences in the time spent on the 'sort' and 'R1' steps for the verb *make* between the first training and the first testing sessions, with p=.000. However, there was no significant difference in the time spent on the 'sort' and 'R1' steps for the verbs *have, give, take* and *do*. An interesting significant difference was found for the verb *get*, with p=.000; however, the *t* value was negative, which indicates that the time spent on the second testing session was greater than the time spent on the second training session.

Table 31. *Results of paired T-tests and descriptive statistics for the time spent on the 'sort' and 'R1' steps*

	'Sort' and 'R1' steps	**Mean**	**Std. deviation**	**t**	**df**	**Sig. (2-tailed)**
Pair 1	*Make* (1st training)–	19.78	6.04	9.509	50	.000
	Make (1st testing)	9.84	4.92			
Pair 2	*Have* (1st training)–	11.53	2.90	-.574	50	.568
	Have (1st testing)	12.25	7.98			

Pair 3	*Give* (1st training)–	12.65	7.27	-1.815	50	.075
	Give (1st testing)	15.08	6.93			
Pair 4	*Take* (2nd training)–	12.63	4.69	1.718	50	.092
	Take (2nd testing)	11.14	3.97			
Pair 5	*Do* (2nd training)–*Do*	9.10	1.54	-.552	50	.584
	(2nd testing)	9.41	3.71			
Pair 6	*Get* (2nd training)–*Get*	13.51	4.71	-4.207	50	.000
	(2nd testing)	17.08	4.13			

5.2. Examining the relationship between DDL use and the successful completion of the activities

This section attempts to answer the second research question by uncovering a relationship between the use of DDL and the completion of the activities. Only the testing sessions were examined, wherein the participants worked on the activities independently and without any help. To investigate the testing sessions, two dependent variables were examined: 1) the scores relating to the process and 2) the activity scores (i.e., the scores for the first and second testing sessions). The participants' performances (scores of activity) during the two testing sessions were first checked to determine if there was a significant difference between the scores of those sessions. The relationship between the process scores and the activity scores was then investigated by means of correlation analysis. Finally, the relationship between the activity scores and the time spent on the processes during the performance of the activities was examined in order to determine whether there was a relationship between the time spent on the testing sessions and the participants' performance during those sessions.

The participants' performances

Table 32 outlines the means and standard deviations of the activity scores in both testing sessions.

Table 32. *Means and standard deviations of the activity scores in both testing sessions*

Activity scores	**Mean**	**Std. Deviation**
1st testing session	44.49	3.83
2nd testing session	46.77	1.63

A Shapiro-Wilk test was conducted to test the normality of the data; this test ultimately showed a non-normal distribution of the data (p=.000 in both sessions). As a result, the Wilcoxon Signed Rank Test was conducted, as this test serves as a non-parametric alternative to the paired-sample T-test. This test helps determine whether there was a difference in activity scores between the two testing sessions. The results indicated a significant difference between the scores of the testing sessions: z= -4.092, p<.05, with a moderate effect size (r= 0.37) according to Cohen's (1988) guidelines.

The mean of the ranks in favour of the second testing session was 21.31 (Std. =1.6), while the mean of the ranks in favour of the first testing session was 14.00 (Std. =3.8). The scores for the second testing session were higher than the scores obtained during the first testing session (see Table 32). As well as, the process scores for the second testing session were higher than the scores obtained during the first testing session. This result indicated that participants' ability to follow the same DDL approach processes improved during the second testing session.

To further investigate testing sessions, the participants' responses to the activity questions were examined according to the type of activity. As the activities had been divided into three cognitive processes, the participants' performance during each one was examined to determine how participant engagement with the concordance lines could enhance those processes. Table 33 outlines the percentage of participants successfully completing each activity, followed by a commentary on the results.

Table 33. *The percentage of participants successfully completing each activity*

Activity type	Questions	**1st testing session**			**2nd testing session**		
		Make	*Have*	*Give*	*Take*	*Do*	*Get*
Noticing GVs patterns	Look at the word immediately following the *GV*. What do you notice?	100%	98%	92%	98%	100%	100%
Form recognition	Write a list of the repeated words.	96%	74.5%	94%	100%	100%	100%
	List the repeated word forms that follow the GV.	98%	96%	98%	98%	98%	96%
Meaning recognition	Does *make* mean the same thing in each line? Give examples from the concordance lines. Provide two examples.	86%	72.5%	70.6%	90%	88%	80%
	Can you explain whether the GV on the concordance lines has the same or a different meaning than the GV on its own as one verb?	88.2%	86%	94%	90%	88%	96%
	Can you write three repeated patterns of GV, along with their meanings? (Pattern 1)	94%	92%	96%	96%	100%	98%
	Pattern 2	92%	94%	88%	96%	100%	96%
	Pattern 3	92%	66.7%	92%	94%	94%	98%

Noticing the pattern

The noticing activity sought to draw participants' attention to the repeated GVs patterns and to identify those repeated patterns. The participants were able to notice the repeated patterns.

Form recognition

This activity aimed to identify GVs patterns by attempting to generalise those patterns. The participants successfully recorded the repeated patterns, with the exception of *have* (74.5% recorded only three repeated patterns for this verb), which can be explained by their failure to use the wildcard (*) (see Table 33). The participants were able to generalise GVs patterns based on the concordance lines. Therefore, the participants noticed the patterns that repeated from previous activities; they then discovered that the repeated patterns could be used to form a hypothesis, which was a theory that the GV was always followed by a noun. Most participants recognised the form of the repeated words that followed the GV (nouns). See Table 33 for participants' answers to the second activity.

Meaning recognition

This activity determined whether the concordancer helped the participants to recognise the meaning of GV patterns. The results indicated that participants were able to identify the meaning of most GVs patterns; moreover, their performance improved during the second testing session. However, care must be taken while discussing these findings, as the two sessions had different sets of GVs and therefore the results cannot be generalised. What can be argued is that the concordancer helped participants to recognise the meaning of the GVs patterns; previous studies have led to similar results, such as those found in Chan and Liou (2005). Of course, it cannot be claimed that the concordancer helped or improved GVs acquisitions, due to the absence of a pre- or post-test to measure the acquisition levels. Table 33 summarises the participants' answers to the third activity.

The relationship between process, time, and activity score

After establishing the significant differences between the variables (activity scores, time spent and process scores) in the testing sessions, a correlation was conducted to identify the type of link that existed between the successful completion of the

activities and the followed process. The relationship between variables was examined for each testing session. The relationship between the activity scores and the process investigated using Spearman's rho correlation coefficient, as the data was non-normally distributed. In the first testing session, a medium significant correlation was found between the activity scores and the process scores. There was no correlation between the activity scores and the time spent on the first testing session.

Regarding the second testing session, there was no correlation between the activity scores and the process scores. However, there was a small negative correlation between the activity scores and the time spent during the second testing session. Table 34 demonstrates the significant relationship between the activity scores, time spent and the process scores for both testing sessions.

Table 34. *Correlation between activity scores, time spent and process scores for both testing sessions*

		Time spent	Process scores
1st testing session	Activity scores	-.038	.318*
	Time spent	-	.381**
2nd testing session	Activity scores	-.181	.069
	Time spent	-	.111

**Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

To conclude, the participants' performance was better in the second testing session. However, the correlations did not show clear relation among the variables. The following section analyses the reflective forms and the interviews to answer the third and fourth research questions.

5.3. The ability to use a computer and its effect on the use of the DDL approach in the classroom

The third research question aimed to ascertain if there was a relationship between the participants' computer skills and their performance while using the DDL approach. It also set out to determine if the participants' computer skills affected their use of the DDL approach, as well as their attitudes towards it. Therefore, the quantitative data

(reflective form) and qualitative data (open ended-questions from the reflective form, and interviews) were used to address this research question.

First of all, it was important to know how the participants rated their own abilities with computers. As revealed in the reflective form, 49% of participants described themselves as very competent users of computers, 45% as quite competent users, and 6% were not very competent. This can be explained by the fact that 98% of participants had their own computers at home and were quite capable in using them.

Secondly, to identify the relationship between the ability to use a computer and the use of the DDL approach, I ran a correlation analysis between three variables: the ability to use computers, the process, and the time spent on the sessions. To this end I conducted a Spearman's rho correlation coefficient, as the data was non-normally distributed (the process data). There was insignificant correlation between the ability to use computers and the process. The correlation value indicates no relationship at all. There was a small, positive correlation between the ability to use computers and the time spent on the sessions, $r=.28$, $n=51$, $p<.05$. It is worth noting that the performance of the three participants who described themselves as non-competent computer users (18, 47, 51), did not exhibit lower scores than other participants who described themselves as very competent users in utilising the process of investigating the concordance lines. For example, participant 18 outperformed in the process performance (100%), with participants 47 and 51 also performing well in the process performance (92% and 88.5%, respectively). Other participants (e.g., 7 and 40) described themselves as very competent computer users and gained 80.7% and 90% of successful completion, respectively. Additionally, participants (e.g., 27 and 19) who described themselves as quite competent users gained 84.6% and 88%, respectively. Therefore, the ability to use computer has no relation on the process of investigating concordance lines.

Also in the interviews (the participants were given these names Amel, Hind, Lyla, Soha, Eman, and Salam, for ease of reference), all the participants had declared that their ability to use the computer had no correlation to either their performances or their attitudes towards the DDL approach. Lyla and Eman explained that their attitudes and their abilities were related to the training they received, rather than their ability to use computers. As Lyla observed, "*I am not a good computer user; my*

ability is very poor, but I love using the corpus to learn new words. The ability to use the computer had no effect as I am a very poor user, and I could manage to use the corpus". Eman reinforced this stance by saying "*I am not a good user. No, it is not related to the use of corpus. The software is clear and easy, you follow clear instructions, so you do not need to be a very competent user of computers*".

5.4. Participants' overall evaluations of the use of the DDL approach and the corpus resource in the classroom

The fourth research question aimed to investigate the participants' evaluations and attitudes towards the use of the DDL approach through analysing the quantitative data (the reflective form) and the qualitative data (open-ended questions from the reflective form and the interviews). The analysed data was divided into the following main themes: the use of the DDL approach, the general view of the corpus resource (the concordancer), and final thoughts. For each theme, the analysis encompasses the quantitative data (reflective form), and qualitative data (open ended-questions from the reflective form, and interviews).

The use of the DDL approach

In the reflective form, 53% of participants believed that the use of the DDL approach in the tasks was very easy, 23.5% thought it was quite easy, and 23.5% thought it was easy. This point was further discussed in the interviews, with all six participants agreeing on the ease of the tasks when using the DDL approach. In regards to how the helpful the approach was in reading and analysing the concordance lines, 57% of participants strongly agreed, 33% agreed, and 6% agreed to some extent that it was helpful. The remaining 4% did not think the approach was helpful in reading and analysing the concordance lines. Given this feedback, it was necessary to investigate in detail why they arrived at these evaluations. The participants were asked what advantages and disadvantages they experienced in using the DDL approach.

Their answers were analysed to determine common factors and themes based on frequency scores. I first identified the key themes then counted their ratio frequencies, considering all the emerged themes (even if only mentioned once). These

themes were divided according to their number of co-occurrences by separated participants, as shown below in Table 35.

Table 35. *The emerged themes from the qualitative data (reflective form)*

	Themes	**Co-occurrences**	**Percentage**	**Total No.**
Advantages	New method for learning new words/meanings	repeated twice	3.9%	51
	Help increase/improve the knowledge of words and meanings of words	repeated 26 times	50.9%	51
	Smooth and easy use	repeated 16 times	31.37%	51
	Helps to understand the meanings of words according to their collocates	repeated 17 times	33%	51
	Knowing new words with no meanings	repeated 6 times	11.7%	51
	Facilitate searching for new meanings of a word	repeated 7 times	13.7%	51
	General theme of usefulness	repeated twice	3.9%	51
	Improve English language	repeated 14 times	27.45%	51
	Help in building sentences.	repeated twice	3.9%	51
Disadvantages	No translation feature	repeated twice	3.9%	51
	No pictures	repeated 4 times	7.8%	51
	The sentences being too long	repeated 6 times	11.7%	51
	Time consuming	repeated 9 times	17.6%	51
	The need for training and practice	repeated 7 times	13.7%	51
	Some contexts were difficult because they did not have enough knowledge of the words in that context	repeated 12 times	23.5%	51
	No disadvantages of the approach	Repeated 19 times	37.2%	51

The disadvantages emerging from this feedback predominantly focus on more technical issues, though some themes conveyed general criticism about using the DDL approach in the classroom, such as the sentences being too long, time consuming, and the need for training and practice. Another point was related to the participants' level, where it was discussed that some contexts were difficult because they did not have enough knowledge of the words in that context.

In the interviews, all the six participants found that the DDL approach was easy and direct. Soha emphasised that it was easy after the first training session "*as all sessions were repeated but with different verbs*". Hind explained this ease of use being a result of the directness of the approach: "*It was a step-by-step approach that led me directly to the answers*".

The six participants expanded the responses from the questionnaire by explaining why they found this approach to be helpful. For example, Salma said the approach was helpful by its gradualness in dealing with the concordance lines with a "*step by step approach*". Eman said that it helped her to understand how the meaning of the noun affected the meaning of the verb. Lyla emphasised the approach's usefulness by drawing attention to the word on right of the verb as a way for noticing the meaning of the verb + noun instead of the verb itself: "*It helped a lot, especially the sort feature. It was excellent. Using colours to notice the words to the right of the verbs was very good, as distinguishing meanings was easier*". Hind described the approach as a "*neat approach*" that assisted her in figuring out the answers. Finally, Amel thought this approach supported learning actively by giving the participants an active role in the learning process:

> *It was a very engaging approach that made us think of the words by connecting them to other words. While using this approach, I felt that I was very active, and I really benefitted from the sessions…… We are not passive learners; we think while we are learning*.

To gain a deeper understanding of the disadvantages experienced by the learners, these six participants were asked about the difficulty they had in the sessions. Five (out of six) participants experienced technical difficulties in downloading the data file. This difficulty appeared in the training sessions only, while they coped with it in the testing sessions. Another type of difficulty was related to the use of the DDL approach in answering the tasks which appeared in the testing sessions. Amel and Salma reflected that they needed time to comprehend some lines, which meant that some of the lines were difficult: "*Sometimes we took time to comprehend the meaning of the target item. Some lines helped directly to figure the meaning, while others were tricky, such as the lines* ***get revenge***" (Amel). Hind stated that "*Doing the tasks and using corpus without help was a bit challenging, especially in the first testing session. Then*

it was easy". This statement could possibly be interpreted as initial difficulties taking control of the concordances. Lyla also found difficulty in some lines where she said, "*My [proficiency] level is not very good [low], so my vocabulary knowledge is limited. Therefore, I found some lines to be difficult or tricky. Other than that, everything was good and clear*". Soha attributed her difficulties to her low-intermediate level: "*I did not know enough words in the context. If my level was higher, I would not have had this difficulty*". Also, she thought that the last activity was difficult because of the type congruency, which will be discussed in section 5.5.4.

Given the general acknowledgment that the DDL approach supports independent learning (e.g., Bernardini, 2004), participants were asked if they preferred guidance throughout the sessions, or if they would have opted to use the corpus independently. All six participants concurred that after receiving the training, they were able to use the corpus and answer the activities themselves independently. Amel, Lyla and Salma said that after the two sessions of training, the tasks were manageable and not difficult when using the corpus, "*but if we had tried to do it for the first time by ourselves, it would have been difficult. We did not need help or guidance after we had the training"* (Amel). Salma observed that "*It will be good to provide help upon request*". However, participants Hind, Soha, and Eman said they were able to use the corpus independently, but faced difficulty in the translation activity, as they sometimes did not know the exact translation of the collocation. As Hind explained, "*Expressing the meaning of the word was a bit difficult*". Soha explained this difficulty in greater detail: "*We knew that the verb has an exact meaning but when we read the lines, it did not make sense. When the verbs are followed by certain nouns, the meaning changes*". The participants related this difficulty to the exercise itself, but I believe it is related to the nature of the target collocation, as the target collocations were incongruent and the participants could not find an exact translation (e.g., *do homage*). The participants were additionally asked in the interviews if they preferred help and guidance in the testing sessions; most of them preferred independent learning and declared that after the training sessions, there was no need for help or guidance from the instructor, as the training was sufficient. Amel said that "*it would be nice to have help, or at least to know that we could get help if we asked for it*", while Lyla said that "*after receiving*

the training, there is no need for help. Some contexts were still difficult, but this was related to my level, so the guidance would not have helped".

General view of the corpus resource (AntConc, concordancer)

In regard to using the corpus tool in the future, the participants were divided. From amongst the 51 participants surveyed, 35% were very sure they would use the corpus tool, 39% would probably use it in the future, 22% could use it in the future (possibly), and 4% declared they would probably not use it. Most participants that said they would use the corpus tool in the future provided the following reasons for doing so: the tool is very useful for knowing new meanings of words (repeated 11 times), learning how to use words correctly, and using words in the right context (repeated 6 times), and useful in developing English language (repeated 8 times). Other reasons were rather general, such as the tool was easy to use (repeated 6 times), very useful (repeated 8 times), enjoyable (repeated 6 times), good (repeated once), and they loved it (repeated 5 times); their generality of the response, while vaguely positive, does not indicate recognised pedagogical benefits of the approach.

Some participants who said that they would possibly use corpus tools mentioned negative reasons for this possibility, such as using it only if needed [*have to use it*] (repeated 8 times), too time consuming to use (repeated 3 times), boring (repeated once) and requiring a lot of training and practice (repeated once). Other participants that said they could use it mentioned reasons such as boring with limited usefulness (repeated 7 times), and a lack of time in which to use it (repeated once). Seven participants did not give any reasons.

The participants' responses in the interviews were similar to the questionnaire responses with five participants (out of six) showing a desire to use it in the future. Their responses featured similar reasons (from the questionnaire) such as "*It was very effective to learn the words from the context*" (Amel). Hind justified her continued interest based on her current needs: "*I will also use it for learning English that is unrelated to curriculum, for example, how to write letters. I will use it according to my needs*". This view was centre balanced by Salma who, although admiring the concept of the corpus and the approach followed in the sessions, said she would not use it in the future because she did not like the AntConc software: "*the software*

interface seems old with no lively colours…. I hate the idea of downloading the data file…. It does not support pictures or video clips". Salma did not object to trying other available software, given that it is a new method for learning English within a native context.

The attitudes towards the concordancer were also explored in the interviews. All six participants agreed on the great benefits of using the concordancer and how using it was a good experience. They also thought that using the concordance lines to find answers for the activities as well as finding different meanings of the target items were beneficial. As Amel explained, "*It helped in answering the tasks by connecting the meaning of the verb to the nouns…and made me think deeply about the target words, one word can have more than one meaning*". However, Hind said that using the concordance lines "*was a little bit difficult. Some lines were tricky, but I managed to do well, other lines were not difficult*". She further attributed this trickiness to the fact that it was a new method for her. Salma similarly found that some lines were not helpful in learning the meanings of the target words, reasoning that she would not have this difficulty if her level was higher.

Ultimately, all six participants believed that reading the concordance lines prior to the activities was a very good and useful way to draw attention to the repeated patterns, as well as to the different meanings a verb can have according to its collocate. As Amel said, "*It drew my attention to the repetition and the forms as well as the differences in meaning, which was better than giving us the information*", while Hind observed that "*it was a good way to notice things [patterns] by myself".* However, Eman stated that "*it was a good way but sometimes it was boring so I read only some of the lines. Once I got the meaning, I stopped reading the lines*", while Soha said "*it was useful to draw our attention to the repeated patterns. But I did not read the lines first; I looked at the tasks, then read the lines*".

Final thoughts

This section summarised the closing question from the interview where the participants were allowed to further expand on their answers. All participants believed it was a great opportunity for learning English. Furthermore, many comments were made about the benefits they could gain by using the corpus for ESP, specifically for learning medical terminology and understanding English used in the medical field, as

all participants were majoring in medical fields. Amel suggested designing an English curriculum and including the use of the corpus as an activity session. Two participants also suggested developing the corpus tool as an app to be used on their phones. Another participant thought that downloading the data file was tricky, so a file-sharing feature would be a good idea for further developing the software. Finally, one participant believed using this experiment for higher levels could be even more promising, as there would not be as much difficulty in understanding the context of the target items.

5.5. Discussion

This study addressed how the participants actually investigated GVs patterns from guided classroom use to independent use. By analysing the data, I aimed to understand how successful the participants were in extracting information (GVs patterns and their meanings) from the corpus in the absence of the teacher (the researcher). In the following discussion, I interpret the results (first the quantitative and then the qualitative results) of this study within a SCT framework for language learning. Lantolf and Thorne (2006, p. 4) said that "SCT is a theory of mediated mental development, it is most compatible with theories of language that focus on communication, cognition, and meaning rather than of formalist positions that privilege structure". Thus, STC theory is compatible with the views that language is a communicative tool (i.e., Halliday's view, 1978), as well as the view of the unit of meaning which is supported largely by corpus linguists such as Hunston (2002), (see Chapter 2). This framework, according to Lantolf and Thorne (2006), asserts that humans utilise mental activity as a mediation process that is organised by culture and society. SCT views learning as a "social phenomenon" that is an essential part of specific cultures and social settings (Villamil & Guerrero, 2006, p. 23; see Chapter 1, section 1.3.1).

Therefore, within an SCT framework for language learning, the use of corpus is a process by which a learner internalises new knowledge through mediation. In this case, mediation is achieved in two ways: teachers who provide sufficient training on

the use of the corpus tool for learning GVs, and the corpus that provides access to the knowledge (i.e., GVs patterns). This process may result in learning linguistic forms that could not be acquired independently (Ellis, 2008), but the acquisition is not assessed in the present thesis; therefore, I cannot claim it as such because there is no test for it. One form of mediation is regulation, which consists of three stages: object, other, and self-regulation. Object regulation means that the learner must rely on objects, such as dictionaries, for help and support. In other regulation, the learner relies on others, such as teachers and peers, for implicit or explicit mediation, such as directions or guidance. Self-regulation is a stage during which learners no longer need assistance or help to accomplish an activity (Lantolf and Thorne, 2006). Thus, corpus use is viewed as mediation if it supports learners in reducing their dependence on teacher's guidance, or other regulation, and if it moves learners to engage in self-regulation. This adoption from the SCT into the DDL approach has modifications of the discovery nature of learning to what Smart (2014, p. 187) called "Guided Induction". The guided induction approach has been followed by many DDL pioneer researchers (see Flowerdew, 2015; Frankenberg-Garcia, 2014; Huang, 2008; Smart, 2014).

This study is unique because, with the exception of Kennedy and Miceli (2001; 2010), Sun (2003) and Ma (1994), few empirical studies have examined how learners actually use a corpus in language learning. The present study tracks learners' use of the DDL approach for studying GVs patterns through the use of guided and directed activities. This study also provides evidence of the actual use of corpus tools in learning GVs patterns. This can help fill the current gap in knowledge of how learners actually use corpus tools, as Hafner and Candlin (2007, p. 304) have emphasised the lack of studies providing direct evidence of learners' "self-directed use of corpus tools".

The present study also found that learners demonstrate the ability to use the corpus to complete activities independently and spent less time in each subsequent session. Thus, the results are consistent with other studies arguing that guided use, efficient training, and teacher-guided activities result in better use and more benefits in learning the targeted items before learners begin independent use (Chambers, 2005; Cheng et al., 2003; O'Sullivan & Chambers, 2006; Yoon & Hirvela, 2004; Smart,

2014). The teacher-guided activities in the first and second training sessions resulted in better performances in the first and second testing sessions and led the learners to be independent learners in the testing sessions. In addition to the teacher-guided activity, efficient training also led to improvement in the learners' performances. The training and teacher guidance additionally helped to create a positive environment while using the corpus to learn GVs patterns. Based on the results obtained, the following discussion is grouped into four themes: the first two themes focus on the classroom experiment, which used trackers and tasks to answer the first and second research questions, and the third and fourth themes discuss the reflective form and interview results, which answer the third and fourth research questions.

5.5.1. Independent use of the DDL approach

This section discusses the quantitative findings obtained from the tracker software. The main finding suggests that the participants were able to use the corpus tool and apply the DDL approach independently after the training, as evidenced by the number of steps successfully completed by the learners. The performance in the second testing session was better than the performance in the first testing session. Less time was spent on both testing sessions than on the training sessions, which was anticipated due to the guidance and instructions the learners received in the training session. However, even though the participants received the same instructions and guidance in both training sessions, the amount of time they spent in the second training session decreased, possibly suggesting an existing familiarity with the DDL approach and software. The same thing happened in the testing sessions; the amount of time decreased from the first testing session to the second but with no significant difference.

In general, the performance of the entire process was better in the training sessions than in the testing sessions, with the first testing session having the lowest score, thus signalling the fewest number of steps completed. This can be explained by the participants' lack of familiarity because in the first testing session, they used the corpus independently for the first time. However, we must be cautious about this result, as it could also be related to the participants' difficulty using the wildcard for the second verb (*have*) in that session. The improvement in the performance of the second testing session suggests that the participants took the lead in using the DDL

approach independently and might have been more confident in doing so. This finding is supported by Kennedy and Miceli's (2010) suggestion that time and practice are necessary for improving the use of corpus applications in a classroom. Thus, it is expected that learners will gradually become more confident in its use, with Yoon and Hirvela (2004) claiming that direct training can lead to successful corpus use.

The value of using the tracker software has been emphasised on many occasions in this thesis. In the present study, using such direct observation methodology (the software tracker) helped in understanding how individual learners interact with the resource (i.e., corpus tools); it also helped to identify the problematic aspects of using those resources or tools (Boulton, 2009a). In addition, this tracker assisted in recording direct observations of the learners' interactions with the corpus, so the validity of the study can be verified (Pérez-Paredes et al., 2011). Through the use of tracker software, a closer examination of the process for each session and verb helped explain the lower performance in the first testing session. In this way, the tracker logs allowed me to determine the steps that were more difficult for the participants, and identify the reasons for the lower scores in the first testing session. For example, some of the participants did not utilise the R1 step, perhaps because they thought it was unnecessary as they were able to determine the pattern without it. Thus, while the training was determined to be effective, the R1 step posed problems for some of the participants. These findings support the importance of the training sessions and guided use, which is demonstrated by the improvements in the learners' performances when they followed the same steps they were trained to use in the second testing session.

The use of direct observation methodology is valuable in CL and classroom research because it provides valid information on how individuals interact with a corpus, which Chapelle (2003) emphasised. Yoon (2008, p. 32) identifies the shortage of research in CL: "Little research has looked at the students' individual experiences in the analysis of corpus use. In fact, many corpus studies have regarded learners as a monolithic group rather than as idiosyncratic individuals". This study provides enough data on the classroom use of corpus to enable this view of the participants as individuals within an otherwise monolithic class. This closer examination of the process for each session and the time spent on each session for the participants is rich

information that is often missing in the literature. Even though many scholars (e.g., Horst et al., 2005; Chambers, 2007; Hafner & Candlin, 2007) acknowledge the importance of tracking learners' use of corpus-based resources, the studies that used tracking tools either did not collect the search strings to track details of learners' interactions (Gaskell & Cobb, 2004), or did not include the tracking details of learners' interactions with the resource (Hafner & Candlin, 2007). To overcome these limitations, the present study discusses the learners' interactions in detail below.

The performance in the first testing session was low because the learners used the DDL approach independently for the first time. So they did not feel confident and had to use the wildcard (*), which was difficult for some of them. This finding corroborates Hafner and Candlin's (2007) study on writing skills, suggesting the importance of continuous training in using corpus tools because the implementation of these tools in language learning is still novel. This is also true in the context of the present study, as the participants used a corpus for the first time. In their study on writing skills, Yoon and Hirvela (2004) emphasise the importance of familiarising learners with a corpus before using it in the classroom, regardless of their level, as this leads to positive attitudes. Hafner and Candlin (2007) highlighted several obstacles related to the use of the corpus; for instance, a lack of familiarity with the corpus tools may prompt students to use other web-based tools with which they are more familiar. This may explain why some of the participants (four) in the present study searched other websites such as Google Translate to investigate the target items instead of using AntConc (those participants have been excluded from this present study). This rich information can only be obtained through direct observation methodologies in which the validity of results can be claimed, according to Pérez-Paredes et al. (2011).

Another strength of using direct-observation methodology is to recognise any problematic or difficult aspects that may be encountered during the use of corpus-based resources that learners fail to report. It is essential to discover any difficulties (at least technical, as a result of using the tracker) the participants may have experienced during the sessions. Thus, two technical points were considered in this study: the downloading of the data file in each session and the use of the wildcard * during the second training session and first testing session. As previously noted, the first testing session was the first session in which the participants had to use the corpus

independently, and approximately 45% tried more than once to download the data file. In the second testing session, the number of participants that attempted to download the data file more than once decreased to 25.5%. Thus, it is important to provide learners with guidance and efficient training so they can effectively use the corpus tools.

Regarding the other technical difficulty (the use of wildcard *) the same pattern was repeated. With direct guidance, only one participant failed to use the wildcard during the second training session. Without direct guidance, seven participants failed to use the wildcard during the first testing session. In addition, some of the participants tried more than once to use the wildcard correctly, and after several attempts succeeded (see Table 25). Difficulty using the wildcard had an effect on the overall process in the first testing session. In fact, the difficulty with the wildcard is a problem discussed in the literature. Pérez-Paredes et al. (2011, p. 244) observe that training on features such as tags and wildcards does not necessarily correspond to independent use in recognition of said features, explaining this "reluctance" as a general lack of corpus skills.

This study has overcome the obstacle highlighted by Pérez-Paredes et al. (2011, p. 246): "researchers should be cautious as to the extent to which actual interaction with the corpus has taken place at all". This is an important distinction because even if the learners express their attitudes towards the DDL approach or tools by filling out a questionnaire and/or completing the assigned task, it cannot be claimed that an actual interaction took place. The tracking logs in this study have closely examined the process and the time spent on each session, for each step and for each verb, which shows how the learners have interacted with the corpus resource. This study is also rich in the way it provides a detailed review of the interactions with the concordance use, which is considered a way to use the concordancer with real learners (Gaskell & Cobb, 2004). In general, the performance in the second testing was similar to the performance in the training sessions, whereas the performance in the first testing session was lower than the performance in all of the sessions.

5.5.2. The participants' use of the DDL approach and the successful completion of tasks

The learners' overall performance improved after they received proper training and gained confidence in using the corpus, as a significant difference was found between the scores of the testing sessions. The activity scores were higher in the second testing session than in the first testing session. This finding is confirmed by the study conducted by Yoon and Hirvela (2004) in which the intermediate group received more training in using the corpus than the advanced group, which led to more positive attitudes. The Yoon and Hirvela (2004) study reinforces the importance of direct training, noting that it could lead to more successful use of corpus. O'Sullivan and Chambers (2006, p. 65) reach the same conclusion, indicating that the need for training and guidance with the use of "an appropriate corpus" can lead to more active use of the corpus. In the present study, it should be noted that the participants had difficulty applying the wildcard, which may have affected their answers in the first testing session. However, this result proves the importance of training and guidance in the use of corpus.

In this present study, the participants not only received training on the technical use of corpus, but were also given guidelines on how to read and analyse the concordance lines following Sinclair's (2003) model. This enhanced their performance in the answering activities. As seen in previous research, when participants receive technical guidelines without training on how to read and analyse the concordance lines, or if they undergo a short training period, the result is either insignificant performance or less positive attitudes (e.g., Pérez-Paredes et al., 2011; Gaskell & Cobb, 2004).

Even so, it can be argued that the concordancer helped participants to recognise the meaning of GVs patterns. Previous studies have reported similar results, with Chan and Liou (2005) revealing that de-lexicalised verbs (GVs) are more effectively learnt through web-based concordancing, and Cobb's (1997) findings that learners are able to acquire knowledge of new vocabulary through concordances. Using convergent tasks is another factor that may affect the participants' performance. Bernardini (2004, p. 26) recommends that training on the use of the corpus should begin by using convergent tasks in which the guided learners can reach the same

conclusions or outcomes; once the learners familiarise themselves with the interface, they can move on to divergent or independent tasks. In the current study, the testing sessions were designed in the same way as the training sessions to guarantee a smoother transition from the dependent to the independent conditions. I followed Bernardini's (2004) recommendations in the present study, which led to successful completion and improvements in the participants' individual performances.

The type of guidance provided in this study is not frequently used in the literature, which provides guidance when the learners come into contact with the resource. Pérez-Paredes et al. (2011, p. 236) emphasise that this type of guidance is "less frequently found". Written guidelines on how to conduct analyses is also recommended when the learners have little or no previous training (Gotz & Mukherjee, 2006), as was provided in the testing sessions. Many researchers have supported the use of this exemplar guidance in corpus consultation through teacher-guided activities (Bernardini, 2004; Chambers, 2005; Cheng et al., 2003; Yoon & Hirvela, 2004). Pérez-Paredes et al. (2011) offer guidance before learners' engagement with the tasks, but not while performing the task, as was done in the present study. Based on each type of task, the participants' performance was quite good, as they were able to notice the repeated patterns. The participants successfully recorded the repeated patterns. However, the participants' performance was better in the second testing session than in the first testing session. Regarding the form recognition activities, the results were the same for both testing sessions, as most of the participants recognised the form of the repeated words that followed GVs (nouns).

In the final activity, the meaning recognition activity, the participants were able to assert the meaning of most of GVs patterns; their performance in this improved during the second testing session. The participants' performance was better in the second testing session for all three verbs. Thus, we can say that the participants' performance was not affected by the wildcard, as their scores in the activity in the first testing session were lower than their scores in the second testing session for all three verbs, not just for the verb *have**. Sinclair (1999) notes that corpus data can enhance language teaching, and that the form–meaning link can be taught through this data to minimise the learning load. Thus, learners can use the corpus evidence to develop their creative use of language or "creative processing" (Nation, 2013, p. 110),

occurring when the learners come across target items that they already knew but with different meaning and/or in different contexts. Coming across those target items encourages learners to "reconceptualise their knowledge" of these items (Nation, 2013, p. 110).

In the present study, the activities took language-learning theories into consideration, including the noticing hypothesis and SCT. The inductive approach followed in the activities is entirely dependent upon the noticing hypothesis (directed in the training sessions by the teacher). The noticing is guided by the teacher when the learners are asked to examine a specific language feature (in this case, GVs patterns). This type of teacher-directed noticing is called pedagogical mediation, first introduced by Johns (1991b-1997), and subsequently used by McCarthy (1998) and Widdowson (2000). Flowerdew (2015, p. 21) states that the majority of DDL research adopts the "guided-inductive approach" in which the teacher initiates the search, and the students follow the noticing hypothesis. Boulton (2010a, p. 535) states that the DDL approach goes well with the constructivist paradigm for language learning in that learners explore the data to detect patterns and they are not taught the overt rules. The concordancing context considers rich linguistic input, which can help when learning novel words, as was demonstrated in Cobb's study (1997). Horst et al. (2005) argue that many of the words are not only processed in the course using corpus tools, but they have also been learnt receptively and productively. Due to the absence of a pre-test or post-test to measure the acquisition levels, this present study cannot claim that the concordancer helped or improved GVs acquisition. However, we can argue that, through the set of activities, the participants were encouraged to engage in an in-depth analysis of GVs patterns. In other words, the participants engaged in deep processing of the target items by completing the activities, thus studying the items independently in a rich semantic, syntactic and collocational information context. They first noticed the repeated pattern of each verb, then identified the form of the pattern, before interpreting the meaning receptively and productively. The results indicate that the participants' ability to follow the same DDL processes improved during the second testing session.

5.5.3. Computer skills and attitudes towards corpus use in the classroom

The ability to use a computer had no effect on learners' attitudes or their ability to use

the DDL approach, as confirmed by this study's findings. Interestingly, computer skills may have an effect on the time spent using the corpus resource, as a small, positive correlation was evidenced between the ability to use computers and the time spent on the sessions. This could mean that the participants would spend less time on completing the process as they became more confident in their use of the computers, and would hesitate less while performing the steps.

Boulton (2010a, p. 534) argues that "taking the computer out of the equation" can eliminate potential barriers to using the DDL approach for novice learners. He also recommends using paper-based materials instead of hands-on concordancing, specifically for low-level learners. Other researchers have identified technological difficulties as a source of the problem in using DDL in the classroom (e.g., Yoon & Hirvela, 2004). In contrast, Ito et al. (2009) mention how this generation spent their youth in direct contact with the media and media use is a main part of their lives. Pérez-Paredes et al. (2011, p. 246) note that since the "guided-corpus consultation does not detract hands-on, activity time", the use of digital media and online communication continues to increase. In this present study, this finding was also confirmed by the interviews with the six participants, who agreed that their attitudes and their ability to smoothly use the DDL approach were related to the training they received and not to their ability to use computers. From the interview data, two participants admit to being poor users but they like using corpus (AntConc), thus supporting the argument that computer skills have little effect on the use of corpora in the classroom. The more important thing, however, is to provide guidance and training to gain corpus literacy as Gotz and Mukherjee (2006) recommend.

5.5.4. The participants' overall evaluations of the use of the corpus approach/corpus recourse in the language classroom

The fourth question deals with learners' evaluations. Since the tracker logs cannot be interpreted to convey a positive or negative attitude in qualitative terms, the current section discusses the reflective forms and interview data in qualitative bias. The overall evaluations of the DDL approach (from the questionnaire data) were highly positive, with all participants agreeing that the DDL approach was easy to use. The participants' positive attitudes towards the approach, and the use of concordance lines for learning GVs, were confirmed through the interviews (as discussed in the section

5.4). All six of the interviewees found that the DDL approach was straightforward and easy to use. These findings are consistent with the results reported in other studies, such as Varley (2009), Yoon and Hirvela (2004), Chambers (2005), and O'Sullivan and Chambers (2006).

In the present study, the participants agreed that the approach was helpful in reading and analysing the concordance lines. This is consistent with Varley's (2009) study, whose findings suggest that learners had positive responses to the corpus consultations, and they were able to identify the benefits of those consultations, particularly in terms of vocabulary acquisition. From the follow-up interviews in this present study, the participants agreed on the benefits and on the value of using the concordancer. They thought that using the concordance lines was helpful in finding answers for the activities and in determining the different meanings of the target items. Those positive attitudes were extended to the participants' desires to use the DDL approach in the future, although they were split on the degree of how confident they were about using it, which was consistent with previous studies (e.g., Varley, 2009; Yoon & Hirvela, 2004).

Many studies have noted the importance of training (e.g., Chambers, 2005; Cheng et al., 2003; O'Sullivan & Chambers, 2006; Yoon & Hirvela, 2004), and the participants interviewed in this present study also declared that the training was effective and efficient. All six of them explained that, after receiving the training, they were able to use corpus and answer the activities independently. Moreover, after the training they found the tasks to be manageable and not difficult when using the corpus.

The participants were also able to identify some of the advantages of using the corpus approach, which supports the importance of using concordance lines with guided training for learning GVs patterns. Doing so may help learners improve their knowledge of the meanings of words, understand the meanings of words according to their collocates and, in general, help improve their use of the English language.

In fact, the majority of the participants did not mention any disadvantages related to using this approach. The few disadvantages that were mentioned were consistent with the disadvantages noted in previous research, predominantly noting

that the contexts (concordance lines) were difficult because the participants did not have enough knowledge of the words in that context, and the sentences were occasionally too long. Some of participants described the difficulty of the lines as '*the trickiness of lines'*, in that some of the lines were not helpful in determining the meaning of the target items. They identified their proficiency level as a reason for their difficulty in being able to use the lines.

This disadvantage is also reported as type of difficulty in Yoon and Hirvela (2004), and more often mentioned by participants in the intermediate group than in the advanced group. Another disadvantage relates to the nature of using the corpus tools in a classroom, as these tools are time consuming and require training and practice (see, e.g., O'Sullivan & Chambers, 2006). Technical difficulties were also reported in the interviews, in which downloading the data file was tricky. This difficulty, however, was only associated with the training sessions, as the participants were able to cope with this task in the testing sessions.

A different type of difficulty was related to answering the tasks, which occurred in the testing sessions and was subsequently mentioned in the reflective forms. This impacted the participants' evaluation of a task in which they faced difficulty during the translation activity, as they sometimes did not know the exact translation of the collocation. The participants related this difficulty to the exercise itself, but I believe it is related to the nature of the target collocation, as the target collocations were incongruent and the participants could not find an exact translation. As expected, incongruent collocations were difficult for intermediate level learners (the context of the present study), with GVs patterns problematic for L2 learners in general (Boers et al., 2014). For example, Laufer and Waldman (2011) find no differences in productive knowledge between lower and upper intermediate groups, with the most typical error being the misuse of the verbs in those patterns, such as *do a mistake* instead of *make a mistake*. This issue is related to the L1 effect when the nouns collocate with different verbs. This is discussed extensively in Nesselhauf (2005) and Yamashita and Jiang (2010).

To conclude this discussion, the present study is significant in that it provided learners with effective guidance and direct steps to avoid the difficulties they have faced in previous research, such as the lack of knowledge and skills in using corpora

and concordancers. As well as the difficulties concerned with working on corpus data (Cheng et al., 2003; Lavid, 2007), and to avoid the difficulty they have faced, in general, when using the corpus for the first time (Chambers, 2005; Chambers & O'Sullivan, 2004; Cheng et al., 2003; Kennedy & Miceli, 2001; Lavid, 2007; Yoon, 2008; Yoon & Hirvela, 2004). It also provides tracking information for using a concordancer, which had been talked about more than tested with real learners (see Gaskell & Cobb, 2004).

The tracking methodology used in this study provided the participants with data based on direct observations (textual and screenshots data) of their use of the corpus, which can increase the validity of the results. Pérez-Paredes (2011) claimed the validity of their experiment using the direct observation methodology, as opposed to using indirect methodologies. According to Pérez-Paredes et al. (2011), using indirect observation methodologies can result in misleading data because the provided data may be affected by differences between what learners think they did versus what they actually did. Another issue is that the data of the indirect observation methodologies can be affected by the learners' attitudes and perceptions when they report on what they are doing by narrowing the scope of the data on what the learners think is beneficial or difficult. These issues have been confirmed in previous studies (Chapelle & Mizuno, 1989; Fischer, 2007). Frequently, there is a difference between what learners report to be doing, or what we assume they are doing, and what they are actually doing. This gap can be filled by using direct observation methods, such as tracking software, as was done in this study.

Study One was conducted according to the repeatedly stressed need (Horst et al., 2005; Chambers, 2007; Hafner & Candlin, 2007) to fill this gap in the knowledge of how learners actually cope with using corpora in a classroom as well as tracking learners' direct use of the corpus for language learning. This study also follows Yoon's (2008, p. 32) suggestion to look "at the students' individual experiences in the analysis of corpus use", which is rarely done, as most research studies consider learners as a monolithic group. In general, corpus use in the classroom can be related to many factors that can affect its use, such as the learners' language proficiency and their familiarity with the new approach (Turnbull & Burston, 1998; Yoon & Hirvela,

2004). Thus, utilising direct observation methodologies are essential to evaluate how each learner copes with the use of corpora in the classroom.

PART THREE: Study Two

Study One in this thesis examines the learners' performance and evaluation of corpus use in learning GVs. In particular, it explores how intermediate-level students use the DDL approach to successfully investigate GVs pattern in the classroom. The results are obtained from the students by tracking their behaviours while using the corpus tool both with (dependent use) and without (independent use) a teacher's guidance. In both the dependent and the independent settings, the students are able to conduct their GVs searches and complete tasks successfully. In addition, the students have positive attitudes towards the DDL approach and express a willingness to use it in the future. The interviewed students from Study One also show a desire to use a corpus for learning English in medical majors, explaining that a corpus would be beneficial for learning medical terms and language use in a medical context. Several authors have pointed to the key role that teachers play in realising the use of the DDL approach in language teaching (Frankenberg-Garcia, 2012; Mukherejee, 2004, 2006; Tribble, 2015).

The present study seeks to complement the perspective of using the DDL approach in language classrooms, since all previous promising results (see Chapter 1) illustrate the importance of investigating teachers' attitudes and willingness to use corpora as a necessary step in enforcing this method at the intermediate level of English teaching. The students' willingness and successful use of the DDL approach is not sufficient to apply this approach in classrooms; rather, such application also requires teachers' willingness and acceptance.

Study Two focuses on the role of the teacher in the process of using corpora in the classroom, an essential step in popularising the use of CL in this context. I am particularly interested in transforming classrooms into learning environments that truly facilitate the use of corpora for learning English in the FL context. This transformation can be supported by the introduction of CL and its uses in teaching English, which may help to create accepting attitudes from the teachers' perspective. The transformation of classroom practice has to begin with teachers because they are

the ones who are in the best position to shape classroom life. As Dörnyei and Kubanyiova (2014, p. 3) emphasise, "Teachers *can* become transformational leaders". In this sense, any change in the classroom practice begins with the teachers' desire to create and facilitate the change. Many examples in CL research illustrate cases in which students had positive attitudes towards the use of corpora in the classroom but corpora have still not become primary tools in language teaching, as observed by Boulton (2010a). Therefore, many scholars have recommended directing research towards teachers, with a focus on pre-service teacher training programs (e.g., Boulton 2009a, 2010a; Frankenberg-Garcia, 2012).

Dörnyei and Kubanyiova (2014) argue that teacher motivation towards teaching a FL is necessary to motivate students to learn that FL. They specifically discuss how teacher motivation and vision towards teaching are linked to student motivation, emphasising that teacher motivation is necessary to motivate students towards learning. Their discussion is applicable in the current research for the following reasons: to use CL in the FL context, we must convince teachers of the importance of corpus-based approaches and resources use. Then, to use corpus resources in the classroom, we must first introduce these resources to teachers and provide them with adequate training and tips.

Karavas-Doukas (1996, p. 188) states that teachers' attitudes towards new approaches or innovations in the classroom are an "essential and inevitable part" of applying and using these innovations. Teachers' attitudes affect the classroom, influence students' attitudes, and impact what they actually learn about new innovations (Burns, 1990; Karavas-Doukas, 1996; Nunan, 1990). In fact, examining teachers' attitudes can help to provide information about the types of difficulties that could be encountered when implementing such innovations, as well as the types of support in-service teachers might need (Breen, 1991). Nunan (1991), among others, argues that teachers' attitudes towards new innovations can determine their success (in classroom use), even though teachers' attitudes are still neglected in second language classrooms. Nunan's (1991) claim is true in the case of CL research, since, though many researchers have pointed to the importance of using CL in the language classroom, teachers' attitudes towards the use of corpora in the classroom are still neglected. This study aims to address this gap by examining the attitudes of in-service

teachers towards the use of corpora in EFL classrooms. This study also aims to investigate the factors affecting the implementation of corpora (approaches and resources) in the language classroom for intermediate-level students. The specific theoretical background for designing Study Two will be discussed in the following chapter.

Chapter Six: Specific Theoretical Background

The aim of conducting this study is to explore teachers' attitudes and perceptions regarding the use of corpora in the language classroom. Only two studies have previously attempted to examine in-service teachers' attitudes. First, Mukherejee (2004) conducts a survey to explore if teachers in Germany know or make use of corpora in the classrooms (see section 1.5.2). The results of his survey suggest that corpus-based methods are not well-known in the English classrooms in Germany. Mukherejee's (2004) study is important because it confirms that a gap exists between the development of applied CL and its actual uses in classrooms, as well as teachers' knowledge of CL, which is similar to the Saudi context (foreign language context). Thus, Mukherejee's (2004) article is a starting point for researching teachers' knowledge of corpus-based methods and their views on the possible advantages of such methods in classroom practice in a SL context in Germany. In particular, the article discusses possible ways to bridge the gap beyond investigating teachers' attitudes towards corpus-based methods in the classroom. Mukherejee (2004) focuses on the importance of familiarising teachers with the basic knowledge and applications of CL in the language classroom. Mukherejee (2004) also conducts a survey, and provides no details on the reliability of the questionnaire or the construction of the survey. However, he readily admits the exploratory nature of his study.

The second study, run by Tribble (2015), comprises a series of surveys conducted over the last ten years to evaluate how corpus approaches have been used in language education (see section 1.5.2). However, Tribble (2015, p. 45) claims that, according to the survey results of the years (2001, 2008, 2012), the situation of corpora use in the classroom seemed to have "changed a little". Tribble's aim was not to obtain attitudes, but to develop a wider understanding of the resources and approaches teachers used and found most useful in their teaching. Therefore, this series of surveys sought to obtain a better understanding of the situations in which teachers like or do not like using DDL approaches (see Chapter 1, section 1.5.2).

Because of the lack of studies investigating teachers' attitudes towards CL in the EFL classroom context, the current study gains importance and can provide useful insights into teachers' dispositions towards CL in the Saudi classroom context.

Therefore, this study aims to design a questionnaire to measure in-service teachers' attitudes towards corpora in the classroom. The following section will discuss the selected factors that may impact teachers' attitudes towards corpus use in the classroom.

6.1. Factors affecting teachers' attitudes towards corpus use in classroom

The overall aim of the study is to investigate in-service teachers' attitudes towards the use of corpora in the classroom in general and teaching GVs at the intermediate level in particular. The review of related literature shows that no study has yet investigated teachers' attitudes towards corpus uses in the classroom in the EFL context. Most studies that attempt to investigate teachers' attitudes have focused on course evaluations related to attitudes towards the use of corpora in the classroom (e.g., Ebrahimi & Faghih, 2017; Farr, 2008; Leńko-Szymańska, 2014). In reviewing the literature related to CL and language teaching, a set of themes are identified as factors that may affect teachers' attitudes towards CL in language teaching. It should be noted that these factors do not represent a comprehensive overview of all of the factors that may influence teachers' corpus use; rather, they comprise a preliminary list of factors according to the related literature and the current debates in the area (i.e., the uses of corpora in the classroom). These debates are related to computer skills, corpus data, and the communicative approach. The factors are as follows: demographic information, authentic materials, general computer literacy, the communicative approach (focus on teachers' and learners' roles), and course evaluation (the training course). Each of these factors is explained in the following sections.

6.1.1. Demographic information

Demographic information is "factual information", meaning that it reflects facts about the participants such as age, gender, teaching experience, and native language (Gillham, 2008, p. 26). The participants' answers to these factual questions provide the basis for classifying them into groups (Gillham, 2008). The factual questions in the current study include nine variables: gender, mother tongue, age, teacher's degree, teacher training programme, teaching experience, teaching level, teaching load, and

previous knowledge of corpora. The selection of these information categories was justified by related literature as outlined below.

The first variable is gender, which is an important factor because it can help to explain the data supporting the global feminisation of the education profession (Cortina & Roman, 2006). Furthermore, gender can play a role in our understanding of the gendered use of information communication technology. Tribble (2015) found that the majority of corpus users in the classroom are female, a finding that supports the growth of the feminisation movement (increasing involvement of more women than men) in teaching practice. Drudy (2008, p. 319) notes that "teaching is a highly feminised profession in Western societies and is likely to remain so". Including this factor may provide insight into the differences between male and female teachers' attitudes towards corpora use in the language classroom, which might support the gender balance in teaching.

The second variable is the participants' native languages, which may have an indirect effect on attitudes because non-native speakers may find corpus data (i.e., authentic materials) challenging. Of course, this does not mean that only non-native speakers find corpus data difficult; this problem also arises with native speakers. It will be useful to know whether teachers' mother tongues affect their attitudes. In addition, to the best of my knowledge, the studied population in Study Two (i.e., the teachers at NBU) includes a wide range of nationalities (and therefore, native languages); thus, obtaining information about the teachers' primary languages will be interesting because it may reflect differences stemming from teachers' native languages.

The third variable is age. A recent survey by Tribble (2015) showed that the majority of people who use corpora in teaching (about 59%) are between 30 and 49 years old. Broady et al. (2010) argued that the lack of technology knowledge influences the attitudes of older people, preventing them from using modern technology. Hawthorn (2007) argued that older people have negative attitudes towards computers because of their lack of experience with new technologies. The view that older people have negative attitudes towards computers stems from evidence (e.g., Dickinson et al., 2007) that older people have difficulty learning about computers and that such learning takes a long time. Furthermore, a study conducted by Charness et

al. (2001) found that older people take a longer time to train and that they make more errors than younger users. These results are related to the cognitive decay in older people (Broady et al., 2010). In sum, including an age variable in the current study is important because this information will contribute to our understanding of the relationship between age and the acceptance of modern technology.

The fourth variable is the qualification, which illustrates whether the teacher's academic background affects attitudes. The fifth variable is the language teacher training course, which may play a vital role in encouraging teachers to take a positive stand towards the use of corpora in the classroom, since it may develop their abilities to cope with new methods of teaching. Furthermore, teachers who attend a number of training courses may be more willing to change their teaching practice and to engage in ongoing professional development for this purpose.

The sixth variable is experience (i.e., number of years in teaching), which can be related to the age variable since more experienced teachers tend to be older than novice teachers. This variable will provide data on whether teachers' willingness to try new technologies (i.e., corpora uses) for teaching in the classroom is related to their experience. Furthermore, attitudes towards corpora use may be affected by experience. Based on my own experience in teaching (i.e., seven and a half years in three different institutions), I hypothesise that more experienced teachers will be more unwilling to use corpora (and vice versa). I have found that more experienced teachers are less willing to use new methods, while inexperienced and relatively new teachers are more willing and more enthusiastic to incorporate new methods in their teaching.

The seventh variable is related to the level(s) at which teachers currently teach. It is important to know whether the teachers teach only the intermediate level or whether they also teach more advanced levels, since this information may reveal whether a teacher who teaches more than one level has more positive feelings towards the use of corpora. The eighth variable is the number of teaching hours (i.e., teaching load), which can impact a teacher's attitude. If teachers have overly busy timetables, they may have negative attitudes towards the use of corpora in the classroom.

Finally, the ninth variable concerns previous knowledge about corpora and is designed to determine whether teachers have any existing experience with corpora.

This experience may not be directly related to their attitudes, since the teachers who know about corpora can have either positive or negative attitudes (and vice versa). Nonetheless, this variable has been included to determine the teachers' previous knowledge because I believe—as has been shown in previous studies like Mukherejee (2004)—that the majority of language instructors possess little knowledge of CL and its applications.

6.1.2. Authentic materials

Attitudes towards Authentic materials (AMs) constitute the second factor that can affect teachers' attitudes towards the uses of corpora in the classroom. The use of AMs in English classrooms has been widely debated (Gilmore, 2007). Therefore, it is necessary to examine teachers' attitudes and perceptions of AMs, since these attitudes can have a significant impact on learners' attitudes and perceptions. Teachers' attitudes in general can impact students' attitudes; therefore, it is necessary to discover how teachers in a Saudi context perceive AMs use. Dörnyei (2003) argues that teachers' attitudes influence learners' motivation and learning achievement. This factor is important and may influence teachers' attitudes towards the use of corpora in the classroom, since the corpus data that is presented for teachers in the current study are AMs that have been collected from native speakers and have not been designed for learning purposes.

The use of AMs in the EFL classroom has a close relation to CL, since corpus data are considered authentic. Corpus data comprise a collection of texts designed for linguistics research, which are real texts produced by native speakers or writers (i.e., not initially, necessarily designed for teaching purposes). These are typically produced for other speakers of the language and appear in mediums such as TV programmes, newspapers, and magazines. In other words, corpus data are AMs. Morrow (1977, p. 13) defines AMs as follows: "An authentic text is a stretch of real language, produced by a real speaker or writer for a real audience and designed to convey a real message of some sort". However, from a language learning perspective, Widdowson (2003) confirms the distinction between text and discourse with regard to corpora, arguing that texts are language productions that are exclusive to the communicative situation, while discourse is language used in communicative situations in which learning the language happens via competence through communication. Widdowson's (2003)

disagreement concerning the authenticity of corpus data is also based on the transition from one medium to another, which decontextualises the language. Mishan (2004) also agrees with Widdowson's (2003) argument that corpora decontextualises language by focusing on the production rather than the reception. So, the receptive perspective and the intentions for using this discourse (spoken) are lost through the transformation into electronic data. She argues that authenticity under these conditions cannot be achieved. Despite Widdowson's (2003) argument, corpus data often still include some elements of authenticity (per Morrow's (1977) definition). Therefore, Mishan suggests developing Widdowson's division (1978) between genuineness and authenticity for pedagogical uses. Instead of considering the authenticity as a relationship between the passage and the reader (as originally suggested by Widdowson (2003)), authenticity will refer to a relationship between the learner and learning activity, a process of interaction which authenticates the corpus data by learner engagement through the learning activity.

Larsen-Freeman (2000) claims that one of the principles of the communicative approach is the use of AMs. However, there is an on-going debate concerning the authenticity of discourse and the genuineness of texts (Widdowson, 1990, 2003), which goes beyond the aims of this study. Simultaneously, there is another debate concerning the use of AMs in language learning, which will be considered in this study because the attitudes towards this use are more relevant to our research aims. Al Azri and Al-Rashdi (2014) discuss the arguments in favour and against using authentic materials in an EFL context. Despite all the benefits of using AMs, some researchers still tend to discourage their use for teaching either because of the proficiency level of learners or time constraints. Peacock (1997) mentioned several advantages of using AMs: AMs can meet learners' needs, prepare them for real life, and familiarise them with the culture. It has also been argued that AMs can help students learn a target language (Guariento & Morley, 2001; Wilcox et al., 1999). Another argued benefit of AMs is the increase in motivation to learn a language (Gilmore, 2007; Sherman, 2003). Kilickaya (2004) said that AMs help provide students the chance to practice a real language that can be used beyond the classroom. On the other hand, though both Kilickaya (2004) and Richards (2001) acknowledge the benefits of using AMs, they also admit their disadvantages (e.g., AMs require

more time and effort to simplify texts and identify complex structures and difficult vocabulary). Similarly, Martinez (2002) argued that using authentic materials can raise difficulties related to culture comprehension among classroom learners. Moreover, Berado (2006) claimed that even cultural factors can enhance the difficulty of using AMs in the classroom and, consequently, demotivate learners. In sum, using AMs is time-consuming and requires special preparation according to the learners' levels; for example, Guariento and Morley (2001) argue that using AMs for lower levels can frustrate and demotivate students. However, the benefits of AMs use have the potential to outweigh the disadvantages.

6.1.3. Computer skills and attitudes

Teachers' attitudes towards computer literacy have been shown to be closely related to corpora because corpus use is a type of computer use. Yoon and Hirvela (2004) acknowledged that technology impacts the independent use of corpora in classrooms. Therefore, it is important to know the habits of everyday computer use, since this can indirectly reflect teachers' willingness to use corpora in their classrooms. Furthermore, teachers' attitudes towards computer use affect attitudes towards corpora use because if teachers do not use computers or lack to strong computer skills, they will not choose to utilise corpora in their classrooms. Boulton (2010a) explores this connection by considering the problem of technological issues in DDL implementation in the classroom.

6.1.4. Communicative approach[10]

Attitudes towards the communicative approach tend to go along with attitudes towards the use of corpora in teaching. This link has been emphasised extensively in the literature, since the DDL approach supports inductive learning, learner autonomy, discovery learning, and the centring of the learner in the learning process (Aston, 2001; Bernardini, 2004; Mukherjee, 2004). This factor is not aimed to determine the attitudes towards the communicative approach itself but it is related to the teachers' attitudes towards their role and the learners' roles with the communicative approach

[10] The communicative approach focuses on improving communicative competence rather than performance competence (Richards & Rodgers, 2014). The communicative approach is the approach used in Saudi Arabia for teaching English.

(this factor will be called attitudes towards the communicative approach). Figuring out the perceptions of the teacher's role in the classroom is very important because these perceptions can be related to the nature of classroom corpora use, particularly to support learning discovery, learner autonomy and learner-centred activities (Gavioli, 2001).

6.1.5. Course evaluation

This factor is important because it may have influence on the teachers' attitudes towards the use of corpora in language teaching. It was proven in the literature that most teachers do not know about CL and those who do have limited knowledge (Mukherjee, 2004). To this end, it is impossible to investigate teachers' attitudes without introducing CL and explaining some of its uses in the classroom. Therefore, examining the teachers' evaluations of the training course can show if their attitudes towards the use of corpora are affected by the training course. Leńko-Szymańska (2015) argues that the course affects the participants' perceptions of the value of corpora in language education. It is worth observing that creating a comprehensive training course on using corpus approaches and tools for in-service teachers is beyond the aim of this thesis; rather, my goal has been to present a simple training course with limited examples and resources to introduce the corpus concepts and approaches in language teaching to elicit the teachers' attitudes. The course evaluation factor is designed according to Stufflebeam's (2007) Context, Input, Process, Product (CIPP) model of evaluation, which is used extensively in the literature (the model coined firstly by Stufflebeam (1967)). It covers four main angles: context (the course aims and objectives), input (course content and materials), process (conduct and teaching–learning process), and product (assessment and impact). The present study excludes consideration of product because there are no assessment tasks.

Chapter Seven: Research Methodology

7.1. The overall design and research questions

The study addresses the following research questions:

1. What are teachers' dispositions towards the use of corpora in the classroom?
2. What are the factors that may influence teachers' attitudes towards the use of corpora in the classroom? How might these factors influence the attitudes?
3. How do EFL teachers perceive the corpus approach for teaching GVs?

This study was designed to address these research questions by achieving the following aims:

1. Design introductory training course (two sessions) for teachers to show them possible ways of using corpora in the classroom.
2. Evaluate in-service teachers' dispositions towards the use of corpora in the classroom by constructing and administering a questionnaire.
3. Identify possible factors that may affect teachers' dispositions towards the use of corpora in the EFL classroom.

The design used in this study is based on mixed-methods research, involving an exploratory angle. The exploratory design was selected for developing the questionnaire, because this design type is recommended when researching a topic or area that has little available information or that has not been thoroughly investigated (Dörnyei, 2007). As such, this type of design provides "ways of conceptualizing the topic" and helps to identify the themes and possible variables (Ivankova & Creswell, 2009, p. 140). This design can also help generate important variables that may be missing or absent from the current literature because, for the purposes of this study, there are limited prior studies that examine in-service teachers' attitudes towards CL.

The exploratory design consists of a small-scale-exploratory interview study (gathering qualitative data) to inform the design of the main instrument, which is a questionnaire. Cohen et al. (2011) believe that interviews in the preliminary stage of a study can provide important data, which can enrich the development of the

questionnaire. Conducting interviews with in-service teachers at the early stage provides in-depth information for the development of the questionnaire. This was important for this study due to its unprecedented nature in this particular setting (i.e., FL context, Saudi context). The interviews were helpful for eliciting teachers' views on various issues (e.g., possible benefits, difficulties, and potential applications) related to the use of corpora in the EFL classroom.

In summation, a review of the related literature enabled the generation of possible themes and variables before running the teacher interviews. To design the questionnaire, a series of semi-structured interviews were conducted to gain in-depth information by which to construct the questionnaire.

The overall design of the study consisted of a course to introduce CL and its use in the classroom, a questionnaire to elicit teachers' attitudes and perceptions, and a series of interviews to gain a deeper understanding of teachers' attitudes. The introductory course ran for three hours, accompanied by a PPT presentation and a handout. It was divided into two sessions, each session lasting one hour and thirty minutes, with a 30-minute break. The details of the sessions are listed in section 7.3. Before attending the course, participants were required to fill out the first part of the questionnaire and, after attending the course, were required to complete the second part. After collecting the questionnaires, I then asked for volunteers to participate in semi-structured interviews.

7.2. Participants

The participants who volunteered for this study were 56 in-service teachers who worked at NBU in Saudi Arabia. All the 56 teachers filled out the questionnaire and six of them volunteered to participate in the interview. All of them taught General English for the preparatory year (foundation), while some of them also taught in the English department with the foundation year. The sample varied in terms of demographic information (e.g., age, experience, native language, etc.). Estimating the teachers' proficiency levels was problematic, because all declined to take a proficiency test and all considered their skill level advanced or similar to native. Thus, the only way to differentiate their proficiency levels was through classifying them

according to how they learned English: either as a second language (e.g., Indians, South Africans), as a foreign language (e.g., Saudi Arabians, Egyptians), or as native speakers (e.g., Americans, British). While not ideal, this classification was the best solution available. For example, Americans are native speakers, Indians and South Africans are similar to native—although second-language English speakers, and Saudis and Egyptians are advanced foreign language speakers of English. From amongst the participants, 60% of the teachers were Arabic speakers, 21% were Urdu, 7% were English speakers, and the rest speakers of other languages (Malayalam: 3.6%; Panjabi: 1.8%, Bengali; 1.8%; and Hindi: 3.6%).

The largest age group was 31-40 age category with 41%, with the 25-30 category coming second with 28.6%, followed by the 41-50 category with 25%. There were two teachers over 50, and one teacher under 25. The majority of teachers had a master's degree (67.9%), 19.6% had a PhD, and 8.9% had only a bachelor's degree. The sample varied regarding the teacher training programs, as 33.9% had their bachelor's degree in Education, 35.7% obtained a postgraduate certificate in Education, while 21.4% had no formal teacher training. The teachers also varied in their teaching experience: 39% had between 5 to10 years of experience, 28.6% had from 11 to 20 years, and 25% had between 1 to 4 years of experience. The teaching loads varied as well but mainly fell into two categories, with 32% of teachers teaching 18 hours per week and 30% of them teaching for 16 hours. None of the teachers had ever worked with corpora, and 28.6% had never heard the term *corpus* before; 39% of participants had a rough idea about corpora, while 17.9% possessed some corpus knowledge.

Varying in demographics, there were six teachers who participated in the follow-up interview. Five of them were Arabic speakers and one an Urdu speaker. Three of them were Saudi, two were Jordanian, and one Pakistani. Three teachers were 25-30 years old, and three were from the 31-40 category. All six teachers had a master's degree. Four teachers received teaching training, with varied teaching experience; for example, Lucy had about four years' experience, Ella had about 17 years' experience, Ruby had one year's experience, Bella had about ten years' experience, Zara had about five years' experience, and Anna had about seven years'

experience. Only one teacher (Lucy) heard about corpora before on a CALL module in her MA course, but admitted that she had never used corpora before.

7.3. The materials for introductory training course

7.3.1. Course content

Leńko-Szymańska (2014) recommends designing a CL training course using a small amount of resources so that participants have the opportunity to better understand the resources and applications. In this way, designing a focused course may help to overcome the lack of confidence that is frequently reported when using corpus tools for the first time. However, Leńko-Szymańska (2014, p. 272) also argues that, even with a more focused course, there is a risk that participants will be "resource-dependent", and the course will be similar to a tutorial for one corpus tool. This study did not aim to introduce a training course on corpus literacy, but rather to introduce the use of the DDL approach and its application in the EFL classroom to teach general English on an intermediate level. It was the expectation that the participants would be able to provide well-informed responses about corpora when filling the questionnaire and would be able to identify the possible benefits, a process enabling them to form their opinions about corpora. Therefore, the content of the course was more focused on specific examples and resources instead of covering many aspects addressed by published courses for pre-service teachers which stretch over semesters, such as Huttner et al. (2009), Leńko-Szymańska (2014), and Ebrahimi and Faghih (2017).

To avoid the risk of making the teachers resource-dependent, I introduced more than one resource in the course, but the training (practical workshop) relied on one resource only (AntConc, see section 4.4.4). Another reason for designing a short, focused course was to make the best use of the limited available time. That is, the participants were in-service teachers unable to attend a long training course.

7.3.2. Learning objectives and outcomes

The course was designed to accomplish two main aims. The first aim was finding ways of using corpora in the language classroom. Thus, the course units were always presented in the context of language learning activities (similar to Leńko-Szymańska, 2014), rather than covering theoretical and pure linguistics analyses. The second aim

was an emphasis on the pedagogical value of the corpus-based methods and tools in the classroom, as opposed to the language being studied. Therefore, the learning objectives were as follows:

1. Provide a basic understanding of certain key CL concepts, the DDL approach, and corpus-based resources and tools.
2. Introduce the use of corpus tools to investigate lexical patterns.

By the end of the course, the in-service teachers were expected to be able to

- develop a general understanding of corpus concepts,
- be familiar with the DDL approach, corpus-based resource and tools, and
- use corpus software for investigating GVs patterns.

7.3.3. Course structure

The introductory course consisted of two sessions, each of which ran for one hour and thirty minutes with a 30-minute break. The sessions were offered during multiple time slots to accommodate teachers' availability and free time. For example, the first group of teachers (17 teachers) attended the course over two days, i.e., they attended one session on each day. The second group (four teachers) requested to attend both sessions on the same day. Thus, I conducted both sessions in one day, with each session separated by a 30-minute break.

The materials used were examples from the BNC. A selection of examples was saved as text files for use in AntConc and these files were saved on the computers in advance. An internet connection was available for demonstrating BNC uses in the first session. A handout including the details of each session, along with a guide for performing tasks and questions for discussion, was provided to teach participants. The sessions were conducted in a computer lab, and each teacher had a computer. The resources used were a projector, a PPT presentation, and the AntConc software, which was installed on each computer in advance. The following Table 36 presents the course units and the topics covered.

Table 36. *The course units and the topics covered*

Module	Lessons	Class format	Topic covered
Module 1: Teaching about corpora	Introduction to corpora	Presentation	What is a corpus? What is a concordancer? What is corpus linguistics? What are corpora used for? Different types of corpora; examples of free online corpora (BNC); example of free analysis corpus tool (AntConc). Key terms (colligation, collocation). Why use a corpus with language learners/teachers? Corpus-based findings: Example from literature: *any*.
	Data Driven Learning (DDL)	Presentation	What is DDL? Principles, benefits, types of DDL activities.
Module 2: Exploiting corpora to teach language	Practical guide for BNC	Workshop	A brief introduction to an online search facility (BNC). The steps to conduct a search on BNCweb.
Module 3: Teaching to exploit corpora and exploiting corpora to teach language	AntConc as an example of free corpus tools	Workshop	Use AntConc, uploading files; concordance tool.
	Hands-on corpus: Teaching vocabulary (collocations). Three activities	Workshop	Near synonyms: - stop, end, finish Collocations (adj+ N: heavy rain, strong tea; V+ N: GV (*make* + nouns)). Introduce the steps I use with intermediate students.

7.4. Questionnaire design

The following sections explain in detail the process of designing the questionnaire. In this section, I explain the theoretical framework that was selected to design the questionnaire. Using this framework, the study attempts to present an initial conceptualisation of attitudes towards the use of CL in the FL context by integrating the three-component theory of attitude. That is, the purpose of the present study is to develop a multidimensional instrument that could effectively measure affective, cognitive, and behavioural aspects of attitudes within the field of CL and language education, including factors related to the uses of corpus in the classroom.

7.4.1. Conceptualisation

There are few studies that attempt to address teachers' attitudes towards the use of corpora in the classroom, and these studies do not follow a theoretical framework (i.e., three-component theory). Therefore, this study constructs a scale to measure the attitudes of teachers towards the use of corpora in the classroom in the EFL context. Before discussing the framework, I will review the definitions of attitudes mentioned by Oskamp and Schultz (2005).

Oskamp and Schultz (2005) classify a selected sample of definitions of attitude and make efforts to include definitions with different foci. For example, Allport's (1935, p. 810) definition of attitude is a comprehensive one: "An attitude is a mental or neural state of readiness, organized through experience, exerting a directive or dynamic influence upon the individual's response to all objects and situations with which it is related". Bem (1970, p. 14) contrastively provides a more limited scope for attitudes as "likes and dislikes". Eagly and Chaiken (1993, p. 1) offer yet another definition, focusing on the aspect of evaluating attitude, which has earned a great deal of interest: "Attitude is a psychological tendency that is expressed by evaluating a particular entity with some degree of favor or disfavor". Fishbein and Ajzen, (1975, p. 6) approach attitude from a learner perspective as "a learned predisposition to respond in a consistently favourable or unfavourable manner with respect to a given object".

Oskamp and Schultz (2005, p. 8) state that Allport's (1935) definition, with its central feature of "readiness for response", is comprehensive and widely used. They

(2005, p. 8) also discuss another central feature of attitude related to the evaluative aspect of attitude as being a "favorable or unfavorable manner". With this addition, they define attitude in their research as "a predisposition to respond in a favorable or unfavorable manner with respect to a given attitude object" (2005, p. 9). In the present study, I followed Oskamp and Schultz's (2005) proposed definition, because it adds the evaluation aspect to Allport's (1935) definition.

There are three main theoretical viewpoints about attitudes: the tri-component model viewpoint, separate entities viewpoint, and latent process viewpoint. The tri-component model of attitude is used as the theoretical framework for constructing the attitudinal questionnaire in this study because this framework is widely known and supported by many researchers (e.g., Vandewaetere & Desmet, 2009). The framework provides a comprehensive view of attitude—in this research, towards corpus use in the language classroom—by capturing the three components of attitude: (1) cognitive, (2) affective, and (3) behavioural (Vandewaetere & Desmet, 2009; Eagly & Chaiken 1993; Triandis, 1971). The first component reflects beliefs and thoughts about the subject of the attitude. The second component reflects feelings towards the subject, and the third reflects behavioural intentions and actions towards the attitude's subject. Ajzen (2007, pp. 4-5) calls the behavioural component "conative". FL attitude questionnaires that follow this model include the Beliefs About Language Learning Inventory, or BALLI-questionnaire (Horwitz, 1988). The BALLI-questionnaire consists of five major areas: FL aptitude, the difficulty of language learning, the nature of language learning, effective learning and communication strategies, and motivation (Vandewaetere & Desmet, 2009). Another questionnaire that uses the tri-component model is the AMTB (Attitude/Motivation Test Battery; Gardner, 1985). This test consists of 19 subtests that measure the following factors: anxiety, parental encouragement, desire to learn, motivation, and teacher influence (Vandewaetere & Desmet, 2009).

7.4.2. Procedure for questionnaire development

A questionnaire was developed based on a review of the related literature, and small-scale exploratory semi-structured interviews were conducted with Saudi teachers who taught EFL and were familiar with CL. The questionnaires used in previous studies were exploratory and aimed to gain an overview of teachers' beliefs about the uses

and frequency of the use of corpora in their classroom. In addition, these questionnaires did not capture all three components of attitude or provide a comprehensive view of teachers' attitudes towards the use of corpora in the classroom. Therefore, in the present study, the questionnaire was designed to assess the teachers' dispositions towards the uses of corpora in classroom by collecting data that allowed for the description and analysis of the factors that have the potential to influence these attitudes. According to Dörnyei and Csizér (2002), there are six main issues in designing a questionnaire: sampling the questionnaire content and multi-item scales, developing types of questionnaire items, writing items that work, formatting the questionnaire, translating the questionnaire, and piloting the questionnaire. These issues are dealt with respectively in the following sections with the exception of translating the questionnaire.

Sampling of the questionnaire content and multi-item scales

The first step was to prepare the questionnaire items by identifying the factors through reviewing the related literature. To this end, previous studies were reviewed for each factor to find questionnaires that I could use in the current study. Most previous studies did not consider the tri-component model. I identified the questionnaires that could be used in this study, which are listed in the following sections. As discussed in section 7.1, an exploratory design was used to develop the questionnaire. The concept of multi-item scales was followed throughout the design of this questionnaire. Multi-item scales refer to a group of differently worded items that target the same topic or the same theme (Dörnyei, 2010). The multi-items scale helps in preventing excessive loading on one item because the sets of the items on the same topic reduce the number of inconsistencies in the responses to a specific item. Therefore, in this study, the multi-items scale was used to help reduce the number of inconsistent responses to some items.

Types of questionnaire items

The items in the current questionnaire are divided into two types: open-ended questions and closed-ended questions. The majority of items are closed-ended questions (Likert scale and multi-choice for demographic information). A Likert scale is used to indicate the extent to which the participants agree or disagree with a set of statements that are related to a specific theme or topic (Dörnyei & Csizér, 2002). The

Likert scale was selected because Oppenheim (2000) states that it allows for including a large number of items that can be answered quickly. It also allows for expressing degrees of attitudes, and it provides high reliability. A disadvantage of using the Likert scale is that the participants might be inclined to choose the middle option (neutral/not sure) if they do not want to make a real choice. This scenario has been observed by Dörnyei (2010, p. 28), wherein participants avoided making real choices, which consumed more "cognitive work". The participants might be unwilling to make this effort and select the middle choice, which is called the "satisfying" strategy (Dörnyei, 2010, p. 29). However, sometimes the middle option is the most honest option, especially if the participants are expressing their attitude towards new things such as corpora.

The original Likert scale consists of five possible responses. Subsequently, different numbers of responses have been used, such as two, three, six and seven degrees of response. This study followed the original Likert scale because it was commonly used and as Dörnyei (2010, p. 27) states, this method is "simple, versatile, and reliable". The participants were asked to rate each item on a five-point scale of strongly disagree, disagree, not sure, agree, strongly agree. The following section will explain the small-scale interviews conducted to develop the items pool.

7.4.3. Small-scale exploratory interviews

Oppenheim (2000, p. 65) specified that exploratory interviews should be used to guide the design of the questionnaire and that developing a hypothesis involved more than collecting facts and numbers. The semi-structured interview was selected for this purpose, which consisted of a set of pre-prepared questions related to the research questions and to the themes extracted from the related literature. This design helped to elaborate the data I gathered from my extensive reading of the literature. As Dörnyei (2007) indicated, the semi-structured format allows the researcher to follow up interesting topics that emerge during the interview. The semi-structured interview allows the researcher to guide the participants and direct them to the desired topic by using the set of prepared questions and asking open-ended questions to allow the participants to elaborate their answers. Thus, the researcher can ask follow-up questions and gain information about topics that emerge spontaneously during the interview. This interview format assists the researcher in following the themes

systematically by covering the interview agenda for each participant. Through the interview guide (i.e., the pre-prepared set of the questions), the main themes extracted from reviewing the related literature are investigated in depth. While conducting the interviews, I followed up the participants' interesting responses, which prompted them to elaborate the themes. In addition, the interviews were conducted as one-to-one conversations, which allowed me to develop and guide the participant's responses in the desired direction (see Appendix 9 for interview guide). All interviews were recorded by a portable recording device.

The participants

The participants in the exploratory interviews were five Saudi teachers. The selection for these teachers was based on three conditions: teaching experience, being a Saudi teacher, and familiarity with CL. The sixth withdrew in the middle of the interview, as she felt that she did not have enough information and experience with corpora to answer the questions. All the teachers signed the consent form (consent forms available upon request), and each interview lasted about 30 minutes. I conducted the interviews face-to-face with four participants. Because the fifth participant was located in Saudi Arabia, I conducted the interview by phone and sent the consent form by email. All the teachers were female, and they had teaching experience from 2 to 10 years at universities in Saudi Arabia. They taught the foundation year (intermediate level) and all had attended a course in CL, which was a module in their studies for a master's degree in Linguistics.

Interview analysis

Interviews were conducted to help build the questionnaire, not to evaluate teachers' attitudes towards using CL in language teaching. The aim was to determine if the participants could provide any suggestions or issues that might enrich the design of the questionnaire. Therefore, the data from the interviews was used to provide valuable information for preparing the items pool for constructing the questionnaire scales. The analysis of the interviews helped me to investigate whether the teachers could add any new aspects or variables that were not already mentioned in the literature. Dörnyei (2007, p. 245) describes two approaches to analysing interviews: the use of specific methodology (grounded theory) and the use of a more general methodology (the generic approach). Most published research favours the generic

approach, and the term "qualitative content analysis" is used to refer to this approach (Dörnyei, 2007, p. 245). Therefore, I applied the generic approach to analyse the data, as grounded theory is always used to generate or delimit a theory.

Dörnyei (2007, p. 246) mentions four phases in the analytical process of the generic approach: transcription, pre-coding and coding, growing ideas or memos, and interpreting the data. The transcription phase includes transcribing the data by listening to the recordings and typing up the interviews. The second and third phases are crucial to the present study because they clarify the systematic approach I followed for analysing each interview. The second phase, pre-coding and coding, consists of three levels: initial coding, second-level coding, and using a template of codes. I excluded the third level because it requires a predetermined code template, which contradicts the purpose of the interviews; I wanted the data to provide more information about the topic rather than confirm what I found in related literature, which is similar to the three tactics for analysing qualitative data described by Miles and Huberman, 1994 (as cited in Cohen et al. 2011, p. 427). These tactics are: "noting the patterns and themes", which can describe the initial coding level; "clustering-setting items into categories", which can describe second-level coding; and "factoring-bringing a large number of variables under a smaller number", which can describe the template of codes without predetermining it, but working with the data to generate code meanings to build the items and help construct the scale of the questionnaire. Therefore, the first level was the initial coding of the data, and then the codes were clustered into categories, and finally, factoring levels. The third phase, growing ideas or memos, was performed at the second level during hard-copy transcription. The fourth phase, interpreting the data, has been excluded because, as previously mentioned, the aim of these interviews is to enrich the questionnaire items, not draw conclusions about the teachers' attitudes.

First, the interviews (see Appendix 10.A, attached CD) were transcribed and coded according to these identified levels. I did not follow the repetition procedure in analysing the codes (the number of repeated codes), so every code is important even if mentioned only by one participant. The interviews covered the main factors that influence attitudes towards the use of corpora in language classrooms, which are authentic materials, computer skills, and the teacher's and learner's role in the

classroom. These factors were identified by reviewing the related literature (see section 6.1 for a full review). The part of the interview related to these factors lasted for approximately 15 minutes. The interviews then continued as a discussion about teachers' attitudes towards the uses of corpora in classroom, which lasted for another 15 minutes.

After identifying the new codes and the new emerged subthemes, I added them to the items pool of the questionnaire within the themes that had been identified from the previous literature. I included the process of analysing the data about the use of corpora in the language classroom below (as an example of the procedure I followed in the analysis process). The following section presents two excerpts from the data transcription for two participants, and how I applied the analytic approach and arrived at new subthemes and items for the questionnaire pool. These excerpts appear before Table 37, which show the steps used during the second phase, pre-coding and coding.

Participant 1:

I think it would be interesting for learners to work in class in the corpus. Obviously they will need training to do that. It will take a bit time for them to get used to it. But talking about the overall benefit they will definitely benefit from using it because there are many times when learners have synonymous words in class and they do ask me to say like what is the difference between this and that word and if they translate into their first language the Arabic they would find it the same word but they will not know how to use it differently unless they see the corpus where these words are used in authentic materials.

Participant 2:

I think it is very very helpful and it is one way of what I said before it is one way of getting the students to be independent learners and they start getting to learn by themselves and at the same time correcting their correct mistakes and in the same time in future they are going to be effective. This approach help them get like more effective in communication [speaking], in writing, in developing all other the skills.

Table 37. *The steps used during the second phase of the generic approach, pre-coding and coding*

Steps	**Noting the patterns and themes**	**Clustering**	**Factoring**
Participant			
Participant 1	I think it would be interesting	Beneficial	Usefulness
	they will need training to do that	Training	Practicality
	It will take a bit time for them to get used to it	More time	Practicality
	they will definitely benefit from using it	Beneficial	Usefulness
	when learners have synonymous words in class and they do ask me to say like what is the difference between this and that word	Beneficial	Usefulness
	They will not know how to use it differently unless they see the corpus where these words are used in authentic materials.	Beneficial, provides examples of real language	Usefulness
Participant 2	I think it is very very helpful	Beneficial	Usefulness
	It is one way of getting the students to be independent learners and they start getting to learn by themselves	Independent learners/ autonomy	Usefulness
	Correcting mistakes	Beneficial	Usefulness
	In future they are going to be effective.	Beneficial	Usefulness
	This approach help them get like more effective in communication [speaking], in writing, in developing all other the skills	Beneficial, improve speaking and writing skills.	Usefulness

The same process was applied to all participants' transcriptions (see Appendix10.A, attached CD). It should be mentioned that no new codes (items) regarding the computer literacy factor emerged from the data. The following section details the questionnaire I borrowed from previous studies for each factor, as well as the items I derived from the exploratory interviews.

Attitude towards the use of AMs in the language classroom

I searched the literature in selecting the themes and the items for the questionnaire and to the best of my knowledge, with the exception of Al-Asmari and Gulzar (2016), no other previously published questionnaire was designed to investigate teachers' attitudes to AMs. Because Al-Asmari and Gulzar's (2016) study examines teachers' perceptions of AMs in the Saudi context, it is related to the context of the current study. I additionally found an unpublished dissertation (Al-Musallam, 2009) that was very useful because it targets EFL teachers in the Saudi context. Both studies tested the internal consistency and reliability of the questionnaires that they used. In Al-Musallam's (2009) study, the questionnaire's reliability value (Cronbach's alpha) was 0.84 while Al-Asmari and Gulzar's (2016) questionnaire produced a Cronbach's alpha of 0.88. Because the questionnaires used in these studies were designed to achieve different aims, I used only the items that related to the aim of my study. Both questionnaires were designed to examine the cognitive component of perceptions, beliefs and thoughts. I borrowed 17 items from Al-Musallam (2009), 5 items from Al Asmari and Gulzar (2016), and 16 items from the exploratory interviews. In addition, I modified the wording of some items according to the feedback from native speaker judges and the participants in the piloting process (see section 7.4.2).

This part of the questionnaire consisted of 39 items that are divided into two sub-themes: *advantages of using AMs in the classroom* (19 items) and the *willingness to implement AMs in teaching English* (20 items). In designing this factor, all three scales of attitude were covered: the cognitive scale consists of 20 items, the affection scale consists of 9, and the behaviour scale is addressed by 10 items. I then included 4 open-ended questions to gather details about the participants' use of AMs in their classrooms, and also to give them additional space for comments.

Attitudes towards general computer literacy

The literature includes many examples of questionnaires that examine attitudes; however, few consider the tri-component attitude model. I therefore used questionnaires that had a high reliability value and follow the tri-component model. At first, I considered Gressard and Loyd's (1986) questionnaire because their Computer Attitude Scale (CAS) "provides a more complex definition of computer attitude" (Al-Khaldi & Al-Jabri, 1998, p. 31), and it has been used extensively in the literature. Gressard and Loyd's (1986) questionnaire consists of four scales: computer anxiety, computer confidence, computer liking (reliability = 0.95), and computer usefulness (reliability = 0.82).

However, the subscales of Loyd and Gressard's questionnaire could overlap other subscales. Thompson et al. (1991) state that anxiety, confidence, and liking represent the affective part of attitude, and usefulness represents the cognition part of attitude. Therefore, in Gressard and Loyd's (1986) questionnaire, I used only the sub-theme of *usefulness*, which represents the cognition part of attitude. In Nash and Moroz's (1997) questionnaire, I used the sub-theme of *anxiety and confidence*, which represents the affection part of attitude (reliability = 0.91). I borrowed from Key's (1989) questionnaire to design the final sub-theme for this part of my questionnaire, which represents *attitudes towards computer uses* (behaviour scale) (reliability = 0.89). Each sub-theme contains 10 items; therefore, this factor consists of 30 items. Four open-ended questions were developed to gather information about the teachers' habitual use of computers.

Attitudes towards the communicative approach

To the best of my knowledge, no previously published questionnaire was designed to gather information about teachers' attitudes towards their roles in the classroom with regard to the communicative approach. However, some studies investigate and discuss applications of the communicative approach in the classroom (Richards & Rodgers, 2014).

Karavas-Doukas (1996) uses a questionnaire to investigate the communicative learner-centred approach used in EFL classrooms. His study examines the degree of the implementation of the communicative learner-centred approach in EFL classrooms

in public secondary schools in Greece. The questionnaire used in Karavas-Doukas's (1996) study seems appropriate to adapt to the current study because it targets teachers in EFL classrooms and investigates their perceptions of their role and the learners' role in the classroom. However, this questionnaire focuses on beliefs (cognition component) and concludes that a specific component was not assessed. I therefore borrowed the items from the questionnaire that were suitable for the design of my study. The reliability test of the questionnaire was 0.88, which showed a high level of internal consistency. Karavas-Doukas's (1996) questionnaire examines themes related to the principles of the communicative approach: group/pair work (4 statements); quality and quantity of error correction (4 statements); role and contribution of learners in the learning process (6 statements); role of the teacher in the classroom (4 statements); and the place/importance of grammar (6 statements).

The aim of the present study is not to determine the attitudes towards the communicative approach itself but to examine the attitudes towards the uses of corpora, which is built according to the communicative approach. Therefore, the focus of the present study is to investigate teachers' attitudes towards their role as well as the learners' role in the classroom. I therefore borrowed items that were related to the theme, the role of teachers and learners in the classroom (9 statements). I wrote 16 items based on the interview data. This factor includes the following sub-themes: *perception of teacher's role and learner's role in the language classroom* (18) and *willingness to adopt the communicative approach* (7 items). In total, there are 25 items: 9 items represent the cognition scale; 9 items represent the affective scale; and 7 items represent the behaviour scale.

Evaluation of the introductory course

This factor was designed differently because it was not a focus of the study but an indication of whether the treatment (introductory course) had any influence on the general attitudes of the participants. Therefore, it was measured by the cognition scale, which consists of 13 items and four open questions.

Attitude towards the uses of corpora in the classroom

The literature review yielded only preliminary studies that investigated the teachers' attitudes towards the corpora (see Chapter 1). Many studies investigate the attitudes of MA students towards corpora, with some considering MA students as pre-service

teachers. However, most studies focus on the course evaluation and include the sub-theme of attitudes towards the use of the corpus (Leńko-Szymańska, 2014; Ebrahimi & Faghih, 2017; Farr, 2008). Only two studies aim to investigate teachers' attitudes (Mukherjee, 2004; Tribble, 2015). However, the reliability value of the questionnaires is not reported.

A well-known study in the literature (Yoon & Hirvela, 2004) uses a questionnaire to investigate students' attitudes towards the uses of corpora in language learning. The questionnaire focuses on perceptions (thoughts, i.e., the cognition component) and shows an internal reliability of 0.96, which indicates a high level of reliability. I adopted Yoon and Hirvela's (2004) questionnaire albeit with some modifications because their questionnaire targeted students, while mine targeted teachers. I also reviewed other published studies and selected themes from them. I then selected items from the literature and modified them for the purpose of the present study (Yoon & Hirvela, 2004; Leńko-Szymańska, 2014; Ebrahimi & Faghih, 2017; Mukherjee, 2004; Farr, 2008). Modifications were made to the wording and the format of the items to suit the context of the study. Based on the data collected in the exploratory interviews, I generated sub-themes (e.g., practicality of corpus uses in the classroom) and items: 25 items were generated from the interviews; 23 items were borrowed from Yoon and Hirvela (2004); one item was adapted from Farr (2008); and one item was borrowed from Leńko-Szymańska (2014).

This part of the questionnaire covers main themes related to the uses of the corpora in the classroom, which were adopted from both the literature and the exploratory interviews: *practicality of corpus uses in the classroom* (7 items); *teachers' confidence for using the corpora in the classroom* (9 items); *difficulty of using corpus-based approach and tools in the classroom* (11 items); *usefulness of the uses of corpora in the classroom* (14 items); and *willingness to implement the uses of corpora in teaching English* (9 items). This part of the questionnaire thus consists of 50 items: 27 items represent the cognition scale, 14 items the affection scale, and 9 items the behaviour scale. These items were incorporated into the questionnaire alongside the four open-ended questions.

Attitude towards the use of corpus-approach (DDL) for teaching General Verbs (GVs)

This part of the questionnaire is specific because it is related to the university context in which I applied the Study One and target items (GVs). This part of the questionnaire is based on the interview data (exploratory interview) and on my experience in the context and with students who used this approach. It consists of 24 items and includes the following sub-themes: *usefulness of using the corpus-based approach for teaching GVs* (9 items); *obstacles of using the corpus-based approach for teaching GVs* (7 items); and *confidence for using corpora for teaching GVs* (8 items). These items fall into the tri-component model, with 9 items representing the cognition scale, 8 items the affection scale, and 7 items the behaviour scale.

Writing items and formatting the questionnaire

Dörnyei and Csizér (2002, p. 77) emphasise that constructing the items in a questionnaire is not a "100% scientific activity" because it requires a "certain amount of creativity and lots of common sense". They recommend that the item designer use two sources: "qualitative, exploratory data" and "borrowed questions", which were used to build my items pool. When I wrote the items, I followed these general rules, such as ensuring that the items were short and using simple language, especially because most of the participants were not native speakers. I avoided ambiguous and loaded sentences and double-barrelled statements. I further discuss the process that I used to write the items in the following section, which looks at the pilot study.

The format of the questionnaire is very important because it can motivate the participants to produce valid responses in completing it. Some points should be considered in designing the format and the layout of the questionnaire. Dörnyei and Csizér (2002) suggest that it should be between four and six pages in length. To this end, I divided the questionnaire into two parts: the pre- questionnaire (six pages) and the post- questionnaire (six pages). I tried to avoid crowding the questions on the pages by separating the sections and using the entire width of the page. I also included the response options next to each item instead of below it.

Piloting the questionnaire

The piloting process is very important in all research because it provides feedback about the instrument that is meant to be used in the main study. Dörnyei (2003) recommends running a series of trials to pilot the questionnaire in order to evaluate and revise it before applying it in the main study. The piloting process consisted of five stages. The first stage involved proofreading the items for ambiguity and clarifying the wording. The second stage involved the think-aloud protocol, wherein the items pool was assessed by conducting a discussion with two colleagues who were familiar with CL and had used it in their studies. These colleagues were Saudi teachers. One was a third year PhD student with seven years of teaching experience, and the other was a first year PhD student with more than three years of teaching experience. Both studied in English departments in universities within the UK. In the discussion, they provided detailed feedback on the items and they made suggestions regarding the clarity of the writing and the aims of including some items. Based on their feedback, I modified some items and rewrote others; in this way, we ensured that the items would be clearly understood as intended. After reviewing their feedback and making the necessary amendments, I wrote a nearly final version of the questionnaire, which I had a native speaker proofread to provide feedback on the writing and the style.

In the final stage of piloting, the questionnaire should be distributed to a group of participants who are similar to the target population. However, a similar group was not available because the target population has experience in teaching EFL and is not familiar with CL. This population was very difficult to recruit for the pilot study, so I instead recruited participants who were familiar with CL and had general experience in any kind of teaching. I sent the questionnaire to 15 participants, 13 of whom returned it and two of whom did not respond even when I sent a reminder. The participants were asked to complete the questionnaire, provide comments on the clarity of the items, and offer suggestions about how the questionnaire could be improved. The participants differed in their backgrounds, teaching experience, and familiarity with CL.

The feedback I received in the piloting phase was focused on the items' clarity and writing up, which was invaluable in helping fine-tune the final version of the

questionnaire. Their feedback assisted in eliminating ambiguous and difficult words in the items, improving the clarity of the wording, and instructions and deleting irrelevant items. I also obtained feedback about the sequence of the items. Because some items targeted the same sub-theme, I changed their order in the questionnaire. The feedback also helped me to finalise the overall layout. Six participants found that an item was ambiguous, so I deleted it. In addition, one item was overloaded for three participants, so I simplified it. There was no clear pattern of missing responses, which indicated that no single item was problematic enough to produce a non-response. In addition, all the participants provided the time that they spent completing the pilot questionnaire: three spent about an hour, and ten spent about 20 to 25 minutes.

The drawback of the piloting process used for the questionnaire was that I could not apply a reliability test before the actual data collection because of the small number of participants in the piloting stage (13 participants). Dörnyei and Csizér (2002) recommend 50 to 100 participants, with Dörnyei (2003) suggesting that at least 20 participants are required to obtain statistically valid results. Another limitation was the difference between the target population and the participants in the piloting stage. After the pilot took place, certain changes were made on the scales of the questionnaire. The AMs scale initially consisted of two sub-scales: *the advantages of using AMs in the classroom* (19 items) and *willingness to implement AMs in teaching English* (20 items). After the process of piloting, it changed to consist of *advantages of using AMs in the classroom* (18 items) and *willingness to implement AMs in teaching English* (19 items). The Computer Attitude Scale consisted of three sub-scales: *anxiety towards computer uses* (10 items), *usefulness of computers* (10 items), and *uses of computer generally* (10 items). After the piloting, two items were deleted according to the feedback from *the uses of computer generally* sub-scale to contain 8 items, as one item was irrelevant and another item was too general; this also was based on pilot feedback. The attitude towards the communicative approach consisted of two sub-scales: *perception of teacher's role and learner's role in the language classroom* (18) and *willingness to adopt the communicative approach* (7 items). For this scale, no changes were made after the pilot, as the comments predominantly focused on the clarity of writing. The course evaluation scale consisted of 13 items and no changes were made after the pilot because the comments dealt with the order

of the items.

The attitude towards uses of corpora in the classroom consisted of the following sub-scales: *practicality of corpus uses in the classroom* (7 items); *teachers' confidence for using the corpora in the classroom* (9 items); *difficulty of using corpus-based approach and tools in the classroom* (11 items); *usefulness of the uses of corpora in the classroom* (14 items); and *willingness to implement the uses of corpora in teaching English* (9 items). During the piloting stages, some modifications were performed in which *the practicality of corpus uses in the classroom* sub-scale increased to 9 items. The *teachers' confidence for using the corpora in the classroom* sub-scale similarly increased to 10 items. *The difficulty of using corpus-based approach and tools in the classroom* sub-scale decreased from 11 items to 9 items. *The usefulness of the uses of corpora in the classroom* sub-scale decreased to 13 items. *The willingness to implement the uses of corpora in teaching English* sub-scale increased to 10 items. In total, the teachers' attitudes towards corpora questionnaire consisted of 51 items. For the use of corpus approach to teach GVs scale, no major changes were made and the items were the same after the piloting stages. It should be mentioned that even for some scales no changes were made in terms of item number, but there was considerable revision regarding either word choices or general clarity of writing (for full questionnaire, see Appendix 7).

7.5. Interviews

The interview is the second method used to collect data after the questionnaire. Richards (2009) states that interviews are frequently used in qualitative research to explore participants' attitudes and views. Richards (2009, p. 187) also emphasises that interviews allow researchers to "probe" and understand participants' attitudes and perceptions, a depth of investigation not possible with the use of questionnaires alone. Semi-structured interviews are selected according to the purpose of the study (see section 7.4.2). In the present research, I prepared an interview guide containing a set of questions about the same themes used in constructing the questionnaire (see Appendix 9). There is a primary question discussing a main theme related to the uses of corpora in the classroom, then according to the response of the interviewee, a

follow-up with secondary questions, prompting elaboration on that theme. In the present research, these interviews were conducted in the form of one-on-one conversations and recorded on a portable recording device. The interviews were then transcribed and subsequently analysed (see section 7.4.2). All the interviewed teachers were given names to keep them anonymous and for ease of reference.

7.5.1. Sampling strategy

There are three types of sampling strategies. The first type reflects samplings that are similar in some aspects such as homogeneous sampling, typical sampling, and criterion sampling, while the second type reflects unique or extreme samplings such as maximum variation sampling, extreme or deviant case sampling, and critical case sampling (Dörnyei, 2007). The final type contains "less principled strategies" such as snowball or chain sampling, opportunistic sampling, and convenience sampling (Dörnyei, 2007, pp. 127–128).

The context of this study is the foundation year in a Saudi university. Instructors who teach the foundation year in most Saudi universities come from different backgrounds (see section 7.2). To this end a maximum variation sampling strategy was used, which allowed exploration of the various factors mentioned above across all participants. If the teachers continue to have positive attitudes despite all these variations, we can infer that the use of corpora is a successful practice for teaching general English in Saudi universities. Duff (2006, p. 71) highlights the risk of "over-emphasis" on extreme or unique cases as a drawback in this type of strategy. However, this study does not focus on extremes but rather on variety across the teachers; it can be said, therefore, that the sample includes teachers from a variety of teaching backgrounds. In general, at least one teacher from each of the different groups was interviewed. The numbers of participants were assigned according to Guest et al.'s (2006) recommendation of 6–12 participants, as saturation occurs in the first 12 interviews, while most basic themes emerge within the first six interviews. In the present study, the sample comprised a total of six teachers. All the six teachers varied in both their experience and backgrounds.

Interview guide

According to Dörnyei (2007, p. 137), the interview guide is important for four reasons: i) to ensure that all intended topics are covered; ii) to suggest the most appropriate wording for questions; iii) to provide a list of useful probe questions to help in the investigation if needed; and iv) to offer a ready-to-use opening statement and to help keep certain comments in mind. In the present study, the interviews consisted of three sets of questions, which are similar to the themes used in constructing the questionnaire. The first set was opening questions, designed to break the ice about personal and factual information about the participants. The second set was content questions, selected based on the questionnaire themes (the use of AMs in the classroom, the computer literacy, the teacher and learner role in the classroom, the use of corpora in the classroom, the evaluation of the training course, and using corpus approach to teach GVs). The final set was closing questions, important for concluding the interview and allowing participants to add any final comments. Dörnyei (2007) notes that the closing questions can provide extremely rich data, these interview questions can be found in Appendix 9.

7.6. Procedures

Ethical approval was obtained before beginning the study (available upon request). The study began on the second week of November at Northern Borders University, Saudi Arabia. I started the course with the first group of participants (17 teachers). The course ran for two sessions for two days, with each session lasting for one hour and thirty minutes. The following week I ran the course with the second group of participants (4 teachers) in which course ran on the same day for one session with a break of thirty minutes. Then in the following three weeks, the course ran on one day for one session with a break of thirty minutes for three groups (third group: 17 participants, fourth group: 10 participants, fifth group: 8 participants). All the participants read and signed the consent form to allow them to participate in the study.

I conducted all the sessions in a computer lab. In the first session, I introduced myself and outlined the aims of my study. I used PPT presentations to present all the information from the hand-out and to capture participants' attention. Before starting

the first session I asked the participants to fill in the first part of the questionnaire. Then, after the completion of the course, I asked the participants to fill in the second part of the questionnaire. I then requested to interview some of the participants and informed them that their interviews would be recorded.

7.7. Data Analysis

The data collected in this study comprises both quantitative data (closed-ended questions from the questionnaire) and qualitative data (open-ended questions from the questionnaire and interview). In the following section, I outline the scoring systems for the quantitative data only, as the qualitative data analysis follows the method discussed in the previous section 7.4.3.

7.7.1. Data scoring

The first step in scoring the quantitative data involved coding the responses of the closed-ended questionnaire items. The second step worked to reduce the number of variables in the questionnaire, which can be done through either factor analysis or using multi-item scales. I used the second method because I did not have enough participants for the factor analysis method, which needs at least 100 participants. The multi-item scales method operates by grouping the items that are hypothesised to come together, then by conducting internal consistency tests to validate a hypothesis. Before a reliability coefficients test is conducted, all the negative worded statements are reversed in scoring. In the following section, I explain in detail the steps I took for inputting the data and running the analysis.

I first defined all the variables and assigned a value for each one. Then I inputted all the data into Excel sheets (each sheet contained one factor; for example, the authentic materials factor sheet had all the items from 1- 37). I then calculated total scale scores, which involved two steps: to reserve negatively worded items, then to add together scores from all the items that make up the scale. The following Table 38 explains the system in coding this type of data.

Table 38. *Variables of the questionnaire*

Variables	**Code**

Gender	Female 1
	Male 2
Language	Arabic 1
	English 2
	Urdo 3
	Malayalam 4
	Setswana 5
Age group	Below 25 (1)
	25 to 30 (2)
	31 to 40 (3)
	41to 50 (4)
	51 to 60 (5)
	Over 60 (6)
Degree	Bachelor 1
	Master 2
	PhD 3
	Other 4
Teacher training	Bachelor of education 1
	Post-graduate certificate 2
	None 3
	Other 4
Experience	Less than year (1)
	1 to 4 (2)
	5 to 10 (3)
	11 to 20 (4)
	over 20 (5)
Student level	Beginner 1
	Intermediate 2
	Advanced 3
	All the levels 4
	Etc. …
Teaching load	The number of hours
Heard about corpus	Never 1
	I heard about it, but no idea 2
	I heard about it, have rough idea 3
	Know it but not use it 4
	Done work with it 5
All items in the questionnaire (positive items)	Strongly disagree 1

	Disagree 2 Not sure 3 Agree 4 Strongly agree 5
All negatively worded items (reversed)	Strongly disagree 5 Disagree 4 Not sure 3 Agree 2 Strongly disagree 1

7.7.2. Reliability of items

This questionnaire targets a novel area of measurement because only two studies have previously attempted to examine in-service teachers' attitudes (see Chapter 6). The first step of the quantitative analysis was to check the reliability of the questionnaire by grouping related items into broader conceptual categories. Cronbach's alpha coefficient is the widely-used indictor of internal consistency (Pallant, 2013). Cronbach's alpha coefficient value should be greater than 0.70; however, it is very sensitive to the number of items per scale. For scales with less than ten items, Cronbach's alpha coefficient value can be artificially low. I assessed the factors and sub-factors through many items to increase the reliability of the scales (Dörnyei, 2007); as a result, the reliability of the questionnaire was very good (see Table 39). Data was collected using a pre-questionnaire administered prior to the introductory course and a post-questionnaire administered afterward. The pre-questionnaire solicited background information, attitudes towards the use of AMs in the language classroom, attitudes towards general computer literacy, and attitudes towards the communicative approach in the classroom. The post-questionnaire captured an evaluation of the introductory course, attitudes towards the uses of corpora in language teaching, and attitudes towards corpus approach for teaching GVs at the intermediate level. Both the pre- and post-questionnaire contained open-ended questions. A brief description of each category and the significance of its scoring is listed below:

- Attitudes towards the use of AMs in the language classroom: the higher the score, the more positive the attitudes of the teachers towards using authentic materials in teaching.
- Attitudes towards general computer literacy: a high score represents positive attitudes towards computer literacy.
- Attitudes towards the communicative approach: a high score represents acknowledgement of a teacher's perception of the learner and teacher roles within a communicative approach.
- Evaluation of the introductory course: the higher the score, the more positive attitude towards the introductory course.
- Attitudes towards the uses of corpora in language teaching: a high score represents positive attitudes towards the use of corpora in teaching English.
- Attitudes towards the corpus approach for teaching GVs at the intermediate level: a high score shows a positive attitude towards the use of the corpus-based approach for teaching GVs.

Table 39 presents the outline of the teacher questionnaire with each factor and item numbers, as well as their Cronbach's alpha coefficient. All the factors show a reliability of 0.90, except for the *attitude towards the uses of a corpus approach for teaching General Verbs (GVs*) factor, which shows a value of 0.78, and *attitude towards communicative approach* shows a value of 0.85. To achieve good reliability, some items were deleted from the following factors: one item from *attitude towards the use of authentic materials (AMs) in the language classroom*, one item from *attitudes towards general computer literacy*, one item from *attitudes towards the communicative approach*, three items from *attitude towards the uses of corpora in language teaching*, and four items from *attitude towards the use of corpus-based approach for teaching GVs*.

Table 39. *Questionnaire factors*

Factor	Total items	Cronbach's alpha
Attitude towards the use of authentic materials (AMs) in the language classroom.	36	0.91
Attitudes towards general computer literacy.	27	0.93
Attitudes towards communicative approach (teacher's role).	24	0.85

Evaluation of the introductory sessions.	11	0.91
Attitude towards the uses of corpora in the classroom.	48	0.90
Attitude towards the use of corpus-based approach for teaching General Verbs (GVs).	20	0.78

For an in-depth look at the questionnaire, the following Table 40 presents a description of each sub-factor, including three typical items of each sub-factor, item numbers, and the value of Cronbach's alpha.

Table 40. *Description of each factor*

Factor	**Variable name (sub-factor)**	**Description**	**Three typical items**	**Total items**	**Cronbach's alpha**
Attitude towards the use of authentic materials (AMs) in the language classroom	Advantages of using AMs in the classroom	This variable represents the advantages of using AMs in teaching English.	• AMs help improve students' language proficiency more than textbooks do (1). • AMs introduce students to how language is used in the real world (9). • AMs help overcome some cultural barriers to language learning (13).	18	0.88
	Willingness to implement AMs in teaching English	This variable shows the willingness of teachers to use AMs in their teaching.	• I am willing to use AMs to teach speaking skills (4). • I am willing to modify the curriculum to include AMs in my classroom (16). • I do not mind switching to the use of AMs in everyday teaching (35).	18	0.75
Attitudes towards general computer literacy	Anxiety and confidence towards computer uses	This variable represents confidence for using the computer.	• Generally, I feel OK about trying a new program on the computer (1). • I do not feel threatened when others talk about computers (7). • I am not the type who does well with computers (10).*	10	0.89
	Usefulness of computers	This variable shows the perceived usefulness of using a computer.	• Learning about computers is worthwhile (3). • Working with computers is not important in my job (5).* • I cannot think of any way that I will use computers in my career (8).*	10	0.83

	Uses of computer generally	This variable represents the respondent's typical computer use.	• I use a computer on a regular basis (9). • I can perform important tasks on a computer (11). • I work with computer-aided instruction (any computer use in educational settings) (25).	7	0.70
Attitudes towards communicative approach	Perception of teacher's role and learner's role in the language classroom	This variable represents the teacher's perception of the learner and teacher roles within a communicative approach perspective.	• Because the learner comes to the language classroom with little or no knowledge of the language, he/she is in no position to suggest what the content of the lesson should be or what activities are useful for him/her (4). • I do like my role as a facilitator in the learning process (7). • The teacher as an 'authority' and as an 'instructor' is no longer adequate to describe the teacher's role in the language classroom (22).	17	0.73
	Willingness to adopt the communicative approach	This variable shows the willingness to adopt the communicative approach in EFL classroom.	• I am willing to use the learner-centred approach in everyday teaching (11). • I am willing to provide training for learners to take responsibility for their own learning, because learners are not used to such an approach (16). • I am not willing to negotiate and use tasks and activities to suit students' needs (2).*	7	0.77
Evaluation of the introductory course	Evaluation of the introductory course	This variable represents the evaluation of the introductory sessions	• The course explained well what a corpus can be used for (5). • The course provided a useful introduction on how to use corpora in the classroom (6). • The hands-on activities were not useful (7).*	11	0.91

Attitude towards the uses of corpora in the classroom	Practicality of corpus uses in the classroom	This variable reflects the importance of training as a practical aspect of the use of the corpora in language classroom.	• Training teachers on the use of corpus tools would be important to gain confidence in the uses of the corpus approach in the classroom (5). • Students should have extensive training before the corpus approach is applied in learning (15). • The training for teachers on corpus uses would be an important factor for the use of the corpus approach in the classroom (35).	6	0.72
	Teachers' confidence for using the corpora in the classroom	This variable represents the degree of teachers' confidence during the use of corpora and tools in the classroom.	• Working with corpus resources would make me nervous (4).* • I would be confident in using the corpus approach in the classroom (38). • I would enjoy talking to other teachers about corpus approaches and resources (2).	10	0.83
	Difficulty of using corpus-based approach and tools in the classroom	This variable shows the degree of perceived difficulties teachers expect to encounter during the use of the corpus-based approach and tools in the classroom.	• Students' low proficiency level may be an obstacle in using the corpus data in the classroom (21). • I believe that I would encounter difficulties in using the corpus resources in the classroom because of the speed of my college's Internet connection (22). • My English proficiency level might be an obstacle in using corpora in my teaching practice (37).	9	0.72

	Usefulness of the uses of corpora in the classroom	This variable represents the usefulness of the uses of corpora in the EFL classroom.	• Using the corpus approach would help my students to learn the meaning of vocabulary (13). • Using corpus data for my students would be helpful for learning grammar (27). • Corpus tools would be useful for teachers' direct use in the classroom (33).	13	0.80
	Willingness to implement the uses of corpora in teaching English	This variable shows the willingness of teachers to use corpora in their teaching.	• I want to use the corpus tools in my upcoming English teaching courses (3). • I am willing to use corpus data to teach the differences between the spoken and written varieties of English (48). • I am willing to initiate the use of computer-based corpus instruction in the institution where I teach (17).	10	0.82
Attitude towards the use of corpus-approach for teaching General Verbs (GVs)	Usefulness of using the corpus-based approach for teaching GVs	This variable shows the usefulness of using the corpus-based approach for teaching GVs.	• The corpus approach would increase students' knowledge of GVs, which they need in real-life situations (7). • This approach would help students become aware of the different meanings associated with GVs (9). • This approach to learning GVs would help reduce verb misuse (10).	9	0.82
	Obstacles of using the corpus-based approach for teaching GVs.	This variable represents obstacles students may encounter during the use of the corpus-based approach for teaching GVs at the intermediate level.	• My students would need help all the time in using this approach because they are not independent (5). • I think that the corpus approach used to teach GVs would be time-consuming in terms of lesson time (19). • I think that my students' proficiency level would make selecting GV materials difficult when applying this approach (15).	7	0.78

	Confidence for using corpora for teaching GVs.	This variable shows the teachers' confidence in adapting and using the corpora to teach GVs to intermediate level students.	• I would enjoy using AntConc for teaching GVs (8). • The corpus skills proficiency of the teacher would influence students' attitudes towards this approach for learning GVs (12). • I would enjoy training students to use the corpus approach for learning GVs (21).	4	0.85

*. Refers to negatively-worded items

Chapter Eight: Quantitative results and discussion

The purpose of Study Two was to investigate teachers' dispositions towards the use of corpora in teaching English as a foreign language, as well as to explore the factors that might affect these attitudes and especially to investigate the impact of the introductory course on teachers' attitudes. The following sections present the quantitative results from the data (questionnaire): teachers' attitudes towards the use of corpora in the classroom; analysis of quantitative data on aspects of the use of corpora in the classroom; teachers' attitudes towards the uses of corpora to teach GVs for intermediate levels; and the factors affecting teachers' attitudes towards use of corpora in the classroom. This chapter furthermore offers discussion and interpretation of these results.

8.1. Teachers' attitudes towards the use of corpora in the classroom

The mean of teachers' attitudes towards the use of corpora in the classroom was 3.70 (*SD*=0.38). There were only three cases (2.24, 2.44, 2.88) associated with openly negative attitudes with the remainder administrating a range of positive attitudes with an upper limit of 4.63, indicating that teachers' attitudes ranged from moderate to favourable. This distribution of attitudes may be attributed to the fact that this attitude was measured after the introductory course, which leads us to the question of how successful the introductory course was. A correlation analysis showed a significant positive strong correlation (r=.70, n=56, p<.001) between the attitudes towards the introductory course (Likert scale scores) and attitudes towards the use of corpora. This disposition was also examined by dividing the sample according to thirds containing the highest and lowest attitude (towards corpora use) scores according the data distribution. The participants were divided into the most enthusiastic (above 3.80) and least enthusiastic attitudes (between 3.60 and 3.80), and then an independent-sample T-test was conducted to compare the attitudes towards the introductory course for both groups. There was a significant difference in the attitudes towards the introductory course for the most enthusiastic (*M*=4.32, *SD*=.51) and least enthusiastic (*M*=3.88, *SD*=.42); t (37) = -2.89, p=.006 two tailed. The magnitude of differences in the means was large (mean difference=-.44, 95% *CI*: -.74 to -.34). The effect size is large (-0.93, r=0.42), according to Cohen's (1988:284-7) criteria wherein .01=small, .06=moderate, .14=large effect.

Therefore, the introductory course (M=3.93) worked very well for generating an overall positive disposition towards the use of corpora. However, even after the introductory course, the maximum attitude score was only moderate 4.63, which does not exhibit a strong sense of enthusiasm.

The second research question investigated in this stage was, aside from the introductory course, to determine which of the factors (the use of AMs, the communicative approach, and the general computer literacy) affected teacher attitudes towards the uses of corpora. I initially hypothesised that those factors would include general computer literacy, the communicative approach, and the use of AMs. The results of the correlation tests show that, after the introductory course, general computer literacy provided the next strongest correlation, while the communicative approach and the use of AMs and attitudes towards the use of corpora supplied a moderate positive correlation, as can be seen below in Table 41.

Table 41. *Pearson correlation between the teacher attitude towards corpora in the classroom and the three factors of general computer literacy, the communicative approach, and use of authentic materials*

		General computer literacy	**The communicative approach**	**The use of authentic materials**
Teacher attitude towards corpora in the classroom	Correlation Coefficient	.468**	.228*	.289*
	Sig. (2-tailed)	.000	.031	.031

***. Correlation is significant at the 0.01 level (2-tailed).*

**. Correlation is significant at the 0.05 level (2-tailed).*

Based on these correlations, we can conclude that a meaningful introductory course can positively influence teachers' attitudes towards using corpora in the classroom, with certain other factors contributing to these attitudes, as demonstrated by a more finely-tuned analysis of these contributing factors (see Chapter 9).

8.1.2. Analysis of attitudes towards the uses of corpora in the classroom (sub-scales)

This section seeks to investigate in more depth the teachers' attitudes towards the uses of corpora in the classroom by examining each sub-scale. The first sub-scale is the *practicality of corpus uses in the classroom*, which is related to the importance of training before using corpora; this was highlighted as being important by the teachers in

the interviews. The mean of this sub-scale is 3.96 (*SD*=0.5), which shows the teachers' readiness to participate in a training before using corpora. The second sub-scale is the *confidence of the uses of corpora in the classroom,* which shows a mean of 3.85 (*SD*=0.5). This result is very promising, as the teachers' confidence was very high for using a new tool and approach despite none of the teachers having ever used corpora in their classroom. In addition, the training they received was not as long or in-depth as it would have been an introductory course, so the teachers could raise their confidence levels with a longer training period and more hands-on tasks, which would influence their the general attitudes towards corpora use. The third scale explores the *perceived difficulty of corpora uses in the classroom* and reveals that teachers acknowledged the possible difficulties with a mean of 2.8 (*SD*=0.6). Although the teachers identified some of the difficulties of using corpora, the mean of this sub-scale is low, which indicates that the teachers think they might overcome those difficulties. The fourth sub-scale is about the *perceived usefulness of corpora in the classroom*; the mean is 3.77 (*SD*=0.4). This sub-scale shows a moderate response and positive direction towards enthusiastic attitudes, because the teachers acknowledged the usefulness of corpora, as made clear in the open-ended questions as well as in the interview data. The fifth sub-scale measures *willingness to implement corpora in the classroom*, which was similar to the fourth sub-scale with a mean of 3.77 (*SD*=0.5). The fifth sub-scale shows moderate but not enthusiastic attitudes to implementing corpora, which might be evidence of caution being shown by teachers previously unfamiliar with corpora.

8.2. Teachers' attitudes towards the use of corpus-approach for teaching GVs

The final part of the post-questionnaire focused on a specific area of language instruction in the same area in which students already experienced GVs (see Study One). This section was included in the present study to determine if teachers' views were consistent with the students in the same institution. Study One targeted students' interaction with corpora for learning GVs, then the students filled in the reflective form expressing their opinions about the DDL approach and the tool used. This section is significant in shedding light on the differences between these views evidenced by students versus their instructors. As explained in Study One (see Chapter5), students consistently respond

positively towards the training and the use of the DDL approach to learn GVs. It is interesting to check whether the teachers' attitudes towards the use of the DDL approach to teach GVs for intermediate-level students are similar to the attitudes adopted by their students.

The mean of teachers' attitudes towards the uses of the DDL approach to teaching GVs was 3.42 (SD=0.39), which is considered to be moderate to favourable. For deeper investigation, I looked at the sub-scales of the teachers' attitudes towards the uses of the DDL approach for teaching GVs which show a mixed picture of the three sub-scales. Two seem to support a positive attitude towards using the DDL approach to teaching GVs, but neither of them reaches very positive attitudes. The mean of *the usefulness of using the corpus-based approach for teaching GVs* was 3.76 (SD=0.48), while the mean of *the confidence for using corpora for teaching GVs* was 3.82 (SD=0.56). However, the mean of *the obstacles of using the corpus-based approach for teaching GVs* was 3.31 (SD=0.69), in which the teachers identify the specific problems that can occur if they use corpora in their teaching. Taken together, it is fair to conclude that the moderate attitudes are unlikely to overcome the perceived obstacles, and that the teachers are unlikely to choose to use corpora. This is in full accordance with teachers' interviews, wherein the general consensus is that teachers do not mind using corpora, and they could see some advantages and some useful features, but these perceived obstacles are strong enough to cause aversion to the approach. Their conclusion was, "If we have to do it, we would not mind, but, without direct instructions from policymakers, we are not going to volunteer to do that", (my summary). In other words, they did not see enough benefits in the approach to volunteer to utilise it within an environment which did not fully support it.

8.3. Factors affecting teachers' attitudes towards the use of corpora in the classroom

The previous section explored teachers' attitudes towards the use of corpora in EFL classrooms and their relations to the pre-selected set of factors. Looking at the teachers' attitudes towards these factors is informative, as it is predicted that these factors also affect attitudes towards the use of corpora in the classroom. Ascertaining teachers' attitudes towards these factors can also indicate possible changes in attitudes towards the use of corpora in the classroom. For example, if the teachers have very positive attitudes

towards the use of AMs in their teaching, this could indicate the possibility of attitudinal change towards the uses of corpora in the classroom, as corpus data is considered to be a rich source of AMs. Many of the teachers in the open-ended questions noted that corpus data is rich source of AMs. This potential for attitudinal change is applicable to the other factors, such as general computer literacy and the communicative approach. The attitudes towards the use of AMs was moderate, as the mean was =3.49 (*SD*=0.5). On the other hand, the attitude towards general computer literacy was favourable with a mean of 3.91 (SD=0.6), which is higher than all other factors. The attitude towards the use of the communicative approach appeared moderate with a mean=3.64 (*SD*=0.4). In general, the teachers' attitudes seemed positive towards the use of AMs, computer use in the classroom, and the communicative approach in their regular teaching; this can reflect possible thinking about the uses of corpora in their teaching for, at the very least, attitudes were not decidedly against any factor. Interestingly, there are strong correlations among other factors, as Table 42 exhibits.

Table 42. *Pearson correlations among the three factors of general computer literacy, the communicative approach, and use of authentic materials*

Factor		**Attitudes towards communicative approach**	**Attitudes towards general computer literacy**
Attitude towards the use of authentic materials in the language classroom	Correlation Coefficient	.603**	.703**
	Sig. (2-tailed)	.000	.000
Attitudes towards general computer literacy	Correlation Coefficient	.671**	/
	Sig. (2-tailed)	.000	/

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

The questionnaire contains a set of key signal items (closed questions) to ask about frequency and habits of teachers regarding the use of AMs and computers, as well as the teachers' ranking of the introductory course. This set of questions provides insightful information about the teachers' habits of using AMs in their classrooms and the use of computers within educational settings. These questions include basic queries such as "How often do they use AMs?" The data for this question revealed that only 5.4% always use AMs in their teaching, while 16% seldom use AMs and 7% never use AMs. Another question addressed the level that teachers think students should start being exposed to AMs, with 44.6% of the teachers thinking that students should be exposed to

AMs at the beginner level and 41% thinking at the intermediate level. The frequency of teachers' uses of computers per week for teaching purposes showed that the majority use computers more than four hours (64%). Regarding training courses on the use of computers for instructional purposes, 53.6% of the teachers received the training course while 42.9% did not receive any training. The final question in the set was about rating the short training course on CL provided by the researcher, wherein 82.2% rated the course as good to very good (rank 3+, 17.9%; rank 4, 14.3%; rank 4+, 41%; rank 5, 8.9%). This set of questions did not provide statistically significant differences between group means as determined by one-way, therefore they will not be discussed in the rest of the chapter.

8.4. Discussion

To address the main question of this study, I first discuss the results using the quantitative data to outline the general picture of teachers' dispositions and teachers' attitudes towards certain aspects of corpora use in the classroom. I also provide the teachers' opinions about using corpora to teach GVs to the intermediate level students by exploring the quantitative data. I additionally address the possible factors affecting teachers' attitudes.

8.4.1. Teachers' attitudes towards the use of corpora in the classroom

In this study, teachers' attitudes towards the use of corpora for teaching English are moderate to positive (M=3.70). This attitudinal feedback is encouraging, for CL was a new concept to these teachers who had never previously used corpora for teaching purposes. The teachers did not reach enthusiastic attitudes, which may be based on their lack of knowledge about the different uses of corpora in the classroom, a factor noted in critical literatures (Leńko-Szymańska, 2014; 2015; Romer, 2009, 2010).

Gaining enthusiastic attitudes, therefore, has significant value in Romer's (2006) "corpus mission" (p. 83), or what she called "missionary work" (p. 126), to introduce CL for teacher training programs, students, and material designers. In this study, teachers recognised the need and importance of training before using corpora in their classes, as the mean of the subscale *practicality of corpus uses in the classroom* is (M=3.90)–the highest score among all the subscales. The teachers' recognition of their need for training

was not surprising, as most studies in the literature refer to the need for training before teachers and learners apply corpora in the classroom (Cobb, 1997; Flowerdew, 1996; Kennedy & Miceli, 2001). Breyer (2009, p. 167) supports this stance, claiming that "training teachers appropriately is essential if they are to be expected to use corpora for their teaching practice".

The second subscale focuses on *the teachers' confidence when using corpora in the classroom*. The teachers showed a good measure of confidence in applying corpora although it was new for them; this confidence may have been related to the training they received, which the teachers emphasised in the interviews was adequate to start using corpora. Even though the teachers felt confident in applying corpora methods, they acknowledged a degree of difficulty in using corpora in the classroom. However, the mean of this subscale (2.80) suggests that these difficulties are possible to overcome.

Subscales measuring *the usefulness and the willingness to implement corpora in the classroom* are similar to the scores for teachers' general attitudes towards the use of corpora (3.70). I believe the teachers' views about the usefulness of corpora are limited because they have not used corpora independently. A point that was mentioned repeatedly in the interviews was that teachers prefered homework or tasks to explore corpora independently (Ruby and Bella). The more that the teachers realised the usefulness of corpora, the more willing they were to implement it. Boulton (2009a, p. 82) frames this point as a matter of perceived usefulness, observing that "the perpetual question with new technologies is whether we are genuinely doing new things, or merely rehashing old things in new ways". To this end, the teachers' awareness of the usefulness of applying corpora plays a role in their willingness to implement it.

8.4.2. Teachers' attitudes towards the use of the corpus approach for teaching GVs

The teachers' attitudes towards the uses of corpora for teaching GVs are moderate (3.42). If we look more deeply at each subscale, we find the teachers' attitudes towards *the usefulness of using corpus-based approaches to teach GVs* are moderate (3.70). This moderate attitude can be related to the nature of GVs: "for many teachers, collocation is just another way of presenting vocabulary" (Lewis, 2006, p. 173). If the teachers are not aware of the importance of teaching collocations in the first place, they will not see the need for any method or approach to teach collocations. Lewis (2006, p. 173) also

observes that, if the teachers do not have a "deep commitment" to teaching collocations, the concept will remain only introductory in the classroom.

The second subscale is *the teacher's confidence in using corpora for teaching GVs* (M=3.80). This score can be explained by the fact that teachers have never used corpora before, nor have they been introduced to the DDL approach prior to the introductory course. However, the mean score of *the obstacles to using the corpus-based approach for teaching GVs* is 3.31, which is a bit worrisome, as the teachers discovered obstacles and difficulties in applying this approach in their classrooms. The mean of the obstacles sub-scale may indicate that the teachers acknowledged that they may face those obstacles in applying this approach when teaching GVs for intermediate levels. The teachers' attitudes towards the use of corpus-based approaches for teaching GVs were similar to their attitudes towards the uses of corpora in teaching English; this may be because of the novelty of corpora for teachers, as well as the amount of time and number of workshops needed to establish the basic uses of corpus methods in the classroom.

8.4.3. Factors affecting teachers' attitudes towards the use of corpora in the classroom

I anticipated that there would be some factors (i.e., the introductory training course, computer literacy, teachers' perceptions of communicative approach, and AMs) that might affect the teachers' dispositions towards the use of corpora in the classroom. According to the results of the questionnaire, this hypothesis was correct. Raising teachers' awareness of CL makes a major contribution to bridging the gap between applied CL and language teaching. This study contributes to this lack by providing an introductory training course for in-service teachers, which was beneficial in creating positive attitudes towards uses of corpora in teaching English.

The data generated from this study has led to many important findings. First, I have identified factors that can prevent the teachers from applying corpora in their classes, as well as factors that facilitate corpora applications. Second, I have realised the importance of designing a suitable training course for the targeted teachers that considers teachers' needs and previous experiences with CL. Third, I have found that it is important to provide a more comprehensive picture of corpora use in teaching English as a foreign language (i.e., general English).

For teachers who had never heard about corpora, their moderate attitudes are promising because their attitudes have the potential to further improve after longer

training, designed according to their needs. Leńko-Szymańska (2015) observes that the participants' perceptions of the value of corpora in language education are affected by the course itself. I found the same thing in the current study; the positive reaction towards the training course impacted the general attitudes towards corpora in language teaching. As the findings show, the teachers' attitudes towards uses of corpora in the classroom have a strong relationship to the introductory course (i.e., the training) and to their general computer literacy. A moderate relationship existed between the communicative approach and the teachers' attitudes towards uses of corpora. Those relationships were anticipated in the published literature and have been supported in the current study.

Computer literacy is frequently discussed as an obstacle to using corpora in classroom (Yoon & Hirvela, 2004; Tian, 2005; Boulton, 2010a). Leńko-Szymańska (2014) argues that this obstacle is reduced because of improvements in the computing skills of both teachers and learners, as well as the spread of computer labs in educational institutions. Tribble (2012b) confirms this stance in his observation that computer literacy was the least frequently mentioned factor by teachers as a reason for not using corpora in their teaching. Charles (2017) also emphasises this need for basic technological competence, stating that the teachers in her study said that using corpora requires a certain degree of computer literacy. The current study contradicts Leńko-Szymańska (2014) and Tribble (2012b) by finding a very strong correlation between teachers' attitudes towards the uses of corpora in the classroom and general computer literacy. This contradiction is likely due to the fact that the computer labs in this institution (where the study conducted, NBU) lacked the necessary technical infrastructure to apply CL directly in language classrooms, based on my personal observation.

Corpora use in the classroom, and the DDL approach specifically, are based on the communicative approach (i.e., learner-centred, discovery learning, autonomisation, authentic language; see Boulton & Tyne, 2013). An important step before applying corpora in the classroom, therefore, is to make sure that teachers are ready to change their instruction from teacher-centred to learner-centred as well as to accept their roles as facilitators for the learning process and for applying corpora in the classroom—roles that have been emphasised by many researchers (e.g., Boulton and Tyne, 2014a). As Boulton (2009a, p. 93) observes, "it can be difficult having one's authority questioned [teachers],

something which DDL actively encourages". Johns (1988, p. 14) also addresses this difficulty by noting that DDL

> entails a shift in the traditional division of roles between student and teacher, with the student now taking on more responsibility for his or her learning, and the teacher acting as research director and research collaborator rather than transmitter of knowledge.

The moderately significant correlation found between the teachers' attitudes towards the use of corpora in the classroom and the teachers' perceptions of their roles within the communicative approach is congruent with the recommendations among researchers (e.g., Boulton, 2009a). For example, Johns (1991a) recommends that the teacher has to be ready to change his/her role to coordinator rather than transmitter. Charles (2012, p. 101) heralds the flexibility in the teacher's view of his/her role and the readiness in changing roles as "a necessary concomitant of encouraging learner autonomy" for using corpora. To apply CL in the classroom, therefore, the teachers must be ready to see an evolution of their roles.

Chapter Nine: Qualitative Results and Discussion

In this chapter, the teachers' attitudes will be explored through the qualitative data of the open-ended questions (from the questionnaire, where the participants are numbered for ease of reference) and the teachers' interviews (where the participants are named for ease of reference). To this end, this chapter presents the two following sections. The first section looks at the open-ended questions and includes the analysis of qualitative data on the uses of corpora in the classroom, as well as the analysis of the qualitative data from the introductory course. The second section is the teachers' interviews which address general attitudes towards using corpora, the factors facilitating or hindering corpora implementation, and the influence of the introductory course on the teachers' attitudes. The discussion of the qualitative results are then integrated in the second section (9.2.) because the themes emerging from the open-ended questionnaire were similar to the themes that emerged from the interviews. Nevertheless, the interviews provide more in-depth information than the questionnaires could provide.

9.1. Open-ended questionnaire

9.1.1. Analysis of qualitative data on the uses of corpora in the classroom

As mentioned earlier, the teacher sample displayed positive attitudes towards the uses of corpora in the classroom. In order to analyse which aspects the teachers found particularly useful, four open-ended questions (in the questionnaire) examined this issue further. The first question addressed the possible benefits of corpus data, with the teachers' responses showing acknowledgment of the benefits of using corpus data in their classes. Teachers elaborated that corpus data could help improve four English language skills, notably "improving vocabulary" and "improving proficiency". As Participant 45 observed, "It would come in handy when teaching grammar, vocabulary, speaking, reading, and writing". In another direction, teachers also found corpus data useful in preparing teaching materials, as well as providing a rich source for AMs. Participant 5 emphasised these benefits, stating that "for teachers, it will revolutionise language teaching, and, for students, it will give them access to focus on AMs". The teachers also noted that it exposes students to real language: "it will give more exposure to English language usage in real life" (Participant 39).

The corpus data could additionally be seen to increase motivation as well as cultural awareness, as mentioned by many of the participating teachers. Participants 55 and 25 focused on this improvement of both teachers' and learners' motivations: "teachers and learners would benefit by creating [an] interesting and learning environment [and] so developing their knowledge power" (55). Others saw corpus data as a good alternative to dictionaries, as Participant 35 suggested corpora can operate "[As an] alternative to digital dictionaries, it can be beneficial in terms of concordance". All the benefits mentioned by these teachers are in accordance with the benefits of using AMs in teaching, which are described in literature (see section 6.1.2). It may be that evaluating the teachers' attitudes towards the use of AMs in the classroom could provide an indication of their attitudes towards using corpora in their classrooms.

The second question from the questionnaire explored teachers' views of the advantages and disadvantages of the application of CL in English language teaching in general. Their answers provided a wide range of advantages and disadvantages of the uses of corpora in the classroom. These responses were classified into categories (see Appendix 8, attached CD, for the thematic analysis of the teachers' responses in one of the open-ended questions). Many of these categories have already been mentioned in literature – including time constraints, technical difficulties, and students' proficiency levels – as rich sources for AMs, for improvement of the four main language skills, for improved vocabulary usage, and for increased motivation to learn English. The teachers additionally mentioned three categories that are not discussed widely in literature regarding the use of corpora: the burden on the teacher, the specialised uses for corpora, and the possible confusion that can be caused by different usages of words. A deeper investigation reveals that what was considered to be an advantage by some teachers is considered a disadvantage by others, such as the time constraint issue. Some teachers thought that the use of corpora is time-consuming, as Participants 41 and 19 emphasised: "but it needs time and training before start[ing] with the application of CL", while others believed that it saved time, because they have a rich source. A few teachers claimed that corpora are not meant to be used by teachers but for researchers' purposes, because of the low level of students: corpora are meant for "academic [use] but [are] not applicable to the students of Turaif [name of the city], as they have very low levels of the English language" (Participant 31). This contradiction is found too with motivation, as discussed

by Participant 39: “the motivation level and proficiency of English students may be hindrances”. Participant 37 took the opposite view, noting that “it [the use of corpora] is interesting, and it might motivate students”. Corpora use may additionally place a further burden on teachers, as Participant 8 mentioned: “[It] puts more pressure on teachers on how and what to use during materials preparation”. This feeling of burden may well be linked to the teachers’ lack of experience using corpora, and in this way contributes to expressions of being overwhelmed.

The third question, about the possible positive and negative aspects of teaching through the use of corpora in the classroom, is more specific to the teacher situation at NBU. Their answers were expected to be more specific and oriented towards what they needed or aimed to achieve through utilising corpora in their classroom. Most responses were focused on the low English level of the students; it was clear that the teachers considered corpora use to be unsuitable for their classes. This thought was confirmed by many participants, who stated that “low proficiency students may be an obstacle in using corpus [methods] in [the] classroom” (Participant 3), “the weaker students would not be able to make use of corpus [methods], because they are weak in reading [and] comprehension” (Participant 6), and that “most students are not advanced enough to benefit from corpora” (Participant 7). Participant 14 linked these low English proficiency levels to motivation when she claimed that “weak students in English will not be interested”. A repeated concern was the lack of time and the need for training involved for the appropriate use of corpora; as Participant 41 emphasised, “it improves the skills, but it needs time and more training before start[ing] with it”. Participant 18 mentioned that “it will help students as well as teachers, but it is time consuming, and we do not have enough time for such activities”. The technical issue was also mentioned again, with some teachers believing that they could not use it in the current situation: “students are not allowed to be [on the] internet on campus” (Participant 56). They actually considered the need to use computers as a negative factor in the current situation, as Participant 45 explained: “It needs classes to be equipped with computers and connected to the internet”. Teachers such as Participant 24 believed in the importance of using syllabi and thought of corpora as an unnecessary distraction, claiming that corpora are a “distraction from focus on [the] syllabus”. Also, as Participant 36 emphasised, “the

corpus cannot encompass all the details that a curriculum can; we cannot get rid of [the] curriculum and only teach our students how to sort the frequency of some words".

The fourth question enquired about their future intentions regarding the use of corpora as a teaching resource. Thirty-five percent of the participants did not answer, which was expected as the ratio of the completion of open-ended questions is declined compared to the close-ended questions (Dörnyei, 2010). However, 65% answered, a significant number which I believe carries some value. Of the 65% who answered, 16% gave a very general answer, such as "I think so" (19), "Maybe, because I am learning seeker" (32), and "Not applicable" (56). The answers given by remaining 49% are discussed in the following section.

A new theme emerged for this question regarding the use of corpora being dependent on policymakers. As Participant 31 speculated, "I might use [it], depending on our university budget, students' level, and interest". An important category is the importance of training, as teachers believed that if they received training, they would be happy to use corpora. As Participant 18 stated, "first I would like to take training about its use, and then I will use it, because it's helpful and can make things easy and understandable". This stance was corroborated by Participant 20: "I am willing to use it by getting useful training" and Participant 28: "If given training, I won't hesitate". There was some agreement among teachers that corpora could be used as supplementary materials and tools. As Participant 8 stated, "I would use it as supplementary resource in my teaching, help to provide up-to-date materials to improve [students'] linguistics competence". Participant 44 said she would also use corpora, but "not necessarily as a main tool or preparation". However, she went on to say, "Actually, I would like to use it in my teaching materials and let my students use it and learn through it". The idea of using the corpora for research but not for teaching was repeated in this question, as Participant 35 said she would not use it because of the students' proficiency levels: "I would have to use corpora at advanced levels, especially for research purposes".

After reviewing the teachers' answers in the four questions, it may be concluded that teachers have genuinely considered applying corpora in their teaching. They listed all the possible obstacles and negative aspects as well as the benefits and possible positive aspects, indicating that they did consider applying corpora in their classes. This

range of responses helps explain the collectively moderate attitudes towards the uses of corpora in teaching.

9.1.2. Analysis of qualitative data on the introductory course

Because the introductory course had an impact on the teachers' attitudes, it is useful to more closely examine which aspects of the sessions worked and which did not. The questionnaire contained two open-ended questions about the units and activities the teachers liked the most and the least. A third question asked whether they would like to change, add, or eliminate anything in the introductory course. The questions had good response rates (question 1 = 86%, question 2 = 75%, and question 3= 70%). The teachers' answers to the question about the unit or activity they most liked were mainly limited to three themes: the practical applications of CL in the classroom, hands-on training, and introduction to CL. Each theme additionally contained a number of sub-categories.

The practical applications of CL in the classroom included indications of the teachers' preference for the tools, resources, and practical activities used in the introductory course. For example, teachers found AntConc to be both useful and helpful, and they also liked the concordance function. Participant 42 observed that "AntConc helps in teaching natural language". The teachers also appreciated the activities used in the sessions which related to collocations and grammatical patterns. Participant 55 liked the "grammatical activity, because students usually do [make] mistakes". Participant 2 found the collocation activity the most useful, noting the benefits of "Collocation and concordance, give curiosity in judging out the possibilities and usage of the keywords". Participant 22 found that collocation activities could help in increasing cultural awareness as well: "The unit which discusses heavy rain and strong tea … shows different vocab[ulary] in [a] different culture". Some of the participating teachers also liked the BNC demonstration, indicating a real interest in the application of corpora in the classroom. The teachers also showed interest in the training itself, and they liked hands-on training. Participants 41 and 46 confirmed that with the training, the use of corpora became easier: "[I enjoyed most] the practical part; when we practice, things become easier". Participant 6 mentioned that she liked the training steps which helped with acquiring vocabulary usage, specifically "downloading [the] data file and looking at the right side or left side, because it teaches the possible usages of that vocab[ulary]".

The activities least enjoyed by the teachers were actually similar themes to what other teachers liked the most, but with large differences in degree. Only three teachers (about 5%) said they least liked the collocation and GVs activities, while ten teachers (about 17.85 %) liked collocation and GVs activities. However, about 44% of teachers said they did not find anything to dislike in the sessions, which explains the overall positive effect of the sessions on the teachers' attitudes towards the use of corpora in the classroom. If 44% of the teachers found nothing to dislike, and 25% did not answer this question, only 30% of the sample could possibly identify some parts of the session to dislike. Interestingly, some teachers found the demonstration of the BNC web insufficient, as they desired to have on-hands training, which was not included in the sessions. As Participant 28 noted, "We do not have direct access to the link BNC". Therefore, their rationale for what they liked least was due to the shortage of training, rather than the corpus resource itself.

The responses to the third question (which was about if they would like to change, add, or eliminate anything in the introductory course) indicate the degree to which the sessions were enjoyable, as most teachers wanted to add more training sessions and extend their length. Participants 2 and 43 suggested adding more hours, while Participants 12, 24, and 34 specified adding more practical sessions. Participant 39 required more advanced training, such as instruction on how to create and import files, while Participants 3, 17, 22, and 35 preferred adding more practical activities.

9.2. Teachers' Interviews

The interviews were conducted with six teachers who volunteered and showed variation among the teachers regarding different aspects of considering using corpora in teaching. The aim of these interviews was to gain an overall understanding of the factors that could help or hinder the uses of corpora in the EFL context for in-service teachers, as well as their attitudes towards corpora besides their willingness to use corpora in their classes. The interviews were conducted to generate more in-depth information than the questionnaire could provide; it should be emphasised that these interviews were used for illustrative purposes, not as a main tool for collecting data. The themes emerging from these interviews were similar to the themes that emerged from the exploratory interviews used for constructing the questionnaire. A key difference was that the main theme from

these six interviews was the influence of policymakers. All the interviewed teachers shared the same concerns about the policymakers and their influence on implementing a new methodology which might encourage or prevent such implementation. The teachers in the current study used the term policymakers to refer to the local authorities in the university, such as the head of departments, coordinators, the dean of the college(s), and/or the vice-chancellor. In addition to this concern about policymakers, the following themes emerged: general attitudes towards the uses of corpora, the preference of corpora use in the language classroom, the advantages and disadvantages of using corpora in the classroom, the influence of the introductory course on the teachers' attitudes, and the factors facilitating or hindering corpora implementation.

9.2.1. General attitude towards the uses of corpora in the classroom

Overall, all the teachers provided positive feedback towards the uses of corpora and were excited to use corpora in their classroom. They were also very positive towards the introductory course as well. This positive reception extended to consideration of using corpora in the next semester. As Lucy said, "*I, of course, am thinking about using it during my next semester, because I will be using it to teach the next level students, so it will be my main reference*". Others clarified their desire to use corpora, but they also revealed their awareness of possible obstacles; as Ruby observed, "*if we have a large number of students, yes that would be such a difficult thing to do but as this term we do not have so many students so I guess we can apply it in this semester*". Anna also commented on this: "*I wish to use this, but sometimes we are bound with the time, and we are bound with finishing the syllabus*". Anna was the teacher least enthusiastic about using corpora, as she declared that she could not use it under her current circumstances wherein priority was placed on covering the syllabus and permission was needed before including any new teaching methods or materials. She was also the least satisfied teacher with regard to the policymakers in the university, which might have influenced her attitude. I therefore believe it is not comprehensive enough to investigate teachers' attitudes towards corpora without counting the possible factors affecting those attitudes. Considering the influence of all the factors, the teachers in this study showed promising positive attitudes.

Overall, the teachers showed positive attitudes towards the uses of corpora and genuine interest in using corpora in their classrooms. The teachers who took part in the

interviews were volunteers, so I expected that they would be fairly receptive to the idea. These teachers showed serious consideration of using corpora in the following semester. In addition to showing promising positive attitudes, they also expressed their preferences for the possible uses of corpora, in addition to the advantages and disadvantages; this discussion revealed the teachers' understanding of corpora, and to this end provided informed guidance for future decisions regarding the use of corpora in the university in which the study was conducted.

The preference of corpora uses in the language classroom

Divisions in the type of preferred access to corpora can be related to teachers' personal preferences. Some teachers, such as Bella, Ella, and Zara, preferred using corpora directly in the classroom and to have their students given direct access to use corpora. Bella explained this preference: "*If you use it as printed [material], you are actually cutting the experience, because students do not know where you got it from*". Ella and Zara justified their preference by the availability of resources; Ella stated, that, in her case, "*I have my own connection, my own laptop, ..., the extension cords, everything. I have it, because I have to put plan B and C with me in the classroom. So, in this case, I can teach them directly"*. Zara did not mind using direct access through iPads and phones but not in the computer lab.

Other teachers did not prefer direct access, including Lucy, Anna and Ruby. For example, Anna described herself as an anti-technology person: "*I want to make sure that they practice it in class, not [via] technology. I am not in favour of technology*". She also mentioned the issue of resource availability: "*There is a lack of labs; we do not have sufficient labs*". Lucy thought that indirect use was the best option for her students, relating this to their level: *"[I prefer] adapting authentic materials to put them in exercises. This is the easiest thing I can do, and it is going to be very helpful for the students*". Another preference related to using corpora as a supplementary or permanent source in the classroom; although there were mixed opinions regarding students' levels, all the teachers agreed on using corpora as supplementary with the textbooks. Bella concurred: "*In a different context, where students' levels are better and where their whole attitude toward learning is better, yes, I think I am going to make [it] a permanent part of the curriculum of the whole learning [process]*".

As was the case in the current literature, there were divisions in the types of preferred access to corpora according to teachers' personal preferences. Three teachers preferred direct access to corpora, consistent with the spirit of DDL (Cobb, 1997; Todd, 2001); they also preferred direct access because of the availability of resources (e.g., computers labs). The other three teachers favoured indirect access, mentioning different reasons for this preference (e.g., new technology, lack of resources, low-proficiency levels). Other researchers have encountered similar views regarding the indirect use of corpora (i.e., printed materials). For example, Gavioli (2005) believes that learners would find it difficult to get used to the new material (i.e., the corpora), the new technology (i.e., software), and the new approach (i.e., DDL) all at once. Boulton (2010c) also adds that the learners' level of language ability could be an obstacle to using corpora directly. Bernardini (2002) observes that indirect use is sometimes better based on the technophobic nature of some learners; in this study, some teachers were technophobic and therefore preferred indirect access. Farr (2008) shares the same view with Bernardini (2002) that technological aspects of using corpora can cause frustration for some learners. Boulton (2010c) notes that printed materials could help reduce the reliance on computers and overcome the lack of resources which has been emphasised by the teachers in the current context. Vyatkina (2016a) also observes that online corpora may require high cognitive skills, which can be difficult for both students and teachers alike. The uses of corpora in the classroom were chosen as supplementary materials and tools to enhance the current curriculum, which is in line with Gabrielatos's (2005, p. 20) recommendation: "the use of corpora should not be treated as an alternative to, or rival of, existing teaching approaches, but as a welcome addition".

The advantages and disadvantages of the use of corpora in the classroom

The teachers' recognition of possible advantages and disadvantages of the use of corpora, although they did not yet use corpora in their classes, indicated that they were able to foresee how implementing corpora could have an impact on their everyday teaching. This theme indicated how the teacher would implement corpus-based approaches and tools in the EFL classroom. One of the mentioned advantages was the source of AMs. Lucy said, "*First of all, it is easy to find authentic materials. … It is good to teach students, to use materials that are in context that will help students use these contexts in their real life*". Another advantage was that corpora can improve learning and

facilitate teaching, with a preference for using corpora in teaching grammar and collocation. This preference was raised from the activities used in the introductory course. Bella stated, "*Especially in grammar, instead of explaining the rule, giving them examples. I can give them the examples, ok. It is kind of a discovery journey … I think using corpus will make it [teaching collocation] easy, because they are seeing it in real context. This is how English people use it*". Ruby also offered a corresponding view: "*As you taught us before, for grammar I mean for the verbs and these things, I guess the way you did with us was absolutely amazing I would use it exactly as you did*".

An important advantage demonstrating the teachers' awareness of the possible uses of corpora in the classroom was the flexibility of corpora. This was reflected in Bella's comment that a corpus is like dough: "*I understand that corpus something like, you know, the dough. You can format and use it the way you like*". Anna thought that a main advantage was being knowledgeable of all new innovations relating to teaching: "*I mean, updating our knowledge as teachers is quite useful and, as students, I mean, that is good if we update them. We can give them the latest technology, the latest software*". The use of corpora can lead to more independent learners, which is essential in learning English language, as Bella emphasised: "*I just love the idea of them improving by themselves. I do not have to spoon-feed them their improvement. They are going to do it to themselves*". Zara additionally raised an important point that corpora can help in changing students' roles in class: "*I think it would. As I mentioned changing roles and getting more involved in the classroom…..so the students can as well look up to word themselves instead of the teacher telling them*". Corpora can also be used to improve GVs learning not just for intermediate levels, but even for beginners, although the teachers revealed different opinions about using this method with beginner students.

Although the teachers have been able to identify some advantages of using corpora, they used the term disadvantages for the obstacles that they may encounter during their application of corpora. For example, they mentioned the time issue, as using corpora is time-consuming, and they do not have enough time to use it in their current classroom. This lack of time appears to be less about the nature of corpora but because of the syllabus, which dictates the curriculum they have to cover. To this end, it can be concluded that the teachers did not find any major disadvantages. However, Anna thought that a disadvantage of using corpora was the use of computers, as she said that

"*writing practices are also important, and handwriting is also important, because using too much technology keeps our kids from [learning] how to write*". Anna's comment reflects a wider aversion to technology, a dispreference which could change with additional and more freely-available corpus training. However, this lies outside the scope of the present study, and beyond the means possible through the short training.

The teachers' recognition of possible advantages and disadvantages of using corpora, although they had not yet done so in their classes, indicated that they were able to acknowledge the uses and the methods for implementing corpora in their everyday teaching. The advantages and disadvantages theme indicated how the teacher would implement corpus-based approaches and tools in the EFL classroom. The teachers were able to list the benefits of using corpora in their current classrooms (see section 9.1.1.), most of which were emphasised by corpus linguists (researchers and scholars interested in corpora). Reaching an agreement between corpus linguists (i.e., researchers) and in-service teachers can also enhance communication, which will eventually help in popularising CL for teaching the English language. As Romer (2006, p. 129) recommends, it is important to "foster communication among and improve the exchange between researchers on the one side and practitioners (teachers, teacher trainers and trainees, and materials writers) on the other side".

A main advantage of using corpus was its use as a source of AMs and real language as well as its usefulness in preparing teaching materials. As Mukherjee (2004) and Ebrahimi and Faghih (2017) observe, the teachers in both studies considered corpora as a source for AMs. Duda and Tyne (2010) also consider corpora as a source of AMs. Corpora were additionally seen to increase cultural awareness and could be used as a good alternative to dictionaries. It improved learners' levels and facilitated teaching by improving language proficiency (e.g., Allan, 2006; Cobb, 1999; Horst & Cobb, 2001; Koosha & Jafarpour, 2006; Sun & Wang, 2003). In addition, teachers believed that using corpora could lead their students to more independent learning and to be more involved in the classroom, which aligns with the DDL approach. As Johns (1991a, p. 31) argues, corpora will "help [students] to become better language learners outside the classroom". Other research has suggested that DDL fosters learner autonomy and increases language awareness as well as cognitive skills (Boulton, 2009b; Talai & Fotovatnia, 2012; O'Sullivan, 2007). Most teachers preferred to use corpora for teaching collocations and grammar (e.g., lexco-grammatical patterns) due to the type of training they had received.

This preference is because of the confidence to handle this type of activity after the training that is mentioned by Leńko-Szymańska (2014), who recommends designing focused courses with smaller numbers of resources so the participants have greater confidence in using them. Breyer (2009) also argues for "recognising that there is a significant difference between learning and teaching with corpora, as well as providing student teachers with the required skills, is of great importance" (p. 156). I agree with Breyer (2009), that students (even pre-service teachers) differ significantly from teachers in terms of needs and goals when they enrol in a CL course. Furthermore, I believe that training teachers in the uses of corpora while they are teaching is of great importance because they can relate their teaching situations to the knowledge and skills they acquire from the training course. Leńko-Szymańska (2015) emphasises the need for training teachers on different applications of corpora as "a requisite for explicit instruction of pre-service and in-service teachers in the potential applications of corpora in the language classroom" (p. 136). An important advantage of using corpora mentioned by the teachers was that it can increase learners' motivation to learn and teachers' motivation to teach by creating a fun environment and encouraging learner-centeredness as emphasised by Boulton (2010b), Chan and Liou (2005), and Yoon (2008).

The teachers mentioned syllabus-based time concerns estranged from corpus use that would prevent them from using corpora on the basis of insufficient preparation time. Boulton (2010c, p. 560) similarly acknowledges that preparing DDL materials is "extremely time-consuming". The time issue has been raised by many researchers, including Ebrahimi and Faghih (2017) and Zareva (2015), and Farr (2008). In addition, Chambers (2005), in her discussion on how to popularise corpus consultation, finds that the time issue is a serious challenge. The teachers were also concerned about technical issues related to the use of computers and technology, and expressed the need for training in appropriate uses of corpora as recommended by many studies (Mukherjee, 2006; Mukherjee, 2004; McCarthy, 2008; Breyer, 2009; Hüttner et al., 2009).

Unfortunately, some teachers believed that corpora were not meant to be used by teachers but only by researchers because the proficiency-level of students was too low to cope with the AMs offered by corpora. They therefore believed that corpora were more effective in being utilised only for academic research purposes. This issue is a subject of debate in CL research; some studies encourage using corpora for lower-level students while others do not. For example, Hadley (2002, p. 111) claims that his attempt to use

DDL for beginners was "doomed to failure'', while Boulton (2010c) argues that DDL can be used for lower-level students. Yoon and Hirvela (2004) also observe that intermediate-level students outperform the advanced-level students, and intermediate-level students are more positive. Boulton (2009b) argues that if the objection against using corpora (i.e., DDL approach) is based on the lack of the analytic and linguistics skills of students at lower levels, the objection would be acceptable, as the students may find it difficult to cope with the AMs.

Talai and Fotovatnia (2012, p. 1526), on the other hand, observe the benefits of corpora despite these difficulties: "for instance, it improves learner independency and autonomy, enhances language awareness, and makes the learners able to cope with authentic language". Study One in this thesis showed that the intermediate students worked on corpus data independently, although they complained of difficult words in some contexts; they were, however, willing to use corpora in the everyday classroom. Charles (2014) suggests adding drop-in sessions or on-demand courses to overcome any obstacles that may be raised during using corpora, although she does not address the lower-level students but she addresses ESP students.

The final obstacle to the use of corpora that teachers reported was the added burden and pressure—as preparing materials is time-consuming—emphasised by many researchers. Boulton (2010c), for instance, reports that for each of the items used in his study, he spent about half a day preparing the materials. Johns (1991b) also admits spending eight hours on a single handout. I, however, believe this feeling of burden to be unjustified, because the teachers' lack of use of corpora may contribute to their perception that using corpora is overwhelming. As is the case with any new tools or materials in teaching, teachers require more time and training to overcome any feelings of potential frustration raised by the lack of confidence in using these new tools and materials.

9.2.2. The influence of the introductory course on the teachers' attitudes

All the interviewed teachers shared the same view about the introductory course in that it created positive views about using corpora in the classroom, especially among the teachers who had never heard about it. For example, Lucy said that the course was "*very informative. It was very well-organized, it is, for us, or, for me, personally, something new … and I like it very much, and I would have wanted it to be maybe a little*

longer". Ruby also agreed, stating that "*it is very important. It is completely a new thing you know it is just not about the theoretical part I get the most benefit actually form the practical part so I guess it is very important to be for the teacher to be given some theoretical part and some practical part as well".* All the teachers had positive attitudes towards the course and they liked the content as well as the materials, which helped in improving their views about using corpora in their classes.

The teachers liked the practical applications of CL in the classroom, the hands-on training, and the general introduction to CL. The teachers found the demonstration of the *BNCweb* insufficient, as they desired to have more hands-on training. Their rationale for what they liked least was due to the shortage of training, but not specifically the corpus resource (i.e., the *BNCweb*). Most teachers wanted to add more training sessions and extend the length of these sessions. This is in line with findings of previous studies which report that participants want more hands-on training (Zareva, 2015; Ebrahimi & Faghih, 2017). Researchers also recommend that training that provides hands-on experience is important to familiarise teachers with CL (Goktas et al., 2008; Frankenberg-Garcia, 2012). The obstacles that may be encountered during the uses of corpora is outlined in greater detail in the following section.

9.2.3. The factors that facilitate or hinder corpora implementation

The first factor that could facilitate using corpora was the existence of an expert or supporter who could help the teachers if needed. Some teachers also showed a desire to train students by themselves. This factor was mentioned only by Ella, who was the most experienced teacher among the interviewees: "*I said 'we need a supporter.' You know? We need [someone] supporting [us], because you have been the specialist in this field, so, you know, you will know better than us*". She was the only teacher who pointed to the need for a helper or supporter, because she might be in a similar situation where she needed help when applying new tool or approach in the class (because of her many years in teaching). Zara was against expert existence in helping prepare materials, as she believed "*the moment it becomes systematic and you know imposed by the administration it will become something very similar to the textbook it would not be spontaneous, would not be natural*". The textbook was another factor identified as a controversial hindrance. For example, Anna had a different point of view about the textbooks. Teachers felt a lot of pressure to finish the textbooks, but at the same time textbooks were seen as important

for providing discipline: "*We need textbooks, because it keeps students well-disciplined. You know, when you give them materials, I mean like newspapers cuttings, like some videos, maybe it is difficult for them to compile all these things*" (Anna). Teachers are in this way obliged to finish the textbooks; they are bound in the classroom, and that teachers don't have much energy to go beyond the textbook. It also seemed that the textbooks were more suitable to students' levels; as Zara emphasised, "*The textbooks do aid in certain situations like when the students' level so basic*". The cultural differences in the AMs (corpus data) could also be a drawback in this context, as teachers like Lucy stated that they preferred to avoid these differences: "*Usually, here in the Middle East,…… some other cultural differences are excluded from the main books, and modified books are designed for the students here. So [in] exposing students to authentic materials, there can be sometimes cultural differences that the teacher has to explain*". Bella mentioned the same problem, noting, "*But, here, in Saudi Arabia, I think the differences are really bigger. There is a huge gap; whenever you have to introduce something, you have to be careful*".

The learner level also created disagreement among teachers. While some teachers declared that they could use corpora with all levels, others preferred to use it only with intermediate levels. This disagreement is expected, as it is one of the more controversial issues related to corpus use in the classroom (Johns, 1991b; Yoon & Hirvela, 2004). Lucy said that she had "*never been in a situation where I was in need of using AM, … I struggled a lot with my students because they were beginners, and sometimes I had to go back to the basics in teaching the ABCs and very, very basic English. So I found myself only using formal textbooks*". Anna suggested that corpora could be used with both beginner and intermediate students, but "*it should be, like, designed properly, like, for beginners' students, something different, or intermediate students should be something different according to their level*". Lucy shared the same view as Anna, in that this approach was "*not for intermediate [students] only; it could be helpful for all students, but it takes time to choose and organise depending on the level of students or what skill I am teaching*". Computer literacy was also seen as a possible hindrance for both teachers and students, although it is an easy one to overcome by training, as Lucy noted: "*I can give them time to learn, but they will overcome this problem if they have problem with computer in the first place. It is gonna be an easy obstacle to overcome*". Anna suggested

the same thing regarding the computer literacy of teachers: "*I mean, there are some teachers who cannot use computer, but, also, if we give them training … If it will be a policy of the institution, definitely a teacher will [get] used to it*". Zara also mentioned that teacher's competence in using technology played a role: "*If the teacher is not very good user of computer or programs, yeah the teacher will find it more difficult if she is not very so used to using computer and she is not very competent computer user she will not prefer the use of corpus in the classroom probably*".

The teachers' views about their role in the classes seemed to facilitate the use of corpora, because they recognised the importance of being a facilitator to improve students' learning. Additionally, they appeared unhappy in their current roles, as they were the only figure of authority and had very passive students; they were eager to change their roles, as they occasionally emphasised in the interviews. This role change could be supported by applying corpus in their classes. As Lucy believed, corpora "*would help in improving the dynamic in the classroom … [It] will improve my students, because my students are now dependent on me for getting their information, but teaching them this [corpus use] will help them become more independent in their learning*". It was also emphasised that that the teachers should change their current view to be able to accept using corpora in the classroom. As Anna pointed out,

> *Sometimes teachers are very authoritative. Yeah, that is an obstacle. I mean, you know, there are some teachers who want to teach according to their rules. As they learn in their, I mean, when they were students, so they want to teach in that way. Sometimes their role becomes very strict in disciplines and other things, so it is difficult to focus on that particular thing [corpus use]*.

The seventh factor was motivation, which is very important in learning a FL. All the interviewed teachers believed that both the teachers' and students' motivation plays a significant role in implementing corpora in the classroom. Bella have provided a description of motivation in the classroom in saying,

> *It is a whole cycle, and it is not breaking, unfortunately. If teachers are not motivated, you do not expect them to [come to] class happy and want to do something different. No, they will not. And, if students see a very boring teacher, they are going to be bored, and then the whole thing is going to be boring.*

Bella's case represented the least motivated teacher, as she complained during the interview that students were not motivated, which was affecting her motivation. She also showed less satisfaction about her job, which also contributed to this lack of motivation: *"[They show] no willingness, even if you want to introduce them [to a new practice]; they are very negative, and this really affects me. It is [their] general attitude. They are not here to study. They are pushed, forced to be here*". And regarding her job satisfaction, she said, "*We are not motivated, we not given special treatment, we are not appreciated, and we are asked to do [more]. Now, the teachers, normal teachers, excellent teachers, below average teachers, they are all treated the same way*". She went on to explain how this affects her motivation:

> *Actually, it is the policy and the students' motivation. It's, like, you know, big great, you know, walls. You just keep hitting your head against them, because policy will never even give you 5cm of freedom. And students are not motivated. You're speaking to yourself, like, 'What we were doing just now?'*

Anna related teacher motivation to training, observing that, "*Teacher motivation depends on you; the way you will train us, definitely we're gonna use it*". She also agreed with Ella's point of view about the influence of students' motivation: "*The worst thing is when they [students] say 'Please tell us what time you are going to finish.' Then you feel that whatever … you are wasting energy, and teaching is worthless*". Zara linked teacher motivation to the students' levels:

> *I am less motivated with some levels sometimes when the students are not motivated they come like you get influence by students. I can't say that I am always like neutral you cannot always be neutral when the students are very as whole classroom are very demotivated and no matter what you do in the first few weeks of your module with them, they'll still be not motivated and they are lacking any interest then it kind of seeps to you*.

This motivation factor was seen to directly affect the next factor, the willingness to use corpora. Bella's and Anna's attitudes clearly showed this, as they were the least motivated teachers, something which was reflected in their willingness. For example, Bella said, "*In the ideal situation, yes, I am very willing and I like it. In this situation, whenever I can yes*". And then she said that she could not use it: "*I wish I could use it, but if the situation with the management staff here,….. The main problem we face here is*

the disciplinary problem[11] *… so, yes, if I were in a different college, yeah, I would like to use it. It would create something new and different for the student*". Anna also observed that even if teachers like the uses of corpora, they may not use them: "*I mean it, like, 60-40 percentage, 60% who will not be in the favour, maybe there will be in the favour of using this software [corpus tool], but the thing is, they will not use it*". According to Ella, "*We [other motivated teachers] start looking at some features in this kind of corpus……..I filled application. Now I am one member in this website*". Lucy showed her willingness to use corpora to improve student motivation "*because I want my students to be interested and I want to improve the outcome of my students……..I want to implement this methodology with my students".*

The influence of policymakers, at the level of the university, has emerged as a key factor from the interviews. This factor has considerable influence on the uses of corpora in the classroom, especially in the current context. All the interviewed teachers voiced similar concerns about policymakers, which they related to the willingness for using corpora in the classroom in their responses. In Lucy's case, for example, she was very willing to use corpora and at the same time happy with the policymakers in her college: "*I am very blessed with the administration we have here.....it would be really crippling to see that I could help my students someway but I am being told no*". Ella similarly evidenced high levels of both motivation and willingness linked to support from her institution: "*We found this kind of motivation from them and they supported and they support. The people here they support us in teaching and when we ask them to do something new, they're happy – 'Ok, we'll do it. What do you need?*'" Bella, on the other hand, argued that it is really difficult to convince the policymakers to try new things: "*They are going to challenge you with, you know, the usefulness of what you are going to do*". She also showed caution with what she was doing at the college, even extracurricular activities, saying, "*There is the ugly side of the story. They will ask you, 'Were you allowed to do it?' The 'were you allowed' scared the hell out of me every time I did something strange [extra curriculum activity]".* Anna echoed Bella's point on needing permission to use corpora. Ruby, who works in the same college as Anna, said that using corpora depends to a large degree on the policymakers: "*Well, it depends on*

**********o maintaining discipline in the classroom.

the place where you are working. In the place where I am working we are not allowed to use anything new until we get permission and you know it takes a lot of time to do that."

Another hindrance to using corpora lies in the availability of resources and facilities. As Bella observed: "*We have a very big class, like 100 students in class, and the classes are not well-equipped. They [the rooms] are very small; sometimes you do not have a data show [projectors] in your class because they keep moving them. So, whenever I can, yes, I am very willing".* Lucy raised the issue of the number of students per class as a serious hindrance: "*When you have a large number of students, there are differences among them. So, it is very hard to accommodate the individual differences between the students. So, in that situation you have to spend more time and more efforts to organize and choose and accommodate their needs".* This comment mirrored concerns raised by Zara regarding class discrepancies and their impact on students' willingness to use corpora: "*You have different levels in the classroom especially when they pass from one level to the other".*

Ella mentioned another obstacle, which dealt with teaching loads: "*16 [hours], but, actually, what I teach here, I teach more than this".* As she complained that she did not have enough time because of paperwork, she asked,

> *But what about administrative things, you know, when you work as a head of the department, this is one [obligation]; you work with accreditation, and you work with quality at the university, you work with a study plan, you work with the portal, the website of the college, you work with a lot of things you do. So, what you have to do – you have to be a teacher or you have to be an administrator.*

All interviewed teachers corroborated Ella's point of view that the weight of assigned teaching loads can impact their willingness to use corpora.

Overall, all the interviewed teachers appeared to be of the opinion that training would facilitate the uses of corpora. As Anna said, "*When you gave us that training course, at that time, I was discussing [with] some teachers, and, yes, it is helpful for us. I mean, there are many things that we do not know, and that software that really help*". She continued by specifying the type of training teachers need: "*On each skill, we need training, and, for each skill, I think two sessions should be [enough]… The more you are familiar with the technologies, the more you want to deliver that thing to others".* Bella, on the other hand, emphasised the importance of linguistic analysis: "*Train them on ways*

of thinking. Not to always find answers, you need to look for your answers sometimes. So, how to group, categorize, how to generalize, how to make sure this is ok". Ruby similarly noted that the training "*is very helpful for my linguistic ability and for me to prepare materials for my students".*

In the current study, important factors that either facilitate or hinder the uses of corpora in the classroom have been identified. These factors include: (a) the existence of an expert or supporter; (b) the textbook (the curriculum); (c) learner level; (d) computer literacy (e) teachers' views about their roles; (f) motivation; (g) the willingness to use corpora; (h) policymakers; (i) the availability of resources and facilities; (j) the number of students per class; (k) teaching load; and (l) training on the linguistic analysis. In this section, I will discuss these factors from the teachers' points of view.

First, the need for an expert in CL was justified by the teachers' lack of knowledge in CL and their need for more training. Leńko-Szymańska (2014) finds, after training pre-service teachers (master's level), that "corpus exploration cannot be left to one course within a teacher training programme" (p. 272). In addition, Ebrahimi and Faghih (2017) recommend having "sufficient instructor support" (p. 15) for successful integration of CL. Some of these obstacles were interrelated, such as computer literacy and the training on CL (both technical and linguistics) necessary before introducing corpora in the classroom. The results show that computer literacy corresponds to teacher attitudes towards the uses of corpora, a correlation anticipated before running the study. Most research has referred to technical difficulties as hindrances; for example, Boulton (2010c, p. 534) notes that "it may be that technical aspects are too daunting for teachers and students", and Farr (2008) reports that most students face initial difficulties for both technical and conceptual aspects in the early stages of the course. It is important that teachers report these hindrances because providing the appropriate training can help in overcoming them.

The teachers mentioned policymakers as another hindrance that affected other factors, such as the curriculum, the availability of resources and facilities, the class discrepancy issue (i.e., number of students per class), and teaching loads. The teachers complained that the policymakers did not give them space to work on or develop their teaching methods unless they asked for permission, which does not leave teachers much choice in thinking about using corpora in their classes. This issue is discussed

theoretically by Romer (2006, 2009) and Boulton (2009a, 2010c), but was rarely mentioned by the in-service teachers. Romer (2006, p. 126) invites "missionary work" to popularise CL in LT, and includes teachers, students, material writers, and syllabus designers in her invitation. In the current case, the teachers were willing to use corpora if they received permission from the policymakers; therefore, there is a need for educators to contact the policymakers and convince them of the usefulness of CL in LT. Thus, if the policymakers include corpora as tools or sources in the current syllabus, many other hindrances would be removed. For example, they could modify the curriculum to include direct or indirect uses of corpora, provide the necessary facilities and resources, decrease teacher loads, and limit the number of students per class. Boulton and Tyne (2013) advise that popularising CL for teaching would best start with decision makers, curriculum designers, and publishers, a view consistent with the teachers' requests in this study. The teachers mentioned that a hindrance to applying corpora is the need for policymakers' permission before using corpora in their classes; others mentioned that they would not use corpora unless they had been asked to do so by the coordinators (i.e., decision makers) in the college.

In a different scenario, if the policymakers do not intervene in the teachers' choices to apply corpora in their teaching, other factors such as the curriculum, the availability of resources and facilities, class discrepancy, and teaching load can exist as challenges. Preparing DDL materials can be time-consuming, and in the current situation, the teachers are bound to cover the curriculum; this obligation does not give the teachers time to integrate corpora in their teaching. Boulton (2010c, p. 541) encourages using paper-based materials if the students do not have access to a "regular or reliable" computer laboratory. He also makes the same recommendation if the students have to cover the imposed curriculum for a final exam at the end of the year due to time constraints in resolving the "inevitable technical problems" (p. 542).

The learners' levels were considered a hindrance, as some of the teachers in this study believed that they could not use corpora in their current situations. Boulton (2009b, p. 39), however, contradicts the teachers' views, as he believes that exposing students at lower levels to the complexity of AMs (i.e., corpus data) might have more benefits than exposing them to the "false expectation that clear and simple rules can always be devised". Yoon and Hirvela (2004) advise consideration of learners' levels before using

corpora, because learners may need training and time to integrate corpora into the classroom. The level of students is, therefore, not an obstacle if the teacher adapts to the learners' levels by providing more training and guidance as well as using the soft copy (i.e., indirect use) of corpora in the classroom. The teachers can also use what Smart (2014) describes as the guided induction approach for beginner-level students, the same approach that has been used in Study One in the current thesis. Smart (2014, p. 187) describes the guided induction approach as:

> a particular evolution of the inductive approach where learners are first presented with language samples in the form of an interactive task that guides them to discover the language structure they contain; the teacher has an active role in facilitating these tasks, but typically does not present explicit grammar rules. Learners are then guided to produce the language structure in meaningful communicative tasks.

The need for training was also an important facilitator for a successful integration of corpora in the classroom. The teachers saw the importance of training in this study, and many other researchers have shared the same view (e.g., Cobb, 1997; Flowerdew, 1996; Kennedy & Miceli, 2001). Yoon and Hirvela (2004) find that the intermediate-level students report fewer problems than the advanced-level students because of the additional training the intermediate-level students have received. Huang (2017, p. 1) argues that the hope for applying corpora in the classroom will be through providing the teachers with "the necessary" knowledge, tools, and skills. The training and the guided use are essential before implementing the use of corpora in the classroom, as was shown in this thesis.

The teachers' perceptions about their roles in the classroom were also a very crucial factor in the successful integration of corpora in the classroom. The teachers in this study pointed out that they did not need to be authoritative, but instead to be supportive of learner independency in learning. Mukherjee (2004) observes that the teachers could spot the benefits of using corpora, but they hesitated to use it in their teaching; Boulton and Tyne (2014a, p. 308) justify this hesitation as the teachers' resistance to change their roles as the knowers or "the ultimate expert". A teacher's role in the current context is at the centre of the learning process, so the teacher acts as the knower; therefore, as Boulton (2009, p. 308) speculates, it "can be difficult having one's

authority questioned, something which DDL actively encourages". Mukherjee (2004) finds that the majority of the participants are in favour of teacher-centred activities, which may indicate that that learner-centred activities were undesirable in their classes. To foster the integration of corpora use, the teacher has to "learn to become a director and coordinator of student-initiated research" (Johns, 1991b, p. 3). Mukherjee (2004) also recommends considering the framework for English language teaching in other EFL countries that may not support the language-pedagogical concepts of authentic language use, inductive learning, and learner autonomy by introducing different uses of corpora that go along with deductive learning.

Motivation (either the teachers' or the students') was another significant factor that teachers indicated could facilitate corpora integration. The teachers said that they were motivated to teach in general, but sometimes other factors demotivated them (e.g., discouragement by the policymakers, the learners' motivation, teaching loads, and other responsibilities). The teachers mentioned the willingness to use corpora as another factor that may hinder or facilitate the integration. I believe willingness is an outcome of other factors such as teachers' motivations to apply new methods in their teaching, encouragement from the policymakers to apply new methods and resources in the institutions, and the workshops and training courses for different uses of corpora in teaching language. I believe, therefore, if all other factors were addressed, the teachers would have little reason to be unwilling to use corpora in their classrooms, but still might be reluctant by merely disliking corpora in general. Finally, their intentions to use corpora in their classrooms showed a willingness to use corpora. This result is very promising, and follow-up contact will show if they follow through with using corpora in teaching. Those future intentions, however, were also influenced by good training and encouragement of policymakers in the institutions where the teachers worked.

Part Three started with emphasising the need for introducing teachers to corpora for a full integration of CL in the FL classroom; it will conclude in repeating the same idea. Huang (2017, p. 18) mentions that to make a significant change in language teaching we have to address the lack of full integration of corpora in the classroom which can be resolved by, as recommended by previous studies, utilising teacher training programs as well as employing corpora in general education (i.e., secondary schools). Vyatkina (2016a, p. 211) argues that even with positive findings of using corpora in the

classroom, there is “still relevant and urgent” need to repeat Mauranen’s (2004, p. 208) call: “to make a serious contribution to language teaching, corpora must be adopted by ordinary teachers and learners in ordinary classrooms”.

To conclude this discussion the following section summarizes the main findings revealed from the interviews:

- All the teachers were very positive towards the uses of corpora in the classroom as well as were very positive towards the training course.
- There were divisions in the type of preferred access to corpora to direct and indirect access.
- The teachers recognized possible advantages of using corpora in the classroom such as source of AMs, lead to more independent learners. They also mentioned some disadvantages such as using corpora is time-consuming, and the cultural differences in the corpus data that could also be a drawback in this context
- The teachers mentioned some factors that could facilitate the uses of corpora in this context such as the existence of an expert, the teachers’ views about their role in the classes, teacher and learner motivation, willingness to use corpora, and training needs (whether computer literacy or training on linguistic analysis).
- There were also some factors that might hinder the uses of corpora in the classroom such as the curriculum, policymakers, the availability of resources and facilities, the number of students per class, teaching load, and the proficiency levels of the learners.

General Conclusion

This thesis investigated the possibility of integrating CL into the EFL classroom. Many previous studies have examined how learners use corpora and their perceptions and attitudes towards implementing CL within different contexts (e.g., FL, SL) and foci (writing skills, speaking skills and vocabulary acquisition). However, CL has not entered the mainstream of language teaching (see, e.g., Frankenberg-Garcia, 2012), and "the direct uses of corpora in language teaching are treated rather marginally in the literature in the field" (Leńko-Szymańska & Boulton, 2015, p. 3). CL use is furthermore linked only to specific pedagogical contexts amongst researchers, tertiary education and English majors at the university level. Boulton and Pérez-Paredes declare in their recent overview of CL use in language teaching that "the field has yet to reach full maturity" (2014, p. 122).

In the present thesis, the findings offered effective ways to integrate CL in the classroom, with Parts Two and Three testing a series of research questions investigating the uses of CL in the classroom. Although each part was guided by specific research questions, the whole thesis aimed to address three major research queries:

1. How can GVs be defined and identified within a corpus approach as an operationalisable concept in the classroom?
2. Have intermediate students learned how to use the DDL approach independently in the language classroom for learning GVs?
3. What are teachers' dispositions towards the use of corpora in the classroom?

This chapter summarises the main results of this thesis and links them to the big picture of the possible integration of CL into the FL classroom. These findings include the multi-level approach for the selection of GVs to teach in the EFL classroom, training and learners' interactions with the corpus, and teacher training and determining the real barriers confronting CL integration. The findings also answer the principal research questions of this thesis and address other related aspects.

I. Summary of the Findings

Study One

The first study aimed to evaluate the effectiveness of the training provided to the students and the guided inductive approach to the use of the DDL approach. This evaluation was achieved by tracking participants in the training and the testing sessions via a software tracker. This experiment was the first phase in the process of investigating EFL learners' use of the DDL approach in the classroom. The first step was defining and identifying GVs within a corpus-based approach as an operationalisable concept in the classroom. Operationalising GVs involved finding a systematic approach to defining and identifying GVs for teaching purposes. GVs have been described theoretically, both grammatically (e.g., Quiark et al. 1985) and phraseologically (Howarth, 1998), but without operationalising these descriptions in the classroom. Therefore, finding a direct application (to operationalise GVs, and put them into use for teaching purposes) for teaching GVs in the classroom was a very important step before conducting Study One.

To this end, I designed a multi-level approach to GVs selection: 1) corpus-based, 2) phraseological-based and 3) pedagogical-based. This approach took frequency, degree of difficulty, learner needs and congruency into account. Frequency was chosen following the corpus-based approach, and the degree of difficulty was chosen according to the phraseological approach. The degree of difficulty in learning was measured in relation to restrictedness, transparency and congruency, according to the intermediate students' level. Under this backdrop, the selected GVs patterns were fully restricted and classified as fully transparent (T1), seeing as the second level of transparency (T2) was difficult and the third level of transparency (T3) was the most difficult amongst the three levels of transparency (based on the second level of the multi-level approach; see section 3.3.3).

The second step was conducting this study in the classroom, which found that learners used the DDL approach to complete activities independently and spent less time in the process in each subsequent session. These findings are consistent with other studies (i.e., Cheng et al., 2003; O'Sullivan & Chambers, 2006; Smart, 2014; Yoon & Hirvela, 2004) which claim that guided use, efficient training and teacher-guided activities result in better use of corpora and more benefits in learning the target items before learners begin using corpora independently. In addition to the teacher-guided

activity (guided induction approach), efficient training led to improvements in the learners' performances and created a positive environment while using the corpus to learn GVs patterns in the Saudi context. The main finding of Study One was that the participants could apply the DDL approach independently after training, where the students were trained on how to read and analyse the concordance lines beside the technical training on how to use AntConc. This was evidenced by the number of steps the learners successfully completed, with performances in the second testing session showing improvements over the first. The learners additionally spent less time on both testing sessions than on the training sessions. Another important finding was that the participants' overall evaluation of the DDL approach was very positive; the participants agreed that the approach was easy to use and, along with the use of concordance lines, they found the approach very helpful for learning GVs by recognising the form as well as the different meanings of GVs patterns. This positive evaluation highlighted how the corpus activities were beneficial for the students' English language, particularly improving GVs usage and GVs pattern meanings, in the current thesis context. The direct training and hands-on activities contributed to creating this positive evaluation, with the guided inductive approach helping to familiarise learners with the direct use of the corpus.

Study One is significant in that it provides learners with effective guidance in terms of the method of delivering the exemplar guidance and inductive learning. This study also provides direct steps for avoiding the difficulties faced in previous research, such as the lack of knowledge and skills in using corpora and concordancers. It also addresses difficulties concerning working on corpus data (Cheng et al., 2003; Lavid, 2007), as well as using the corpus for the first time (Chambers, 2005; Chambers & O'Sullivan, 2004; Cheng et al., 2003). The DDL approach used in Study One provides rich and enhanced input (textual enhancement such as coloured font) in the form of concordance lines, which increases learners' awareness of target items that can eventually lead to improved performance (Vyatkina, 2016a). The modification of the DDL approach is based on the SCT idea that adopting the mediate factor, that is, the teacher, leads to what has been called the guided induction approach, which helps to increase learners' autonomy (Vyatkina, 2016a). The guided inductive approach has shown improvement in learners' use of corpora; Smart (2014) observes that a guided

inductive DDL group outperforms other deductive groups in learning English passive constructions. Similar to Study One, the use of the guided inductive approach shows improvements in participants' use of corpora as well as improvements in the completion of the tasks.

The tracking methodology, which is a process of monitoring students' interactions with the corpus resource, is used in Study One to gather participant data based on direct observations of their use of the corpus, a method validated by previous research (i.e., Pérez-Paredes, 2011). Study One fills a gap in knowledge on the direct use of CL in language teaching and how learners handle the DDL approach in the classroom. It achieves this, first, by providing data on the direct exploitation of the corpus for language teaching and how learners actually cope with using the corpus in a classroom. Second, it tracks individual learners, as Yoon (2008) recommends, examining the individual students' experience and usage during corpus consultation. Third, the uses of direct observation methods, such as tracking software, as is done in this present study, helped to avoid subjective data that may be misleading, such as self-reports, due to the effects of the learners' attitudes and perceptions. For example, this could occur in when learners narrow the scope of the data to what the learner thinks is beneficial or difficult, as well as potential confusion regarding what learners think they did versus what they actually did. It is not uncommon to observe a difference between reported activity, or assumed activity, and what is actually taking place. For example, participants in Study One encountered difficulty in using the wild card (*), but they did not report it. Thus, such tracking methodology helped in capturing what learners are actually doing (Chun at al., 2016).

Study Two

Study Two was built on the groundwork set up in Study One. After the learners demonstrated they could independently follow the DDL approach for learning GVs, it was necessary to investigate teachers' attitudes and willingness to use corpora (the DDL approach and corpus-based resources) in the classroom as a necessary step in introducing this method at the intermediate level of English teaching. The students' willingness and successful use of the DDL approach is not sufficient to apply this approach in classrooms, as such application also requires teachers' willingness and acceptance. Vyatkina (2016a, p. 211) emphasises the relevance of Mauranen's (2004, p. 208) call "to

make a serious contribution to language teaching, corpora must be adopted by ordinary teachers and learners in ordinary classrooms", which this thesis aimed to achieve.

Teachers' attitudes towards corpora have been largely overlooked in previous research, which might be a contributing cause for the current lack of CL implementation in the everyday classroom (see Chapters 8 & 9). An important finding of this thesis is that most teachers from Study Two had no idea about CL, another possible factor contributing to its absence from the classroom (Mukherejee, 2004). The main findings of the study are summarised as follows: First, the questionnaire produced an excellent measure of internal consistency, as the reliability test of teachers' attitudes towards CL in the classroom results in α 0.90. Second, the teachers displayed moderately positive attitudes towards the use of CL in the classroom, which is considered a good start to integrating CL in the Saudi classrooms. Third, the teachers' attitudes towards the introductory course were positive, indicating that the introductory course was important for defining and affecting teachers' attitudes towards CL, especially because they had no previous knowledge about corpora use; therefore, training courses should be designed to suit the target sample and focus on practical applications in the classroom. Fourth, there were correlations between general computer literacy, the use of AMs, the communicative approach and attitudes towards corpora, which were important in realising that these factors may facilitate CL implementation in the classroom. Fifth, this study identified several factors that may facilitate or hinder corpora use in the classroom, as discussed from the teachers' perspectives; these factors included: (a) the existence of an expert or supporter; (b) the textbook (curriculum); (c) learner level; (d) computer literacy; (e) teachers' views about their roles; (f) motivation; (g) willingness to use corpora; (h) policymakers; (i) the availability of resources and facilities; (j) the number of students per class; (k) the teaching load; and (l) training on linguistic analysis. These factors are significant in that they provide a clear map for employing corpora in language teaching, particularly in the Saudi context.

Those factors can be categorised into themes related to 1) the bureaucratic system (curriculum, policymakers, availability of resources and facilities, number of students per class and teaching load); 2) the training needs (existence of an expert or supporter, computer literacy and training on linguistic analysis); 3) the teachers themselves (teachers' views about their roles, motivation, and willingness to use corpora); and 4) the

learners themselves (learner level, motivation). The abovementioned factors help to clarify why there is a lack of corpora use, and the discussion of these factors (see section 9.3) provides deeper investigation into the classroom and understanding of why corpora is not fully integrated into the EFL classroom, particularly in the Saudi context. Although there is an indication that teachers are willing to implement corpora, there are various bureaucratic obstacles to be overcome, as mentioned earlier; however, the main barrier against CL implementation is the teachers who need to be convinced that corpora uses are worth spending their time and efforts on to master their various applications. This barrier can be eliminated by more proactive efforts, such as more training, free resources and ready-made teaching materials.

II. Implications and Recommendations

The findings of the present thesis fill the gap in the current literature by supporting CL integration in language teaching. This integration is possible through targeting both teachers and students. As well, the findings contribute to the use of corpora in language teaching by providing a list of possible obstacles for a full integration. Although the present research is conducted on a small scale and targets a very specific sample (i.e., EFL classrooms in Saudi Arabia), it offers important implications towards using corpora in language teaching.

The multi-level approach for selecting GVs can be beneficial for teachers, wherein the teachers can use this systematic approach to meet the needs for selecting GVs patterns in the classroom because, as Gouverneur (2008) indicates, GVs patterns are afforded little attention in primary language learning series, such as *Cutting Edge*, *Inside Out* and *New Headway*. Therefore, the teachers in Saudi Arabia can enrich their syllabus using the multi-level approach for selecting GVs patterns, as the prototypically used textbooks are the *Cutting Edge* and *New Headway* series. Meunier and Gouverneur (2009, p. 181) observe that the English for General Purposes teaching has "not yet benefited from the corpus revolution". As well, textbook publishers have declared that the current textbooks are not corpus-based (Meunier & Gouverneur, 2009). Teachers can use this approach to select GVs according to their students' needs; the multi-level approach considers the degree of difficulty in learning GVs patterns, which will help in choosing items that are suitable for different learners' levels.

The multi-level approach can also help teachers to create a "pedagogic corpus". This use of the term is different than Meunier and Gouverneur's (2009, p. 185), who used it to refer to a corpus based on data from a textbook. In the scope of this thesis, I use a pedagogic corpus to discuss corpus creation according to the students' needs, which can establish an important resource for students based on the proficiency level. What I am calling for is creating a free corpus for Saudi students using the multi-level approach to select data that shows different meanings and usages of GVs (similar to SCoRE, the sentence Corpus of Remedial English, a specialised corpus and web browser-based DDL program for Japanese students). The idea of creating a pedagogic corpus is not limited to GVs usage but can include any features of language and target different foci. The size of the corpus will be half a million words to avoid overwhelming the users, which will be limited in the first stage to GVs patterns only. The BNC and COCA will be used as a source of data (both written and spoken components) because the target genre is General English, and will provide a variety of uses in different contexts. The data will be collected by teachers or by a team who will apply the multi-level approach to organise the data into students' levels according to the degrees of difficulty (see Chapter 3). It will contain basic functions such as a concordancer (presents the data in the form of Key Word in Context, KWIC) and exercise (can be used as quizzes after teaching sessions), functions to introduce possible situations and activities for the right usage of GVs patterns. However, what is significant about this suggestion is categorising data of the corpus material according to the proficiency levels of users. This suggestion is ambitious in terms of categorising data into levels of difficulty (similar to the multi-level approach; see Chapter 3), which can raise debates regarding what is suitable and relevant for each level.

The findings show that training is a key factor in encouraging students to use corpora independently, and it is important to conduct training sessions that focus on both the technical and linguistic aspects before implementing corpora in the classroom. The training should also provide the exemplar-guided training, which is offered when learners come into contact with the resource.

Direct observation methods are very important in the classroom, especially in the digital age; in the present thesis, these methods reveal certain difficulties that the students face while using the corpus, as well as other computer-based distractions in the

classroom (e.g., social media). While piloting the tracking software, I found a number of software programs used to track learner interactions with the resource and with each other. Employing this type of software in the classroom will help teachers increase their awareness of the difficulties students face while using corpora, as well as aid in following students' progression. Simply put, if we do not know how the students make use of corpora, we cannot argue that corpora contribute to their learning. The tracking software can help in spotting inexperienced and low-ability students so the teacher can intervene at the right time to reduce both frustration and poor learning decisions. A tracking software can help in capturing a student's autonomous actions by observing the interaction between the students and the resource in which students not only learn how to take advantage of resource features, but also can use it independently.

The tracking methodology also provides a more comprehensive investigation into what students achieve, do not achieve and what they think they achieve. I believe that tracking methodology will reduce if not prevent what Fischer (2007) warns about regarding insufficient training or the lack of preparation, as the learners need sufficient training and guidance to develop the metacognitive knowledge which leads to autonomous learning. Using tracking software will help to identify students who need more training, as well as identify each category of interaction (browsing users, linear users and tentative users, according to Nelson et al., 1999), which can help in improving the design of the tasks and the type of training administrated. Analysing the tracking data can answer vital questions, such as how many students attend and participate in the session (I had a clear number of students who attended each session in Study One), how much training is needed (length and type, whether exemplar-guided training, or reactive training according to the students' needs), and what to improve in the corpus regarding the data or tasks (e.g., I have found the students had difficulty in using the wildcard * in Study One).

Study Two's findings are especially significant in terms of their implications for teachers, which is rare in literature (particularly in the Saudi context). I have identified factors that can prevent teachers from applying corpora in their classes, as well as factors that may facilitate their usage. This allows these factors to be dealt with in advance, limiting the refusal of or hesitation towards future corpora use in language teaching. The study also highlights the importance of designing a suitable training course for teachers

that considers their needs and previous experiences with CL. As the findings indicate, the training course helps shape the teacher's attitudes into positive ones. The training course and classroom activity materials designed for both studies (Studies One and Two) can also be used by teachers in other Saudi institutions, which will help mitigate the current shortage of corpus materials in EFL classrooms.

Finally, an important factor emerging from this research suggests a need to contact and convince policymakers regarding the importance of implementing CL in the classroom. It is clear from the findings of Study Two that teachers' willingness to use corpora is not sufficient, as long as policymakers do not provide further support and encouragement. This implication leads towards a new direction for research in which a plan should be designed to convince policymakers to support corpora in the classroom. Considering the big picture of corpora use in teaching English as a foreign language (i.e., general English), researchers must recruit policymakers in addition to the teachers to achieve the complete integration of CL in language classrooms throughout Saudi Arabia. The following section presents a proposal towards implementing a training course for teachers and policymakers on the uses of corpora in the classroom.

Proposal for Implementing Corpora in the Classroom

It is challenging to implement a new teaching tool or methodology, whether in general or higher education. Perhaps the strongest reason for this lies in the bureaucratic system of some institutions, at least in this particular case. Beside the bureaucratic system the teachers still play the key role, as they must be motivated and willing to implement corpora in their practice. This proposal is relevant to the specific context of the study, the Saudi universities (more particular to NBU, where the study was conducted). In order to implement the proposal, I will run and design a CL workshop and invite scholars (software developers and corpus analysts) to provide more advanced workshops according to the requirements of the university. Therefore, the first step of this proposal focuses on the teachers in the Saudi context, while the remaining steps involve policymakers:

1. ***Teachers' workshops.*** Running a series of workshops in a friendly environment can showcase the possible uses of corpora in the language classroom. This requires the design of a set of ready-made materials (activities and tasks) for teachers so they can see how corpora use could improve their students'

proficiency levels and perhaps motivate their students to invest in the learning process. Once the teachers are aware and knowledgeable that corpora are beneficial for them and their students, and that it is worth investing their time to learn CL methods and practice, it will be time to move to the next step.

2. ***Policymakers' workshops.*** This step targets the policymakers via a series of workshops, which will be conducted in a different form than the teacher workshops. The policymaker workshops will be focused more on practical aspects, demonstrating the benefits of corpora and their relative uses, as well as free software and resources for educational institutions. The workshops will also point out that by using corpora, teachers will be able to create their own materials instead of buying textbooks and ready-made materials, which constitute a large portion of the budget in Saudi institutions. Once the policymakers show general acceptance towards the corpora use, this may lead to convincing the policymakers to include the Professional Development department, which is responsible for all staff-improvement programs and designing developmental plans for each department.
3. ***Development department's workshops.*** The Professional Development department (responsible for the delivery of continuing professional development, training services, and developing a range of leadership and management provisions, as well as learning and teaching development and support) will enrol teachers into training courses on corpora uses in the classroom for language learning and teaching, which will be a part of the teaching staff's Personal Development and Performance Review. Once the training courses take a formal shape, this will encourage most members of the teaching staff to improve their performance and personal development through attendance. There will be two types of training courses offered: (a) how to use corpora in the classroom, whether for teaching general English or more advanced subjects for English majors and (b) train (as in the first step) teachers to be trainers so they can train students on corpora uses. This second type of course will lead to step four.
4. ***Learners' workshops.*** Depending on the type of training the teachers receive, they will be able to train students on corpora uses for learning the English language. The teachers will train the students to use corpora under their supervision until the students gain sufficient confidence and knowledge to use

them independently. This will eventually help the students increase their autonomy, allowing the teachers to create their own materials and syllabi according to their students' needs; likewise, the students will be able to search for linguistic features or forms without asking for help from their teachers.

This proposal does not change the existing teaching strategies, but rather improves them by adding variety to the teaching methodologies and strategies typically used in Saudi universities. The proposal first seeks to raise awareness of various uses of corpora in language teaching and material design, then aims to encourage teachers to apply this methodology in relevant language courses (it can be added to teach certain skills, such as sessions on improving writing skills or modifying syllabi). I believe that being encouraging and supportive in this proposal is a necessity to improve the quality of teaching strategies as well as materials.

III. Limitations and Future Research

Inevitably, there are limitations in this research design. The studies in this thesis are specific to the context of Saudi Arabian higher education; thus, it is important to be careful when interpreting the results. The interpretations of these results should also take into account the exploratory nature of Studies One and Two. In the following paragraphs, I will list the limitations of these studies.

There are a number of limitations to Study One. First, the multi-level approach has shortcomings. For the rating tasks, the Cronbach's alpha of the inter-rater reliability was α=.68 (restrictedness) and for transparency criterion the Cronbach's alpha was α=.65, which is acceptable but could be improved. This might be improved by providing a context of GVs patterns, for example. In the rating tasks, I give the raters GVs patterns (collocation, e.g., *give birth*) without any examples (i.e., sentences), which might have affected their ratings.

The second limitation of Study One was caused by the difficulty in finding the necessary number of congruent collocations which were considered for inclusion in Study One. After analysing the GVs and their collocates, I found that congruency cannot be distributed equally amongst all the verbs. The distribution of congruent collocations was therefore expected to be unequal across the sessions. Therefore, I included only the

incongruent collocations in the study since incongruent collocations are more difficult to learn; the students mentioned in the interviews that they found the third task (translation task) difficult because they could not find an equivalent meaning in Arabic.

The third limitation, the typical limitation of all classroom research, is that the results need to be interpreted with caution due to the low number of participants. Study One's sample was 51 participants, which limits the generalisability of the results. Therefore, partial replications with larger-scale, different proficiency levels and target items are needed to increase the generalisability of the results. The fourth limitation is related to the proficiency level of participants. Unfortunately, I was unable to obtain proficiency measures for the participants, but all were taking a placement test and were classified as intermediate level according to that placement test. There was no available information on the marks of the participants, as this information could only be accessed by a member of that university. Thus, the participants were assessed via self-report questionnaires, which could be prone to slight underestimation or overestimation.

The fifth limitation is related to the tracker software, which did not record seconds. To calculate the time spent on each step of the process, I had to calculate one value for each set of two steps; these sets included (a) the time spent on the '*type'* and '*start'* steps and (b) the time spent on the '*sort'* and '*R1*' steps. This consolidation was conducted because the time spent on the '*type'* step was counted in seconds; the '*type'* and '*start'* steps had to be counted together to obtain an appropriate value. This was also necessary because most participants clicked '*sort'* and immediately proceeded to click '*R1*'; thus, only a few seconds were spent on the '*sort'* feature. Furthermore, the participants were required to set *'R1'* for the first verb at the beginning of the session, and once the participants set *'R1'*, it was established as a default. Therefore, there was no way to calculate the time spent on *'R1'* except to count its first use in each session.

In addition to Study One, the results of Study Two similarly require caution in their interpretation due to the low number of participants. Replicating the study on a larger scale with different participants and in different contexts (e.g., general education) will help to increase the generalisability of the results.

Another limitation to Study Two relates to the design of the questionnaire, which may have contained too many open-ended questions for the participants, as the ratio of the completion of open-ended questions is lower than the closed-ended questions. The

questionnaire also focused on too many factors, which will be avoided in future research by focusing only on the attitudes towards corpora in language teaching and the evaluation of the training course, as it has been proven to influence the general attitudes. Unfortunately, I was unable to obtain proficiency measures for the participants, and I had to use a classification of native, second and foreign speakers of English, which was not an ideal system of classification.

In addition, the interviewee teachers showed very positive, willing attitudes towards the uses of corpora in language teaching, which should be interpreted very carefully because they volunteered to take part in the interview. This might be an indication of their excitement and positive attitudes. Therefore, in future research the participants who take part in the interviews should have certain selection criteria, such as the mean of the attitude (e.g., highest mean, lowest mean).

The focus of this thesis on only female participants can also be considered as a limitation. All participants were females, which can be justified by the fact that the education in Saudi Arabia is segregated by sex. Thus, conducting experimental studies with the opposite gender (whether with students or teachers) is very difficult due to the cultural and religious considerations. Finally, for further confirmation of the positive results, more follow-up work would involve investigating the continued use of corpora after the training course for both students and teachers.

Regardless of these limitations, the present thesis serves as a solid foundation for investigating corpora uses in the classroom for both students and teachers. It is significant on two levels, the learners and the teachers. On the first level, Study One is a pioneer in tracking learners' interactions with the corpus resource as well as in helping learners to achieve independent use of the DDL approach. On the second level, Study Two is the first study to investigate in-service teachers' attitudes towards the use of corpora in the classroom in Saudi Arabia. In addition, the empirical findings of the current research widen the scope of the possible obstacles in applying corpora in a FL context.

In hindsight, and in the light of the present research, I now realise that applying corpora in the everyday classroom can be challenging. At the beginning of my postgraduate research, I was convinced that as soon as I returned to teaching, I would use it in my classroom. However, my opinion has slightly changed because of the findings of

this research, which contribute to raising awareness of the teaching process at least in this particular context. In fact, my opinion has been influenced by these hindrances the teachers mentioned, especially relating to the bureaucratic system, motivation and willingness. I specify these challenges in particular because I find them difficult to control or avoid; nevertheless, they can be overcome. To this end, I will follow the proposal (section II above) to be able to implement CL in my classroom.

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Appendices

Appendix 1: GVs patterns after I applied the multi-model approach

Make pattern

Classification of *make* pattern according to restrictedness and transparency criteria

No.	Word	Type of restrictedness	Native speaker	Non-native speaker	Log-likelihood value
1	sense	RC1	T1	T1	8566.1999
2	use	RC1	T1	T1	4978.522
3	love	RC1	T2	T2	4731.2416
4	decisions	RC2	T1	T1	2201.2189
5	contact	RC1	T1	T1	2049.8779
6	mistakes	RC2	T1	T1	1640.3821
7	amends	RC1	T1	T1	1568.2059
8	things	RC2	T1	T2	1247.7121
9	money	RC2	T1	T1	1151.8718
10	arrangements	RC2	T1	T1	1109.4572
11	representations	RC1	T2	T1	1071.4853
12	recommendations	RC2	T1	T1	974.8339
13	progress	RC2	T1	T1	864.4608
14	provision	RC2	T2	T1	710.7298
15	enquiries	RC2	T1	T1	700.5811
16	friends	RC2	T1	T1	649.4305
17	matters	RC1	T1, T2, T3	T2	626.6336
18	public	RC2	T1	T1	626.3613
19	comparisons	RC1	T1	T1	609.1304
20	excuses	RC1	T1	T1	517.3367
21	life	RC1	T2	T1	474.6694
22	notes	RC2	T1	T1	448.5993
23	ends	RC1	T1, T2, T3	T1,3	433.381
24	choices	RC2	T1	T1	426.019
25	judgements	RC2	T1	T1	410.1927
26	inquiries	RC2	T1	T1	395.1049
27	plans	RC2	T1	T1	386.6792
28	concessions	RC2	T2	T2	380.4703
29	fun	RC1	T2	T2	340.1713
30	films	RC2	T1	T1	306.0294
31	inroads	RC2	T2	T2	290.6455
32	jokes	RC1	T1	T1	279.7301
33	changes	RC2	T1	T1	265.9167
34	statements	RC2	T1	T1	236.5976
35	headway	RC2	T2	T2	230.9626

36	predictions	RC2	T1	T1	224.054
37	tea	RC2	T1	T1	222.6284
38	facilities	RC2	T1	T1	216.2872
39	profits	RC2	T1	T1	194.3014
40	peace	RC1	T1	T1	193.4696
41	plain	RC2	T2	T2	190.2491
42	coffee	RC2	T1	T1	187.4526
43	adjustments	RC2	T1	T1	186.4081
44	payments	RC1	T1	T1	185.6423
45	room	RC2	T3	T2	183.3473
46	connection	RC2	T2	T2	179.8905
47	allowances	RC1	T2	T2	173.089
48	reference	RC1	T1	T1	172.7561
49	speeches	RC1	T1	T1	172.2981
50	demands	RC1	T1	T1	171.8681

Classification of *make* pattern according to Congruency criterion

No.	Word	Type of restrictedness	Transparency	Incongruence	Log-likelihood value
1	sense	RC1	T1	Incongruent	8566.1999
2	use	RC1	T1	Incongruent	4978.522
5	contact	RC1	T1	Incongruent	2049.8779
7	amends	RC1	T1	Incongruent	1568.2059
19	comparisons	RC1	T1	Incongruent	609.1304
20	excuses	RC1	T1	Congruent	517.3367
32	jokes	RC1	T1	Incongruent	279.7301
40	peace	RC1	T1	Congruent	193.4696
44	payments	RC1	T1	Incongruent	185.6423
48	reference	RC1	T1	Incongruent	172.7561
49	speeches	RC1	T1	Incongruent	172.2981
50	demands	RC1	T1	Incongruent	171.8681

Final list for '*make*'

	Order in the BNC	Word	Type of restrictedness	Transparency	Incongruence	Log-likelihood value
1.	1	sense	RC1	T1	Incongruent	8566.1999
2.	2	use	RC1	T1	Incongruent	4978.522
3.	5	contact	RC1	T1	Incongruent	2049.8779
4.	7	amends	RC1	T1	Incongruent	1568.2059
5.	19	comparisons	RC1	T1	Incongruent	609.1304
6.	32	jokes	RC1	T1	Incongruent	279.7301
7.	44	payments	RC1	T1	Incongruent	185.6423

8.	48	reference	RC1	T1	Incongruent	172.7561
9.	49	speeches	RC1	T1	Incongruent	172.2981
10.	50	demands	RC1	T1	Incongruent	171.8681

Have pattern

Classification of *have* pattern according to restrictedness and transparency criteria

No.	Word	Types of restrictedness	Native speakers	Non-native speakers	Log-likelihood value
1	access	RC2	T1	T1	2532.6138
2	difficulty	RC2	T1	T1	2227.7561
3	regard	RC2	T2	T2	2157.2017
4	fun	RC1	T1	T1	846.5148
5	trouble	RC2	T1	T1	654.4864
6	sex	RC2	T1	T1	534.981
7	lunch	RC2	T1	T1	407.0144
8	implications	RC2	T1	T1	329.1533
9	doubts	RC2	T1	T1	272.2417
10	dinner	RC2	T1	T1	264.7605
11	recourse	RC1	T1	T2	257.0386
12	jurisdiction	RC2	T1	T1	183.324
13	nightmares	RC1	T1	T1	181.4693
14	reservations	RC2	T1	T1	169.6212
15	problems	RC2	T1	T1	157.8904
16	nots	NAME	?	?	132.6113
17	repercussions	RC2	T1	T1	130.674
18	dealings	RC1	T1	T1	115.52
19	misheard	PAST PARTCIPLE	T1	T1	115.508
20	plenty	RC2	T1	T1	108.7876
21	hysterics	RC1	T1	T1	102.1863
22	mercy	RC1	T1	T1	91.0831
23	responsibility	RC2	T1	T1	83.9118
24	babies	RC2	T1	T1	83.6597
25	visions	RC2	T1	T1	83.2375
26	misgivings	RC2	T1	T1	75.7315
27	breakfast	RC2	T1	T1	64.7802
28	balconies	RC1, LITERAL	T1	T1	64.4552
29	links	RC2	T2	T1	62.1739
30	intercourse	RC2	T1	T1	61.3996
31	tantrums	RC2	T1	T1	60.895
32	cancer	RC2-RC3	T1	T1	56.6201
33	flu	RC2	T1	T1	55.2437
34	abortions	RC1, LITERAL	T1	T1	54.6084
35	hiv	RC2,RC3	T1	T1	51.1691
36	overslept	VERB	T1	T1	50.8383

37	ambitions	RC2	T1	T1	50.4246
38	faith	RC2	T1	T1	44.6026
39	toothache	RC1, LITERAL	T1	T1	40.9787
40	tea	RC2, RC3	T1	T1	38.2831
41	priority	RC1	T1	T1	37.178
42	bin	VERB, BEEN	T1	T	34.9878
43	boyfriends	RC2	T1	T1	33.0992
44	connections	RC2	T1	T1	29.6686
45	qualms	RC2	T1	T1	29.5785
46	similarities	RC1	T1	T1	28.6664
47	hallucinations	RC2	T1	T1	26.6071
48	supper	RC2	T1	T1	25.3993
49	bee	VERB, BEEN	T1	T1	24.2286
50	confidence	RC2	T1	T1	23.659

Classification of *have* pattern according to Congruency criterion

No.	Word	Types of restrictedness	Transparency	Incongruence	Log-likelihood value
4	fun	RC1	T1	Incongruence	846.5148
13	nightmares	RC1	T1	Incongruence	181.4693
18	dealings	RC1	T1	Incongruence	115.52
21	hysterics	RC1	T1	Incongruence	102.1863
22	mercy	RC1	T1	congruence	91.0831
41	priority	RC1	T1	Incongruence	37.178
46	similarities	RC1	T1	Incongruence	28.6664

Final list for '*have*'

No.	Word	Types of restrictedness	Transparency	Incongruence	Log-likelihood value
4	fun	RC1	T1	Incongruence	846.5148
13	nightmares	RC1	T1	Incongruence	181.4693
18	dealings	RC1	T1	Incongruence	115.52
21	hysterics	RC1	T1	Incongruence	102.1863
41	priority	RC1	T1	Incongruence	37.178
46	similarities	RC1	T1	Incongruence	28.6664

Do pattern

Classification of *do* pattern according to restrictedness and transparency criteria

No.	**Word**	**Types of restrictedness**	**Native speakers**	**Non-native speakers**	**Log-likelihood value**
1	things	RC2	T1	T1	2063.4774

2	justice	RC1	T1	T1	509.1842
3	business	RC1	T1	T1	311.9231
4	homage	RC1	T1	T1	289.183
5	good	RC1	T1	T1	250.6744
6	wonders	RC2	T1	T1	222.7526
7	muoi	NAME	-	-	213.7798
8	carvoeiro	NAME	-	-	156.5905
9	battle	RC1	T1	T1	110.6074
10	housework	RC2	T1	T1	107.6897
11	sul	NAME	-	-	99.4737
12	press-ups	RC2	T1	T1	84.0134
13	nascimento	NAME	-	-	78.5777
14	brasil	NAME	-	-	77.579
15	androids	NAME	-	-	66.2332
16	infante	NOT ENGLISH	-	-	62.9705
17	moniz	NAME	-	-	59.2208
18	amaral	NAME	-	-	53.9214
19	arieiro	NAME	-	-	47.7658
20	lago	NAME	-	-	45.3584
21	wiv	NAME	-	-	43.5631
22	y.	-	-	-	41.0155
23	somersaults	RC2	T1	T1	36.2567
24	harm	RC2	T1	T1	35.1241
25	penance	RC1	T1	T1	34.6842
26	mar	NAME	-	-	33.9544
27	aerobics	RC2	-	-	28.6144
28	homework	RC1	T1	T1	25.0112
29	sol	NAME	-	-	23.6636
30	lego	-	-	-	20.0312
31	corrections	RC2	T1	T1	19.5626
32	homoeopathy	RC1	T2	T2	18.8037
33	deals	RC1	T1	T1	12.4173
34	mischief	RC1	T1	T1	11.6672
35	tricks	RC1	T1	T1	11.629
36	stapleton	NAME	-	-	11.3766
37	mine	Pronoun	-	-	9.2584
38	fieldwork	RC2	T1	T1	7.4783
39	conveyancing	RC1	T1	T1	7.2953
40	it	Pronoun	-	-	7.2916
41	maths	RC1	T1	T1	7.1002
42	favours	RC1	T1	T1	7.0928
43	exercises	RC1	T1	T1	5.575
44	amy	NAME	-	-	5.5427
45	taking	Part of verb	-	-	4.898

46	postgraduate	RC1	T1	T1	4.6178
47	sitting	Part of verb	-	-	3.8188
48	i.	PRONOUN	-	-	3.6245
49	nicola	NAME	-	-	2.9218
50	cats	PART OF QUESTION	-	-	2.5534

Classification of *do* pattern according to Congruency criterion

No.	Word	Types of restrictedness	Transparency	Incongruence	Log-likelihood value
2	justice	RC1	T1	Incongruence	509.1842
3	business	RC1	T1	Congruence	311.9231
4	homage	RC1	T1	Incongruence	289.183
5	good	RC1	T1	Congruence	250.6744
9	battle	RC1	T1	Incongruence	110.6074
25	penance	RC1	T1	Incongruence	34.6842
28	homework	RC1	T1	Incongruence	25.0112
33	deals	RC1	T1	Incongruence	12.4173
34	mischief	RC1	T1	Incongruence	11.6672
35	tricks	RC1	T1	Incongruence	11.629
39	conveyancing	RC1	T1	Incongruence	7.2953
41	maths	RC1	T1	Incongruence	7.1002
42	favours	RC1	T1	Congruence	7.0928
43	exercises	RC1	T1	Incongruence	5.575
46	postgraduate	RC1	T1	Incongruence	4.6178

Final list for '*do*'

No.	**Word**	**Types of restrictedness**	**Transparency**	**Incongruence**	**Log-likelihood value**
2	justice	RC1	T1	Incongruence	509.1842
4	homage	RC1	T1	Incongruence	289.183
9	battle	RC1	T1	Incongruence	110.6074
25	penance	RC1	T1	Incongruence	34.6842
28	homework	RC1	T1	Incongruence	25.0112
33	deals	RC1	T1	Incongruence	12.4173
34	mischief	RC1	T1	Incongruence	11.6672
35	tricks	RC1	T1	Incongruence	11.629
39	conveyancing	RC1	T1	Incongruence	7.2953
41	maths	RC1	T1	Incongruence	7.1002
43	exercises	RC1	T1	Incongruence	5.575
46	postgraduate	RC1	T1	Incongruence	4.6178

Take pattern

Classification of *take* pattern according to restrictedness and transparency criteria

No.	Word	Types of restrictedness	Native speakers	Non-native speakers	Log-likelihood value
1	place	RC1	T1	T1	85764.6461
2	part	RC1	T1	T2	16083.4603
3	advantage	RC1	T1	T1	14583.8029
4	care	RC1	T1	T1	8728.479
5	account	RC1	T2	T2	7551.9648
6	hold	RC1	T1	T1	2990.7153
7	action	RC2	T1	T1	2457.5101
8	precedence	RC2	T1	T1	2263.6668
9	charge	RC2	T1	T2	2044.9298
10	refuge	RC1	T1	T1	1920.6207
11	responsibility	RC2	T1	T1	1816.4287
12	steps	RC2	T1	T2	1810.3215
13	note	RC1	T1	T1	1257.6309
14	effect	RC1	T1	T1	1243.8726
15	control	RC2	T1	T1	1233.7355
16	time	RC1	T1	T1	1109.4737
17	risks	RC1, RC2	T1	T1	978.4849
18	possession	RC2	T1	T1	866.2513
19	shape	RC1	T2	T1	817.2139
20	stock	RC1	T2	T2	749.6708
21	office	RC1	T1	T1	743.6947
22	pride	RC1	T1	T1	724.0662
23	turns	RC1	T1	T1	716.032
24	root	RC1	T2	T2	638.9649
25	photographs	RC2	T1	T1	601.914
26	notice	RC2	T1	T1	570.822
27	delivery	RC1	T1	T2	567.5043
28	drugs	RC3	T1	T1	491.3287
29	nsaids	RC2	?	?	487.9621
30	prisoner	RC2	T1	T1	485.9754
31	notes	RC1	T1	T1	435.6796
32	fright	RC1	T1	T2	382.3367
33	pictures	RC2	T1	T1	382.2307
34	pity	RC1	T1	T2	376.5844
35	leave	RC1	T1	T1	330.2343
36	precautions	RC1	T1	T1	324.1536
37	heed	RC2	T1	T2	317.3458
38	priority	RC2	T1	T2	308.6635
39	decisions	RC2	T1	T1	304.7112

40	hostage	RC1	T1	T1	296.4129
41	pains	RC1	T2	T2	268.5807
42	offence	RC1	T1	T2	267.1373
43	exception	RC2	T1	T1	258.8803
44	command	RC2	T1	T1	236.3645
45	comfort	RC1	T1	T1	225.829
46	shelter	RC2	T1	T1	212.581
47	orders	RC2	T1	T1	210.4153
48	umbrage	RC2	T1	T2	206.5086
49	revenge	RC1	T1	T1	205.9637
50	issue	RC2	T1	T2	189.6386

Classification of *take* pattern according to Congruency criterion

No.	**Word**	**Types of restrictedness**	**Transparency**	**Incongruence**	**Log-likelihood value**
1	place	RC1	T1	Incongruence	85764.6461
3	advantage	RC1	T1	Incongruence	14583.8029
4	care	RC1	T1	Incongruence	8728.479
6	hold	RC1	T1	Incongruence	2990.7153
10	refuge	RC1	T1	Incongruence	1920.6207
13	note	RC1	T1	Congruence	1257.6309
14	effect	RC1	T1	Incongruence	1243.8726
16	time	RC1	T1	Congruence	1109.4737
21	office	RC1	T1	Incongruence	743.6947
22	pride	RC1	T1	Incongruence	724.0662
23	turns	RC1	T1	Congruence	716.032
31	notes	RC1	T1	Congruence	435.6796
35	leave	RC1	T1	Incongruence	330.2343
36	precautions	RC1	T1	Congruence	324.1536
40	hostage	RC1	T1	Congruence	296.4129
45	comfort	RC1	T1	Incongruence	225.829
49	revenge	RC1	T1	Incongruence	205.9637

Final list for '*take*'

No.	Word	Types of restrictedness	Transparency	Incongruence	Log-likelihood value
1	place	RC1	T1	Incongruence	85764.6461
3	advantage	RC1	T1	Incongruence	14583.8029
4	care	RC1	T1	Incongruence	8728.479
6	hold	RC1	T1	Incongruence	2990.7153
10	refuge	RC1	T1	Incongruence	1920.6207
14	effect	RC1	T1	Incongruence	1243.8726
21	office	RC1	T1	Incongruence	743.6947

22	pride	RC1	T1	Incongruence	724.0662
35	leave	RC1	T1	Incongruence	330.2343
45	comfort	RC1	T1	Incongruence	225.829
49	revenge	RC1	T1	Incongruence	205.9637

Get pattern

Classification of *get* pattern according to restrictedness and transparency criteria

No.	Word	Types of restrictedness	Native speakers	Non-native speakers	Log-likelihood value
1	hold	RC1	T2	T2	4765.8389
2	things	RC2, RC3	T1	T1	802.3614
3	help	RC2	T1	T1	611.3379
4	permission	RC1	T1	T1	201.9308
5	loads	RC2	T1	T1	145.3495
6	tickets	RC1, LITERAL	T1	T1	143.0301
7	fat	RC2	T1	T1	139.5373
8	jobs	RC2	T1	T1	134.8705
9	money	RC2	T1	T1	105.7801
10	wind	RC1	T2	T2	97.096
11	access	RC1	T1	T1	73.361
12	advice	RC2	T1	T1	68.2031
13	frostbite	RC2	T1	T1	67.9602
14	outta	RC1, preposition	T1	?	59.0282
15	supplies	RC2	T1	T1	56.5081
16	dark	RC1	T1	T1	55.0757
17	pneumonia	RC1, RC2	T1	T1	53.9662
18	planning (permission)	RC1	T1	T1	50.4341
19	cramp	RC1	T1	T1	49.81
20	outa	RC1, preposition	T1	?	43.9058
21	chilblains	RC1, LITERAL	T1	T1	43.4054
22	cancer	RC2	T1	T1	42.9319
23	sunstroke	RC2	T1	T1	42.9292
24	people	RC2	T1	T1	41.9529
25	feedback	RC2	T1	T1	40.6447
26	revenge	RC1	T1	T1	38.947
27	results	RC2	T1	T1	38.7961
28	promotion	RC2	T1	T1	38.5461
29	toothache	RC1	T1	T1	38.0386
30	hiv	RC2	T1	T1	31.4742
31	kids	RC1	T1	T1	30.2394
32	approval	RC2	T1	T1	29.7722
33	flu	RC2	T1	T1	28.6242

34	lung (cancer)	RC1	T1	T1	27.431
35	cross	RC2	T1	T1	27.2144
36	indigestion	RC2	T1	T1	26.4866
37	blisters	RC1, LITERAL	T1	T1	26.3166
38	credit	RC2	T1	T1	25.8442
39	priority	RC2	T1	T1	25.5135
40	Liam (male name)	NAME	T1	T1	25.0713
41	guts	RC1	T1	T1	24.1342
42	information	RC2	T1	T1	23.5449
43	aids	RC2	T1	T1	23.1694
44	visas	RC1, LITERAL	T1	T1	22.9539
45	ideas	RC1	T1	T1	21.029
46	hit	RC2	T1	T1	20.8141
47	beat	RC2	T1	T1	20.7369
48	leave	RC1	T1	T1	20.3981
49	mouse	RC1	T1	T1	19.7158
50	calls	RC1	T1	T1	19.688

Classification of *get* pattern according to Congruency criterion

No.	Word	Types of restrictedness	Transparency	Incongruence	Log-likelihood value
4	permission	RC1	T1	Incongruence	201.9308
11	access	RC1	T1	Incongruence	73.361
16	dark	RC1	T1	Incongruence	55.0757
18	planning (permission)	RC1	T1	Incongruence	50.4341
26	revenge	RC1	T1	Incongruence	38.947
31	kids	RC1	T1	Congruence	30.2394
41	guts	RC1	T1	Incongruence	24.1342
45	ideas	RC1	T1	Incongruence	21.029
48	leave	RC1	T1	Incongruence	20.3981
49	mouse	RC1	T1	Incongruence	19.7158
50	calls	RC1	T1	Incongruence	19.688

Final list for '*get*'

No.	Word	Types of restrictedness	Transparency	Incongruence	Log-likelihood value	Note
4	permission	RC1	T1	Incongruence	201.9308	
11	access	RC1	T1	Incongruence	73.361	
16	dark	RC1	T1	Incongruence	55.0757	
18	planning (permission)	RC1	T1	Incongruence	50.4341	
26	revenge	RC1	T1	Incongruence	38.947	

41	guts	RC1	T1	Incongruence	24.1342	Exclude, no enough lines.
45	ideas	RC1	T1	Incongruence	21.029	
48	leave	RC1	T1	Incongruence	20.3981	
49	mouse	RC1	T1	Incongruence	19.7158	
50	calls	RC1	T1	Incongruence	19.688	

Give pattern

Classification of *give* pattern according to restrictedness and transparency criteria

No.	Word	Types of restrictedness	Native speakers	Non-native speakers	Log-likelihood value
1	rise	RC1	T1	T2	17739.5638
2	birth	RC1	T1	T1	4749.6228
3	way	RC1	T2	T1	4284.2855
4	evidence	RC2	T1	T1	3009.1278
5	details	RC2	T1	T1	1611.6315
6	advice	RC2	T1	T1	1552.3609
7	notice	RC1	T1	T1	1507.7818
8	priority	RC2	T1	T1	1366.818
9	permission	RC2	T1	T1	955.6677
10	access	RC2	T1	T1	718.8021
11	orders	RC2	T1	T1	585.1554
12	effect	RC1	T1	T1	561.9857
13	reasons	RC2	T1	T1	497.3739
14	instructions	RC2	T1	T1	484.2082
15	assurances	RC2	T1	T1	417.8749
16	directions	RC2	T1	T1	390.3019
17	credit	RC2	T1	T1	383.4508
18	guidance	RC2	T1	T1	380.8439
19	warning	RC2	T1	T1	368.8238
20	thanks	RC2	T1	T1	368.6795
21	information	RC2	T1	T1	368.6309
22	vent	RC1	T2	T2	357.9871
23	credence	RC2	T1	T1	324.0762
24	prominence	RC2	T1	T1	312.158
25	chase	RC1	T1	T1	288.3237
26	examples	RC2	T1	T1	287.9808
27	support	RC2	T1	T1	184.6216
28	lectures	RC2	T1	T1	164.757
29	pleasure	RC2	T1	T1	163.4624
30	offence	RC1	T1	T1	162.4467
31	cause	RC1	T1	T1	155.2668

32	consent	RC2	T1	T1	152.7334
33	fetvas	Not English	?	?	135.1042
34	precedence	RC2	T1	T1	127.3013
35	protection	RC2	T1	T1	117.1728
36	impetus	RC1	T1	T1	116.7557
37	encouragement	RC2	T1	T1	115.635
38	interviews	RC1	T1	T1	115.5102
39	substance	RC1	T1	T1	114.7222
40	leave	RC2	T1	T1	113.2874
41	money	RC2	T1	T1	109.8669
42	responsibility	RC2	T1	T1	109.2548
43	grants	RC3	T1	T1	106.6887
44	clues	RC2	T1	T1	105.2008
45	help	RC2	T1	T1	104.9888
46	judgment	RC1	T1	T1	98.5841
47	expression	RC1	T1	T2	97.7455
48	preference	RC2	T1	T1	89.3968
49	assistance	RC2	T1	T1	89.3438
50	shelter	RC2	T1	T1	86.1942

Classification of *give* pattern according to Congruency criterion

No.	Word	Types of restrictedness	Transparency	Incongruence	Log-likelihood value
2	birth	RC1	T1	Incongruence	4749.6228
7	notice	RC1	T1	Incongruence	1507.7818
12	effect	RC1	T1	Incongruence	561.9857
25	chase	RC1	T1	Incongruence	288.3237
30	offence	RC1	T1	Incongruence	162.4467
31	cause	RC1	T1	Congruence	155.2668
36	impetus	RC1	T1	Congruence	116.7557
38	interviews	RC1	T1	Incongruence	115.5102
39	substance	RC1	T1	Congruence	114.7222
46	judgment	RC1	T1	Incongruence	98.5841

Final list for '*give*'

No.	Word	Types of restrictedness	Transparency	Incongruence	Log-likelihood value
2	birth	RC1	T1	Incongruence	4749.6228
7	notice	RC1	T1	Incongruence	1507.7818
12	effect	RC1	T1	Incongruence	561.9857
25	chase	RC1	T1	Incongruence	288.3237
30	offence	RC1	T1	Incongruence	162.4467
38	interviews	RC1	T1	Incongruence	115.5102

46	judgment	RC1	T1	Incongruence	98.5841

Appendix 2.A. Rating tasks instructions for Native speaker

Rating Tasks Instructions

You will be asked to rate the following lists of collocations from restrictedness and transparency perspectives according to the following criteria:

1. Restrictedness

Restrictedness refers to whether and to what extent the substitution of the elements of the combination is restricted.

The restrictedness criterion that will employ in this study will be as the following:

1. Verb combinable with only one noun, no possible substitution of the noun in the given sense (i.e. *give birth*) which will be termed as RC1.
2. Verb combinable with a small set of nouns (two to five nouns), possible substitution of the noun which can be used with the verb in that sense (i.e. *make decisions/ choices/ resolutions*) which will be termed as RC2.
3. Verb combinable with a sizable group of nouns (more than five), possible substitution of the noun which can be used with the verb in that sense (i.e. *perform a task/ test/ experiment/ action/ function/ deed*, but not *perform a survey*) which will be termed as RC3.

2. Transparency

Transparency refers to whether the elements (both elements, or one of them) of the combinations have literal or non-literal meaning.

Therefore the degree of transparency will be divided as the following:

1. The pattern has semi-literal meaning (GV has non-literal meaning, collocate has literal meaning) T1, e.g. *make a decision*.

2. The pattern has non-literal meaning, both elements have non-literal meaning (figurative meaning) but the collocation preserves a literal interpretation T2, e.g. *do U-turn (*change a plan or opinion).

3. The pattern has an element of semantic opacity, which means that the meaning cannot be deduced as a function of the meanings of the constituents T3, e.g. *blow the gaff.*

Example
Please fill in this table by answering the following:

1. Decide on the degree of restrictedness (RC1, RC2, RC3) according to the provided explanation in section (1.), also can you please write the possible substitution of the noun if the restrictedness degree is RC2 or RC3, as the provided example in table 1.
2. Rate the degree of transparency (T1, T2, T3) according to the provided explanation in section (2.).

Table 43: Examples of restrictedness and transparency.

#	Collocation	Restrictedness	Transparency	Comment (if you have any)
1	Do U-turn	RC1	T2	
2	Make a decision	RC2, decisions/ choices/ resolutions.	T1	

Appendix 2.B. Rating tasks instructions for Non-native speaker

Rating Tasks Instructions

You will be asked to rate the following lists of collocations from congruency and transparency perspectives according to the following criteria:

1. Congruency
If the collocation has an Arabic equivalent translation, it will be congruent collocation.

2. Transparency
Transparency refers to whether the elements (both elements, or one of them) of the combinations have literal or non-literal meaning.

Therefore the degree of transparency will be divided as the following:

1. The pattern has semi-literal meaning (GV has non-literal meaning, collocate has literal meaning) T1, e.g. *make a decision*.
2. The pattern has non-literal meaning, both elements have non-literal meaning (figurative meaning) but the collocation preserves a literal interpretation T2, e.g. *do U-turn (*change a plan or opinion).
3. The pattern has an element of semantic opacity, which means that the meaning cannot be deduced as a function of the meanings of the constituents T3, e.g. *blow the gaff*.

Example

Please fill in this table by answering the following:

- Decide if the collocation is congruent or incongruent according to the provided explanation in section (1.).
- Rate the degree of transparency (T1, T2, T3) according to the provided explanation in section (2.).

Table 44: Examples of congruency and transparency

#	Collocation	Congruency	Transparency	Comment (if you have any)
1	Have a shower	Incongruent, يستحم	T1	
2	Take a break	Congruent, ياخذ استراحة	T1	

Appendix 3. Teaching Materials (Study One)

Appendix 3.A. Introductory session

Session one (introductory session)

1. What is a corpus?

A corpus is a collection of texts that are examples of natural language. This includes texts from newspapers, books, and recorded conversations.

This is stored on a computer for easy analysis.

2. What is corpus linguistics?

Corpus linguistics is the analysis of this collection of texts, using a computer to look at naturally occurring language.

- What is the difference?

A corpus is a collection of texts that has been stored in computer and used for linguistics analysis.

While, corpus linguistics is the study of language that occurring naturally.

3. Why is corpus linguistics important?

Well, it is important because it helps us discover facts about language.

What are the kinds of facts that we can discover from a corpus?

Frequency and patterns!

4. What do we mean by frequency?

It means the number of times a word appears in the corpus (data set).

You can see a list of the most frequent words in English (from the BNC corpus, 100000000 words)[12]. '***The'*** is the most frequent word in English!

#	Word	Frequency
1.	the	61847
2.	of	29391
3.	and	26817
4.	a	21626
5.	in	18214
6.	to	16284

7.	it	10875
8.	is	9982
9.	to	9343
10.	was	9236

5. What can a corpus tell us about patterns?

A pattern is a number of words that appear together frequently in the corpus. They come together in the same order in different sentences.

- In the following example, we have a verb pattern: a verb that frequently appears with the same words that come after it.

This is called a verb noun pattern, or Vn.

1	You may even **throw caution to the wind** and try one of our Mystery Trips.
2	He decided to **throw caution to the wind** before Selwyn came over for his tea.
3	The two of us **threw caution to the winds** and raced to the rescue.
4	Folly **threw caution to the winds**.
5	When we **threw caution to the winds**, the city.
6	He **threw caution** completely **to the wind** and spooned to cover.

6. How is CL helpful in the classroom?

- CL is very helpful in analysing the language and discovering patterns.
- It can tell you which nouns can be used with specific verbs as in the example above.
- It tells how native speaker uses the language.

For example:

Do we say?

1) Strong tea OR heavy tea

2) Hard rain OR heavy rain

Do you have any questions?

After understanding what is corpus linguistics and how it is helpful, now we will have a look at a corpus analysis tool (software) that helps with analysing language.

CORPUS ANALYSIS TOOL

- What is a corpus analysis tool?

A Corpus analysis tool is a software that helps in analysing certain features of language e.g. AntConc (Shortcut on the desktop).



Now, we are going to operate AntConc by following these simple instructions.

Let's get started:

First of all,

1. **Launch AntConc**
   Look at the desktop and you will find the AntConc icon, double-click on it to open the program).
2. **Explore AntConc**
   AntConc has seven tools (see figure 1) which are:

   (1) Concordance tool, **this the most important one, circled in red colour.**
   (2) Concordance plot tool
   (3) File view
   (4) Cluster/N-grams
   (5) Collocates
   (6) Wordlist
   (7) And keyword list

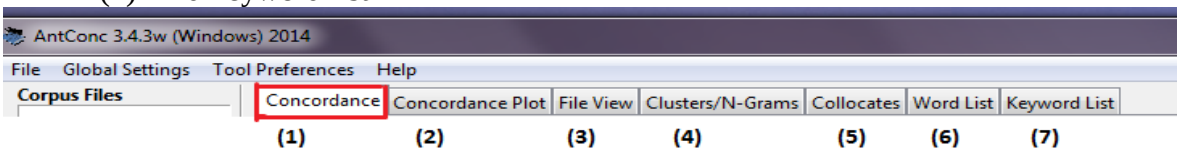


Figure 10

- What is the concordance/ concordancer tool?

It is a tool that gathers all the lines that contain the keyword (the word we want to look at).

The lines will appear with the key word in blue font in the middle.

The lines aren't always complete sentences; they can be parts that come from the beginning, middle or the end of a sentence.

- Look at this example of Concordance lines (concordances) in which the verb Put is the keyword: (figure 2.)

1	1 AJP 242 City Comment: Klesch will	put	pressure on Heron2 ARJ 322 "One principal t
2	capture of strongpoints in northern France and	put	pressure on Paris itself.5 HKX 1297 "There
3	widely expected that the five states would	put	pressure on the respective factions they suppo
4	be said now that, although the Crown	put	pressure upon both Houses, they were capable
5	staged the one-day boycott yesterday to	put	pressure on Liverpool City Council to pay
6	e, the development would worsen traffic problems,	put	pressure on car parking at local shops
7	ssies and targeting leading Muslim businessmen to	put	pressure on the secular business community.14
8	, the Benedictines, Augustinians and Cistercians,	put	pressure on the pope."16 HKR 2951 "The with
9	activity, as forces of the exiled CGDK	put	pressure on the Phnom Penh regime in
10	, a one-time Grimsby stevedore, had privately	put	pressure on the International Cricket Council
11	parts of the central state organization) to	put	pressure on supposedly autonomous managements
12	, given the banks' large equity holdings, could	put	pressure on their capital ratios."21 CCC 832
13	f black propaganda or subversive organisations to	put	pressure on Smith.Ő22 K5D 8494 "Asked
14	8494 "Asked if the Clinton administration would	put	pressure on Israel to solve the deportees
15	"Analysys suggests that, in particular, users can	put	pressure on prices by resisting attempts by
16	faster than look-at-you so She	put	pressure on him."25 K5D 10223 "The official
17	751 "The Serbian Party is also beginning to	put	pressure on the press in other republics,
18	and Croatia."29 CEF 2162 "When you need to	put	pressure on someone, reminding them of time
19	paigning from The Marine Conservation Society has	put	pressure on local authorities to tell the

Figure 11

- **How do we get concordances/ concordance lines?**

It's simple, follow these instructions:

First, upload a text file by doing those 4 steps:

(1) Click on File, **in the menu bar on the left frame of the main window** (Figure 3.).
(2) Select a file by choosing **'Open** File(s) in the **'File' menu**

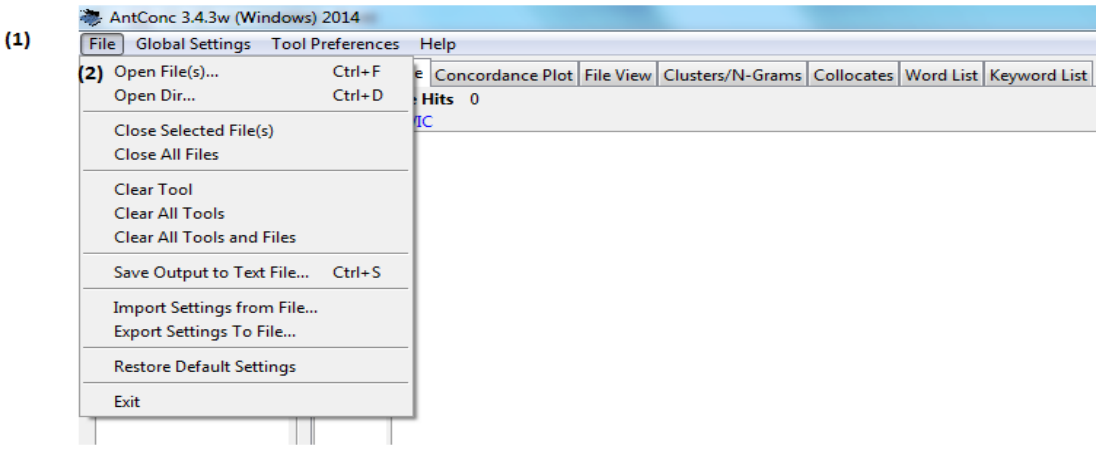


Figure 12

(3) Then, **select** the file named (put.text.) and **click open**



(4) To make sure that the upload is complete, look at the **corpus file icon (1),** as you will see, the number of the uploaded files, **files processed (2)**, is in the box that is circled in red. (Figure 3).

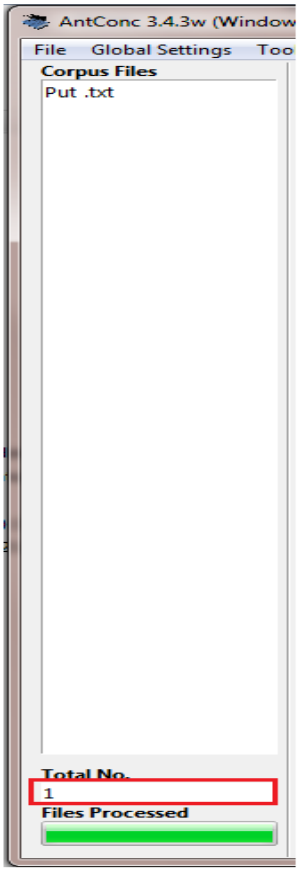


Figure 13

After uploading the file, we can generate the concordance lines following those steps:

(1) Type the word ***put*** in the search box.
(2) Then Click on the '**Start**' button.
(3) You can stop this process at any time by clicking on the '**Stop**' button.
(4) The total number of concordance lines generated (**Concordance Hits)** is shown at the top of the tool window, circled in red (figure 5).

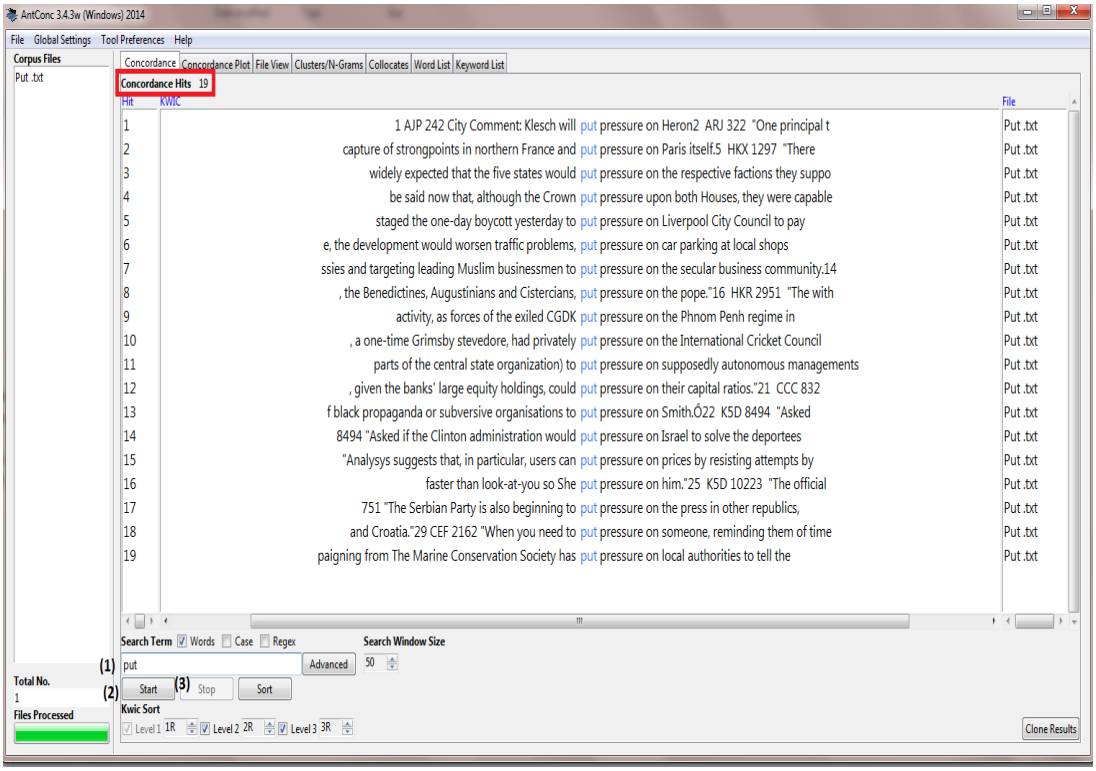


Figure 14

Have you generated the concordance lines? WELL DONE!

Now, let's learn something a bit more advanced, which is **sorting**.

- What is sorting?

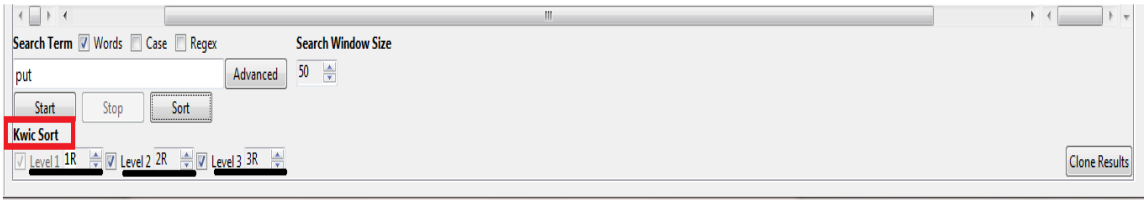
It means rearranging the concordance lines according to whether they show the words to the right and/ or to the left of the keyword. It is three levels:

(1) 0 is the search word
(2) 1R, 2R... are words to the right of the keyword
(3) 1L, 2L. are words to the left of the keyword.

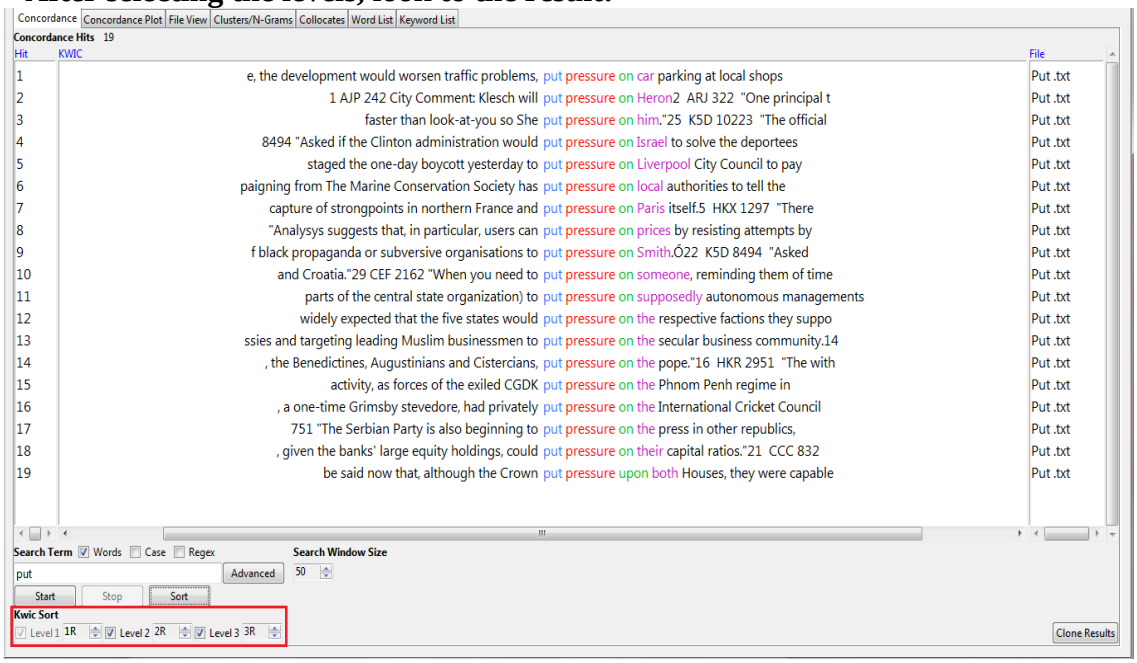
Look at the following example, where **put** is the keyword:

- If we want to select the words that appear on the right to **put**:

We select R1, R2, R3.



- **After selecting the levels, look to the result:**

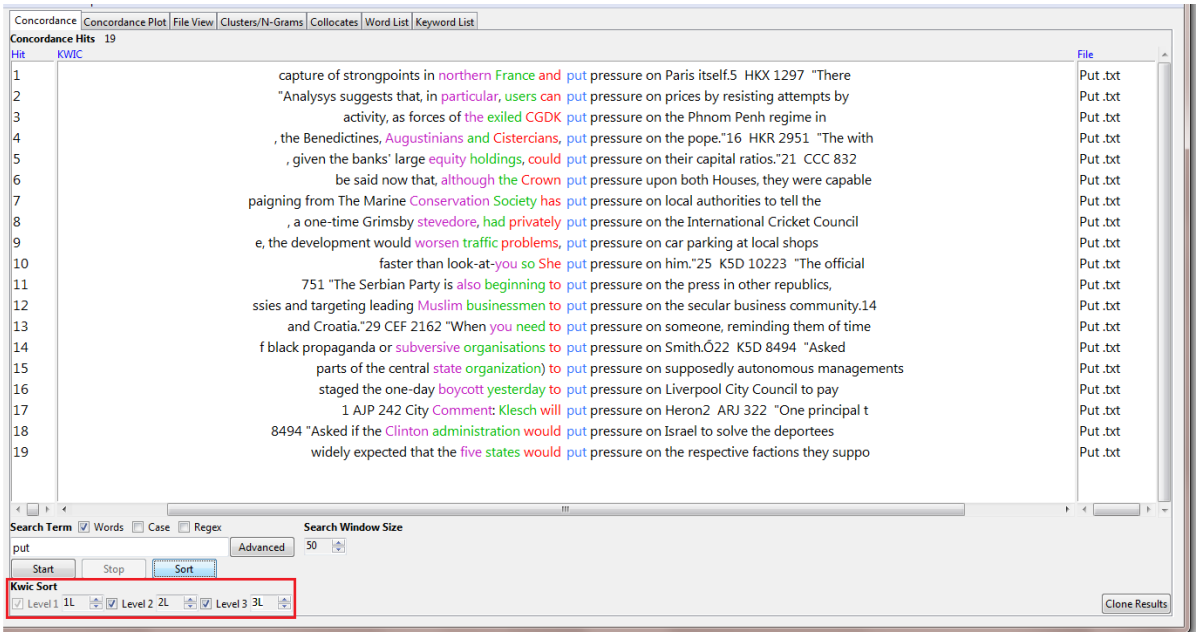


- If we want to select the words that appear on the left to **put**:

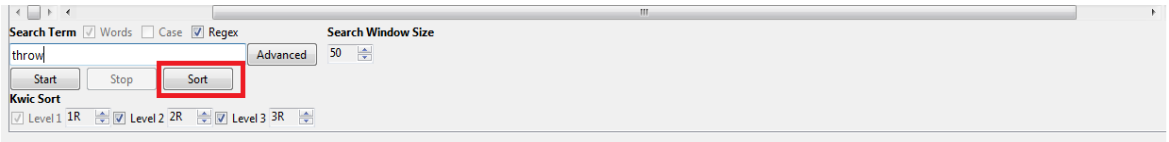
We select L1, L2, L3.



- **After selecting the levels, look at the results**



Do not forget to press sort button after selecting the levels.



Now, we will do the same steps again!

But, before closing AntConc by pressing the Close 'X' button.

A box will pop up saying "are you sure you want to exit AntConc", choose YES.

Now, let's start from the beginning:

1. Launch AntConc from the desktop.
2. Open file.
3. Download the selected file.
4. Type **Put** as the keyword.
5. Press the start button to generate concordance lines.
6. Select the levels of sorting.
7. Press the sort button.
8. Look at the concordance lines.

DO you have any questions?

Appendix 3.B. Training sessions

Session two

Please write your number here: _____

(The linguistic analysis of concordance lines for the verbs)

Today, in this session we will study three **VERBS**:



Warming-up

In the previous session, we went through the steps to generate concordance lines.

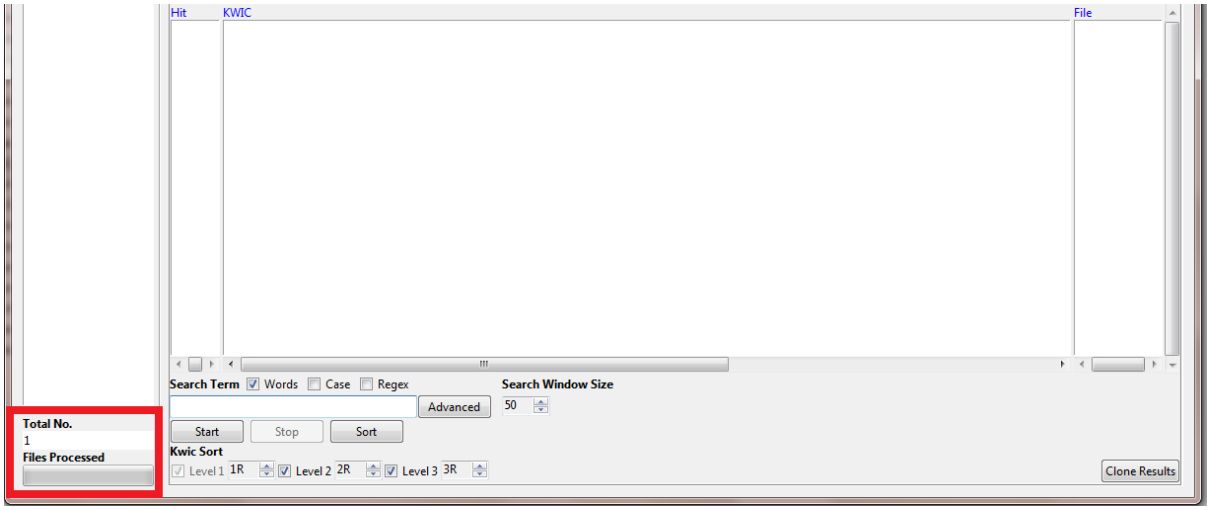
Let's revise them together!

First: Open AntConc program (from desktop).

Second: Upload the file named "**first training.text**". Check the Total No. (Circled in red),

If there is number 1 in the box, well done

If the box is empty, please ask for help!

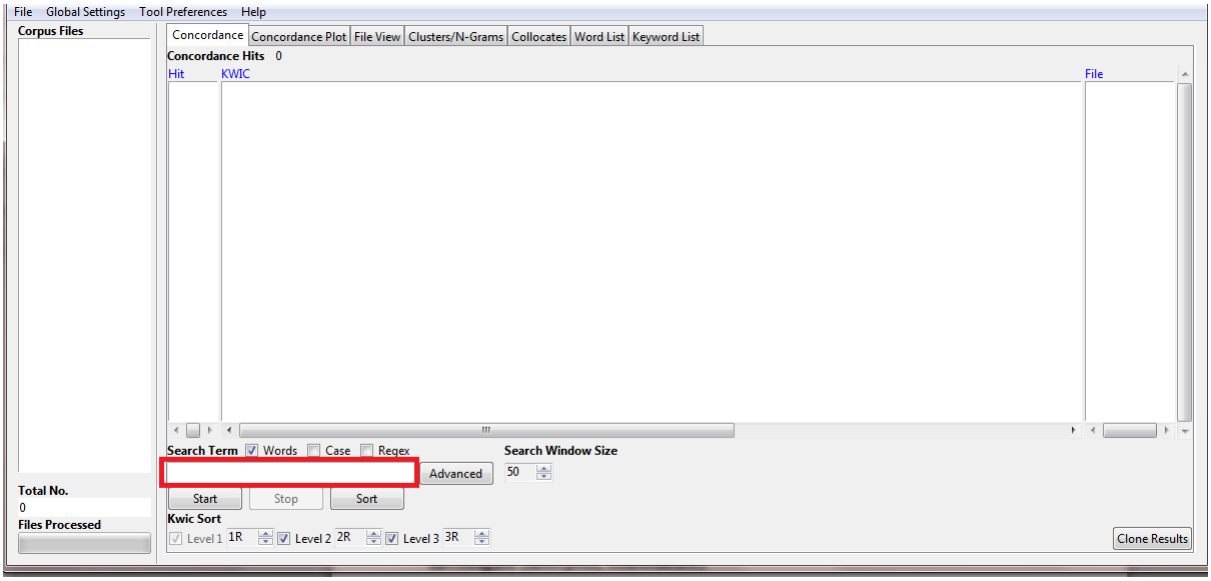


NOW, let's study the verbs

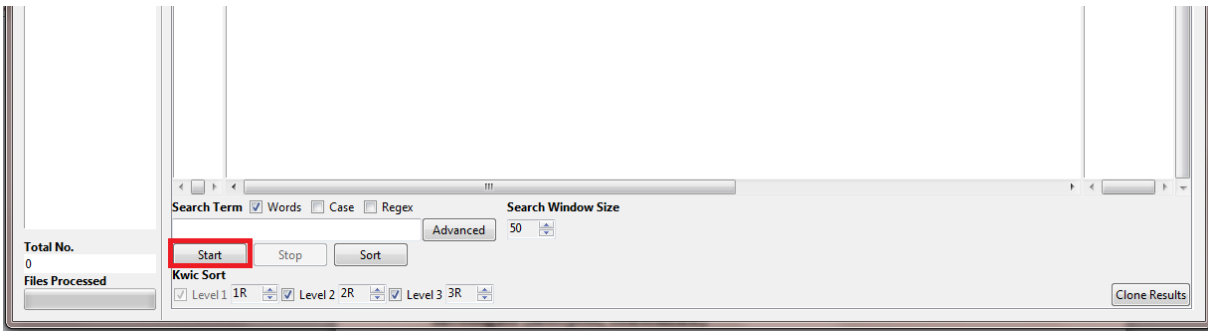
MAKE

We will start with **MAKE**:

Now type "**make"** in the search box, make sure that there are no spaces before or after "**make**".



Then press start



1. **Activity one: searching the first verb "make"**

1.1. Look at "**make"** in each of these lines.

How many times does "**make"** appear in the concordance lines? (Look at the Concordance Hits icon).

_____

1.2. Look at the word immediately following "**make"**. What do you notice?

_____

2. Activity two: investigating "make"

Now, let's try using the sorting feature:

2.1.Set up the sort levels to **R1**, and click on **sort**.

2.2.Notice "**make"** and what comes after it (coloured font).

2.3. Read each example in turn and work out the meaning of "**make"**:

- Look at the words immediately to the right of "**make"** (position N+1). Write a list of the repeated words.

_____

_____

_____

2.4. Does "**make"** mean the same thing in each line? Give examples from the concordance lines.

_____

_____

2.5. List the repeated word forms that come after "**make"** (noun, verb, preposition); can you put them into groups according to their forms? What is the biggest group?

_____

_____

_____

_____

Do you have any questions?

3. Activity three
   Now after taking part in all these activities, let's write the final results.

Look at these examples:

No.	The pattern	Meaning
1	Throw caution	Be careful
2	Put pressure	Forcing

3.1. Can you write 3 repeated patterns with the verb "**make"** that look like the example above?

	"Make" pattern	Meaning/ Arabic or English
1		
2		
3		

3.2. After noticing the meaning of "**make"** in these lines:
Can you explain if "**make"** in the concordance lines has the same or different meaning from "**make"** on its own as one verb.

_____

_____

_____

HAVE

1. Activity one: searching the first verb "have"

1.1. Look at "**have"** in each of these lines.

1.2. How many times does "**have"** appear in the concordance lines? (Look at the Concordance Hits icon).

_____

1.3. Look at the word immediately following "**have"**. What do you notice?

_____

2. Activity two: investigating "have"

Now, let's try using the sorting feature:

2.1. Set up the sort levels to **R1**, and click on **sort**.

2.2. Notice "**have"** and what comes after it (coloured font).

2.3. Read each example in turn and work out the meaning of "**have"**:

- Look at the words immediately to the right of "**have"** (position N+1). Write a list of the repeated words.

_____

_____

_____

2.4. Does "**have"** mean the same thing in each line? Give examples from the concordance line.

_____

_____

2.5. List the repeated word forms that come after "**have"** (noun, verb, preposition); can you put them into groups according to their forms? What is the biggest group?

_____

_____

_____

_____

Do you have any questions?

3. Activity three

Now after taking part in all these activities, let's write the final results.

Look at these examples:

No.	The pattern	Meaning
1	Throw caution	Be careful
2	Put pressure	Forcing

3.1. Can you write 3 repeated patterns with the verb "**have"** that look like the example above?

	Have pattern	Meaning/ Arabic or English
1		
2		
3		

3.2. After noticing the meaning of "**have"** in these lines:
Can you explain if "**have"** in the concordance lines has the same or different meaning from "**have"** on its own as one verb.

_____

_____

_____

GIVE

1. **Activity one: searching the first verb "give"**

1.1. Look at "**give"** in each of these lines.

1.2. How many times does "**give"** appear in the concordance lines? (Look at the Concordance Hits icon).

_____

1.3. Look at the word immediately following "**give"**. What do you notice?

_____

2. **Activity two: investigating "give"**

Now, let's try using the sorting feature:

2.1.Set up the sort levels to **R1**, and click on **sort**.

2.2. Notice "**give"** and what comes after it (coloured font).

2.3. Read each example in turn and work out the meaning of "**give"**:

- Look at the words immediately to the right of "**give"** (position N+1). Write a list of the repeated words.

_____

_____

_____

2.4. Does "**give"** mean the same thing in each line? Give examples from the concordance line.

_____

_____

2.5. List the repeated word forms that come after "**give"** (noun, verb, preposition); can you put them into groups according to their forms? What is the biggest group?

_____

_____

_____

_____

Do you have any questions?

3. Activity three

Now after taking part in all these activities, let's write the final results.

Look at these examples:

No.	The pattern	Meaning
1	Throw caution	Be careful
2	Put pressure	Forcing

3.1.Can you write 3 repeated patterns with the verb "**give"** that look like the example above?

	Give pattern	Meaning/ Arabic or English
1		
2		
3		

3.2. After noticing the meaning of "**give"** in these lines:

Can you explain if "**give"** in the concordance lines has the same or different meaning from "**give"** on its own as one verb.

_____

_____

_____

Thank you very much.

Appendix 3.C. Testing sessions

Session four

Please write your number here: _____

(The linguistic analysis of concordance lines for the verbs)

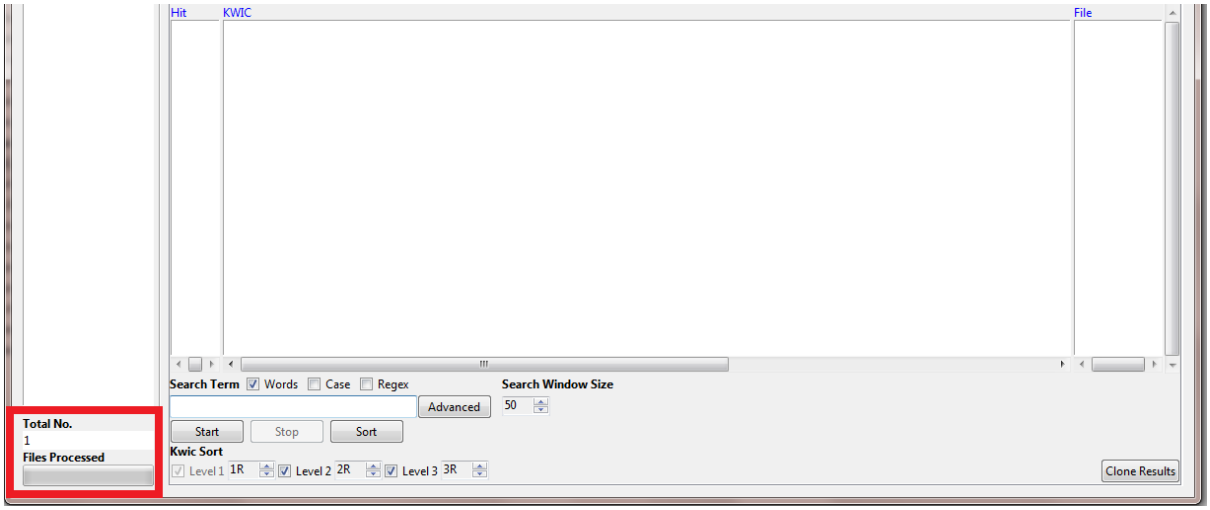
Today, in this session we will study independently three **VERBS** similar to the verbs you studied in the first training session.



First: Open AntConc program (from desktop).

Second: Upload the file named "**first testing.text**". Check the Total No. (Circled in red),

- Do not forget to check the number in the box.



NOW, study these verbs.

Make

Start with **make,** please:

1. **Activity one: searching the first verb "make"**

1.1.Look at "**make"** in each of these lines.

1.2.How many times does "**make"** appear in the concordance lines?

_____

1.3. Look at the word immediately following "**make"**. What do you notice?

_____

2. **Activity two: investigating "make"**

Now, use the sorting feature:

2.1.Set up the sort levels to **R1**, and click on **sort**.

2.2.Notice "**make"** and what comes after it (coloured font).

2.3. Read each example in turn and work out the meaning of "**make"**:

- Look at the words immediately to the right of "**make"** (position N+1). Write a list of the repeated words.

_____

_____

_____

2.4. Does "**make"** mean the same thing in each line? Give examples from the concordance line.

_____

_____

2.5. List the repeated word forms that come after "**make"** (noun, verb, preposition); can you put them into groups according to their forms? What is the biggest group?

_____

_____

_____

_____

3. Activity three

Now, write the final results.

Look at these examples:

No.	The pattern	Meaning
1	Throw caution	Be careful
2	Put pressure	Forcing

3.1.Can you write 3 repeated patterns with the verb "**make"** that look like the example above?

	"make" pattern	Meaning/ Arabic or English
1		
2		
3		

3.2.After noticing the meaning of "**make"** in these lines:
Can you explain if "**make"** in the concordance lines has the same or different meaning from "**make"** on its own as one verb.

_____

_____

_____

_____

HAVE

1. **Activity one: searching the verb "have" (Use the * after have)**

1.1. Look at "**have"** in each of these lines.

1.2. How many times does "**have"** appear in the concordance lines?

_____

1.3. Look at the word immediately following "**have"**. What do you notice?

_____

2. **Activity two: investigating "have"**

Now, use the sorting feature:

2.1. Set up the sort levels to **R1**, and click on **sort**.

2.2. Notice "**have"** and what comes after it (coloured font).

2.3. Read each example in turn and work out the meaning of "**have"**:

- Look at the words immediately to the right of "**have"** (position N+1). Write a list of the repeated words.

_____

_____

_____

2.4. Does "**have"** mean the same thing in each line? Give examples from the concordance line.

_____

_____

2.5. List the repeated word forms that come after "**have"** (noun, verb, preposition); can you put them into groups according to their forms? What is the biggest group?

_____

_____

_____

_____

3. Activity three

Now, write the final results.

Look at these examples:

No.	The pattern	Meaning
1	Throw caution	Be careful
2	Put pressure	Forcing

2.6. Can you write 3 repeated patterns with the verb "**have"** that look like the example above?

	Have pattern	Meaning/ Arabic or English
1		
2		
3		

2.7. After noticing the meaning of "**have"** in these lines:
Can you explain if "**have"** in the concordance lines has the same or different meaning from "**have"** on its own as one verb.

_____

_____

_____

GIVE

1. **Activity one: searching the verb "give"**

1.1.Look at "**give"** in each of these lines.

1.2.How many times does "**give"** appear in the concordance lines?

_____

1.3. Look at the word immediately following "**give"**. What do you notice?

_____

2. **Activity two: investigating "give"**

Now, use the sorting feature:

2.1.Set up the sort levels to **R1**, and click on **sort**.

2.2. Notice "**give"** and what comes after it (coloured font).

2.3. Read each example in turn and work out the meaning of "**give"**:

- Look at the words immediately to the right of "**give"** (position N+1). Write a list of the repeated words.

_____

_____

_____

2.4. Does "**give"** mean the same thing in each line? Give examples from the concordance line.

_____

_____

2.5. List the repeated word forms that come after "**give"** (noun, verb, preposition); can you put them into groups according to their forms? What is the biggest group?

_____

_____

_____

_____

3. Activity three

Now, write the final results.

Look at these examples:

No.	The pattern	Meaning
1	Throw caution	Be careful
2	Put pressure	Forcing

3.1.Can you write 3 repeated patterns with the verb "**give"** that look like the example above?

	Give pattern	Meaning/ Arabic or English
1		
2		
3		

3.2.After noticing the meaning of "**give"** in these lines:
Can you explain if "**give"** in the concordance lines has the same or different meaning from "**give"** on its own as one verb.

_____

_____

_____

Thank you very much.

Appendix 4. Reflective form (Study One)

Reflective form

Participants Number: _____

1. Background information

1. Personal information
Country of origin: _____

My main programme of study is
_____

Age group:
☐ Below 25 ☐ 25 to 34 ☐ 35 to 44 ☐ 45 or over

Have you studied an English course before enrolling in your programme?
☐ Yes ☐ No

Please specify: _____

Proficiency:
☐ Beginner ☐ Low-intermediate ☐ Intermediate ☐ High-intermediate

2. Using computers

- How would you rate your ability to use a computer?

☐ Very competent user ☐ Quite competent user ☐ Not very competent user

- Do you have a PC at home that you can access easily?

☐ Yes ☐ No

- Have you used corpus resources before?

☐ Yes ☐ No

2. Evaluation of your use of the concordancer in the tasks

Please answer the following questions:

A. How easy was the use of corpus in the tasks?

☐ Very easy
☐ Quite easy
☐ Easy
☐ Not easy

B. the approach I follow to analyse the concordance lines is helpful for intermediate language learners like myself:

☐ I strongly agree
☐ I agree
☐ I agree to some extent
☐ I disagree

C. I think the following are advantages for the use of corpus approach (the procedure you follow) for language learning (no limited number):

…….
…….
…….

D. I think the following are disadvantages for the use for corpus approach for language learning (no limited number):

……
……
……

E. Do you think that you will use the concordancer (AntConc) after this experiment has finished?

☐ Yes, definitely
☐ Probably
☐ Possibly
☐ No, probably not

Please comment on why or why not:

……
……
……

Thank you for your participation ☺

Appendix 5: Interview guide (Study One)

The interview questions were the following:

1. How would you rate your ability to use a computer?
2. How easy was the use of corpus in the tasks?
3. Can you evaluate your use of concordancer in the tasks?
4. Do you think that you will use concordancer (AntConc) after this experiment has finished? Why or why not.
5. Can you evaluate your experience using the concordancer?
6. Can you evaluate the followed approach in the session?
7. Do you find it difficult when you perform the task by yourself?
8. Do you prefer to have help or guidance through the tasks (as the case in the training sessions)?
9. What are the difficulties you face during the sessions (training- testing sessions)?
10. Please comment on how you investigate the concordance lines (e.g. I investigate the concordances first and then answer the tasks).
11. Is there anything else you would like to add?

Appendix 5.A. Interviews transcriptions (Study One)

See the attached CD.

Appendix 6: Hand-out of the introductory course (Study Two)

Session one: Introductory course on corpora and language teaching

1. **Warm-up activity:**

- How do you teach the word *'any*'?
- What are the materials you usually use for teaching?

Today we are going to investigate methods we can use to teach lexical words like '*any*'.

2. What is a corpus/corpora?

A 'corpus' (plural corpora) is a collection of texts that are examples of natural language. This includes texts from newspapers, books and recorded conversations that are stored on a computer for easy analysis.

3. What is corpus linguistics?

Corpus linguistics is the analysis of such a collection of texts, using a computer to analyse naturally occurring language. Corpus linguistics helps to reveal facts about language such as frequency and patterns.

'Frequency' refers to the number of times a word appears in the corpus (or 'data-set'), for example, in English the word '*the*' is the most frequently used word.

'Pattern' relates to a number of words appearing together frequently in the corpus. They come together in the same order in different sentences. In the example below, we have a verb pattern: a verb that frequently appears with the same words coming after it.

The main focus of corpus linguistics is to discover patterns of authentic language use via the analysis of actual word usage. Corpus linguistics' only concerns are the usage patterns of the empirical data, and what they reveal to us about language behaviour.

- In the following example, we have a verb pattern: a verb that frequently appears with the same words coming after it. This is called a verb noun pattern (Vn):

1	You may even **throw** **caution** **to the wind** and try one of our Mystery Trips.
2	He decided to **throw** **caution** **to the wind** before Selwyn came over for his tea.
3	The two of us **threw** **caution** **to the winds** and raced to the rescue.
4	Folly **threw** **caution** **to the winds**.
5	When we **threw** **caution** **to the winds**, and went into the city.
6	He **threw** **caution** completely **to the wind** and spooned to cover.

- What is the difference between a corpus and corpus linguistics?

A corpus is a collection of texts that has been stored on a computer and is used for linguistic analysis, while 'corpus linguistics' is the study of language that occurs naturally.

4. What are corpora used for?

Corpora (the plural form of the word 'corpus') can be used to teach English!

Corpora can be used for syllabus design, and the development of teaching materials and classroom activities. Corpus linguistics has been used for developing English language teaching syllabi, for example the *Longman Grammar of Spoken and Written English* and *COBUILD Grammar Patterns* reference books. It can also be used directly in the classroom via the use of learner-centred activities with the teacher as a facilitator for investigating patterns and problematic lexical items such as pairs of near-synonyms (such as 'speak' and 'talk'), grammatical structure (for example tenses) and writing skills (for example the use of connectors).

Why use a corpus with language learners/ teachers?

Native English speakers notice the unusual, marked uses of language, as in '*he don't like apples*'.

But:

Native English speakers do not notice the usual, unmarked uses of language, as in *'The most ten frequent verbs in conversation*'.

Corpus linguistics can provide:

- Descriptions of actual language use which can enrich teaching materials.
- A source of authentic text for language learning.
- Information about frequency in natural contexts

In general, corpus linguistics provides more accurate descriptions (in terms of the actual use of language) of English use, which in turn can inform reference books and pedagogical materials.

A famous approach that uses corpus linguistics for teaching is the Data Driven Learning (DDL) approach.

5. What is DDL?

The DDL approach is derived from corpus-driven research and the use of corpus methods in teaching. The term was coined by Tim Johns (1991) of the University of Birmingham.

It is based on three principles:

- Naturally occurring language from corpus data
- An inductive, bottom-up approach starting from instances of language (corpus data) for generalisation.
- Questioning traditional descriptions of language

Benefits

Benefits for teachers:

- New technology for teaching English
- Source of teaching materials (authentic texts)
- Improves proficiency
- Provides a baseline for judgment (acceptability of collocations and/or patterns) for non-native English speaking teachers.

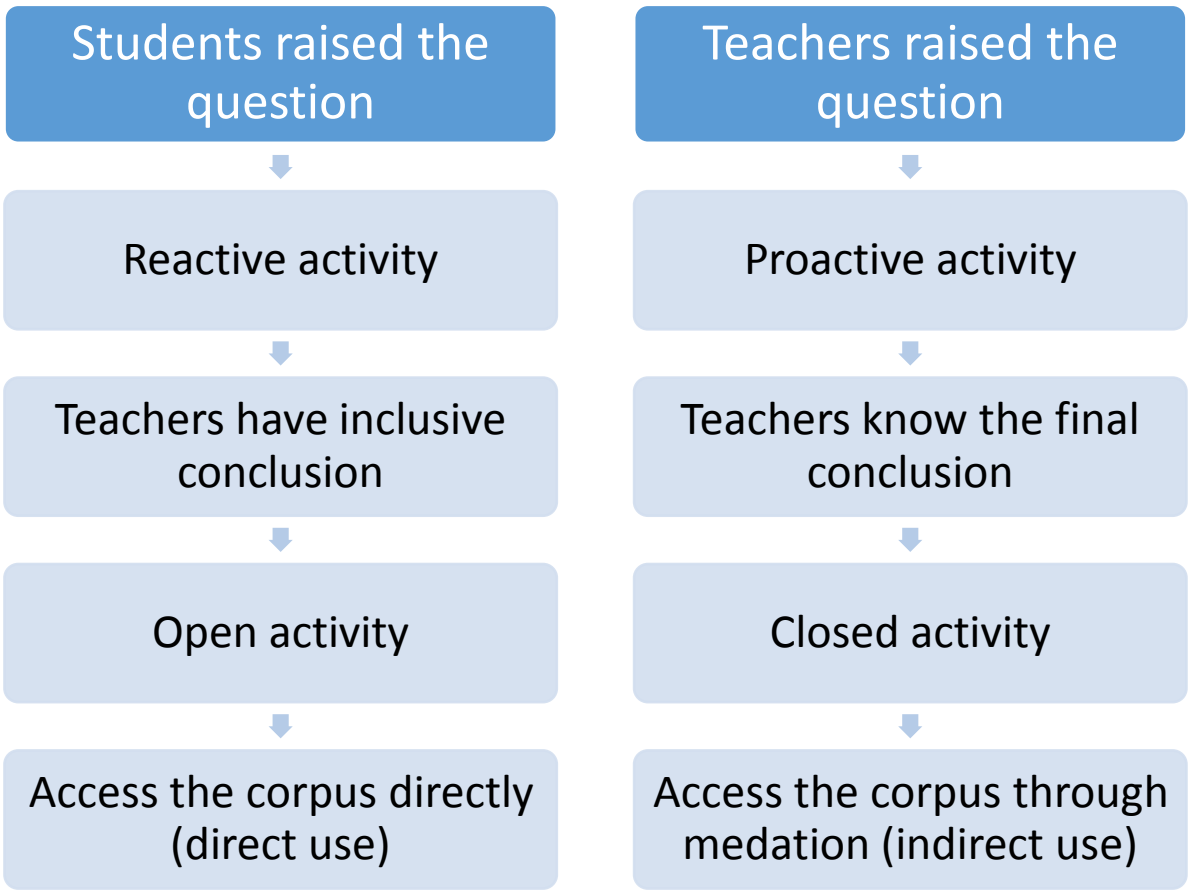
Benefits for learners:

- Supports discovery learning
- Increases learner autonomy
- Improves language awareness
- Enhances learners' ability to cope with authentic language

An example of corpus data and textbooks:

- **How do we teach the word '*any*' using corpus data?**
- **Traditionally**: '*Any*' is taught as part of either negative statements or interrogatives. It differs from '*some*', which is taught as part of affirmative statements.
- *I got **some** nice presents.*
- *I did **not** get **any** nice presents.*
- ***Do** you have **any** brothers?*
- Corpus analysis suggests that in 50% of all cases '*any'* occurs in affirmative statements, in 30- 40% it occurs in negative sentences, and in 10% it occurs in interrogative statements.
- *'Any'* in affirmative statement: *You can ask for my help **any** time.*
- So, the most frequent type of '*any*' is not taught in the classroom.

DDL activities



Discussion of possible scenarios:

- Students raise the question→ reactive activity→ you know the possible answer→ closed activity→ you prepare the material for your students from the corpus→ indirect use.
- Teachers raise the question→ proactive activity→ you do not know the answer→ open activity→ you and your students access the corpus to find an answer→ direct use.

- **Different types of structures that can be investigated using corpus tools such as colligation and collocation:**

6. What are colligation and collocation?

Colligation refers to the co-occurrence of grammatical categories (*e.g.* verbs colligate with adverbs), but it can also be used to refer to the co-occurrence of a word and a grammatical category, *e.g.* 'think of', 'result in', 'speak up', 'put on'.

Collocation is the occurrence of two or more words (lexical words) in short proximity to each other in a text, *e.g.* 'do homework', 'make love', 'do a U-turn', 'heavy rain', 'perform a task'.

- **There are types of corpus tools for investigating linguistic structures:**

7. What software can be used for corpus analysis?

There are two types:

- The first type is designed for a specific corpus, for example the British National Corpus web (BNCweb; there will be a demonstration of a search using this type later in this session)
- The second type can be used with almost any kind of corpus, for example AntConc (there will be a demonstration of a search using this type in the second session).

The practical part:

Demonstrating a search on BNCweb: 'said' and 'told' (reported speech)

1) Register via this link:
   http://bncweb.lancs.ac.uk/bncwebSignup/user/register.php#

2) Run the query

   2.1.) Enter the target item (*said*) in the box below the heading 'standard query'.

2.2.) For this query, do not make any changes to the other available options.

2.3.) Click on ‘start query’.

3) Getting basic frequency information
4) Exploring concordance

Browse through the first page of concordance results, briefly reading through the examples for *said* as you go down.

5) Key Word In Context (KWIC) view and sentence view

By default, the concordance screen will display examples of usage within a complete sentence. To switch to KWIC view, click on the ‘show KWIC view’ button.

NOW:

- Create a collocation database, using the default settings (the log likelihood measure).
- In the collocation parameters, change window span to ‘1 right’. Click ‘GO!’, which is next to ‘submit changed parameters’.
- Look at the resulting list of collocates. What grammatical categories do you notice? What are the top three tags?

Now we will do the same for the verb *told*.

- What does this information tell us about *said* and *told*?

*Key: go to the ‘Collocations’ tool. At the top left, next to the ‘Information’ box it will say ‘collocation’. Use the drop down menu to choose ‘collocations on POS-tags’ and search for POS (part-of-speech) tags in: 1R (span 1R) that immediately follow *said*, and *told*, 1L (span 1L) that come immediately before *said*, and *told*.

You have now been introduced to corpus linguistics and how it is potentially helpful. The next session will be about a corpus analysis tool (AntConc software) for analysing language.

Introducing AntConc functions



AntConc has the following features and functions (this session will focus on the functions in bold font):

Uploading files

Concordance tool

Concordance plot tool

File view tool

Clusters

Collocates

Word List

Keyword List

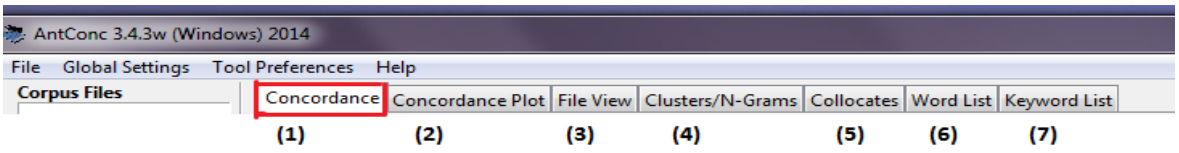


Figure 15

Concordance tool

The concordance tool in AntConc identifies all the lines that contain the keyword (the word we want to look at). The lines will appear with the key word in blue font in the middle. The lines aren't always complete sentences; they can be parts that come from the beginning, middle or the end of a sentence. This tool shows search results in a 'KWIC' (KeyWord In Context) format.

This allows you to see how words and phrases are commonly used in a corpus of texts. It provides many examples of patterns of use.

Let's get started

We are going to operate AntConc by following these simple instructions:

First, launch AntConc

3. On the desktop you will find the AntConc icon. Double-click on it to open the program.

- Look at this example of Concordance lines (concordances) in which the verb 'put' is the keyword (Figure 2).

1	1 AJP 242 City Comment: Klesch will	put	pressure on Heron2 ARJ 322 "One principal t
2	capture of strongpoints in northern France and	put	pressure on Paris itself.5 HKX 1297 "There
3	widely expected that the five states would	put	pressure on the respective factions they suppo
4	be said now that, although the Crown	put	pressure upon both Houses, they were capable
5	staged the one-day boycott yesterday to	put	pressure on Liverpool City Council to pay
6	e, the development would worsen traffic problems,	put	pressure on car parking at local shops
7	ssies and targeting leading Muslim businessmen to	put	pressure on the secular business community.14
8	, the Benedictines, Augustinians and Cistercians,	put	pressure on the pope."16 HKR 2951 "The with
9	activity, as forces of the exiled CGDK	put	pressure on the Phnom Penh regime in
10	, a one-time Grimsby stevedore, had privately	put	pressure on the International Cricket Council
11	parts of the central state organization) to	put	pressure on supposedly autonomous managements
12	, given the banks' large equity holdings, could	put	pressure on their capital ratios."21 CCC 832
13	f black propaganda or subversive organisations to	put	pressure on Smith.Ô22 K5D 8494 "Asked
14	8494 "Asked if the Clinton administration would	put	pressure on Israel to solve the deportees
15	"Analysys suggests that, in particular, users can	put	pressure on prices by resisting attempts by
16	faster than look-at-you so She	put	pressure on him."25 K5D 10223 "The official
17	751 "The Serbian Party is also beginning to	put	pressure on the press in other republics,
18	and Croatia."29 CEF 2162 "When you need to	put	pressure on someone, reminding them of time
19	paigning from The Marine Conservation Society has	put	pressure on local authorities to tell the

Figure 16

➢ **How do we get concordances/concordance lines?**

First, upload a text file by completing these 4 steps:

(5) Click on '**File**' in the **menu bar on the left frame of the main window** (Figure 3).

(6) Select a file by choosing '**Open File(s)**' in the '**File**' **menu**.

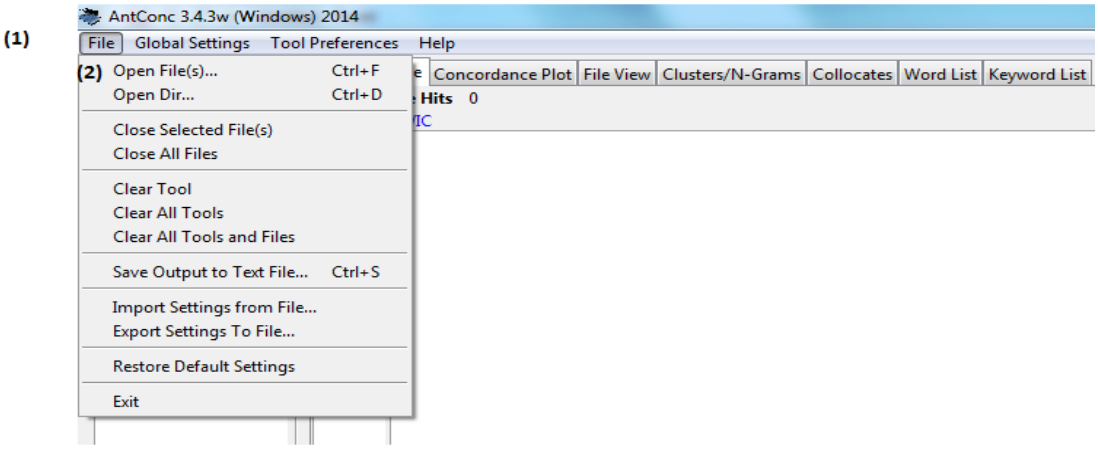


Figure 17

(7) Select the file named (put.text.) and click '**Open**'.



(8) To make sure that the upload is complete, look at the '**Corpus Files**' icon **(1)**. The number of uploaded files, or '**Files Processed**' **(2)** is in the box that is indicated in red in Figure 4 below.

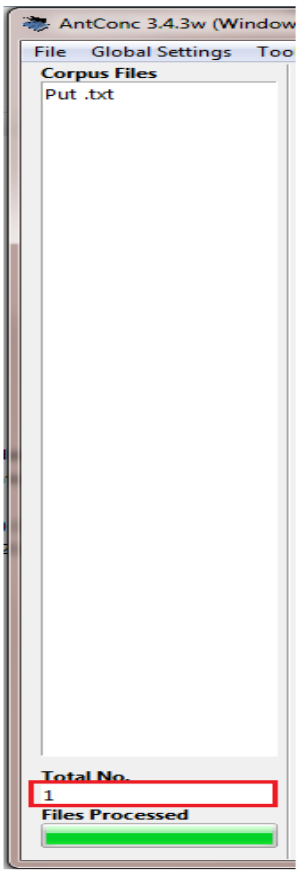


Figure 18

After uploading the file, we can generate the concordance lines by following these steps:

(5) Type the word '***put***' into the search box.

(6) Click on the '**Start**' button.

(7) You can stop this process at any time by clicking on the '**Stop**' button.

(8) The total number of concordance lines generated (**Concordance Hits)** is shown at the top of the tool window, as indicated in red in Figure 5 below.

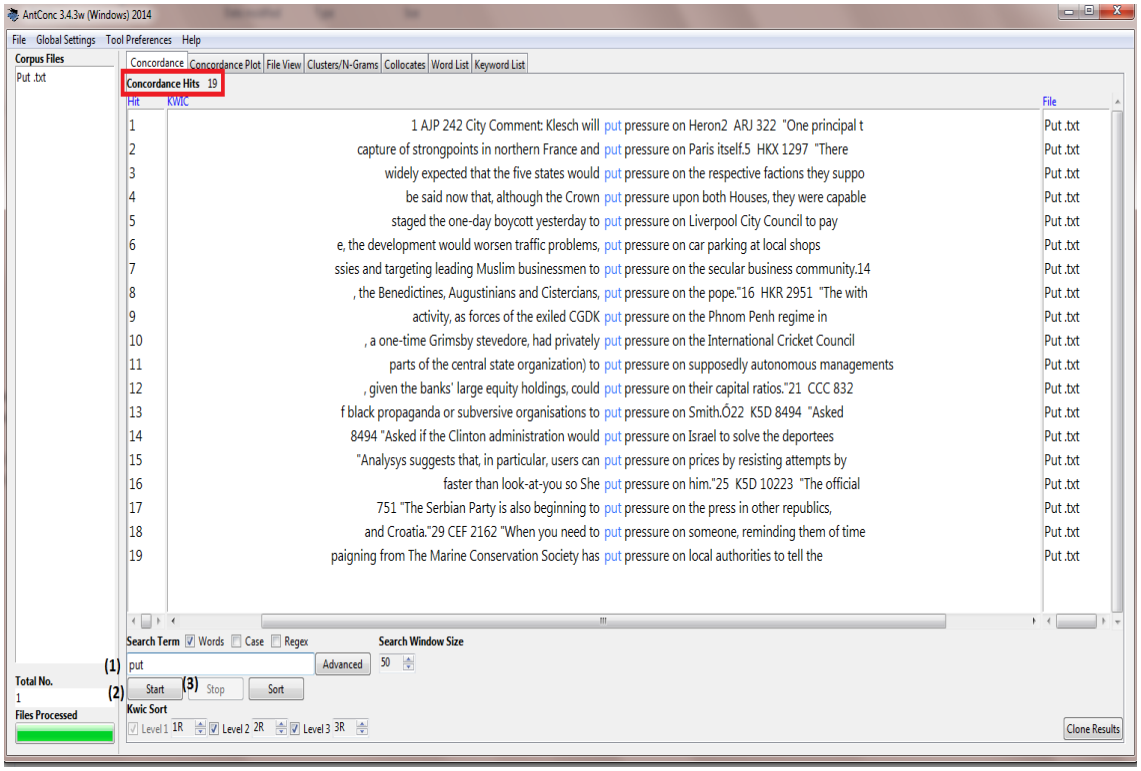


Figure 19

Have you generated the concordance lines? WELL DONE!

Now, let's consider something a bit more advanced: **sorting**.

- What is sorting?

Sorting refers to rearranging the concordance lines according to whether they show the words to the right and/or to the left of the keyword. You can rearrange the lines at three levels:

(4) 0 is the search word

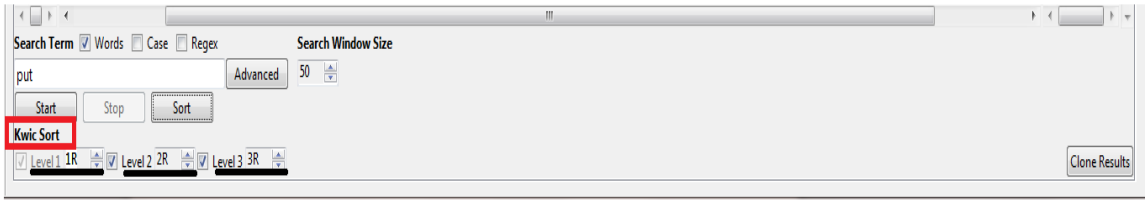
(5) 1R, 2R and 3R are words to the right of the keyword

(6) 1L, 2L and 3L are words to the left of the keyword.

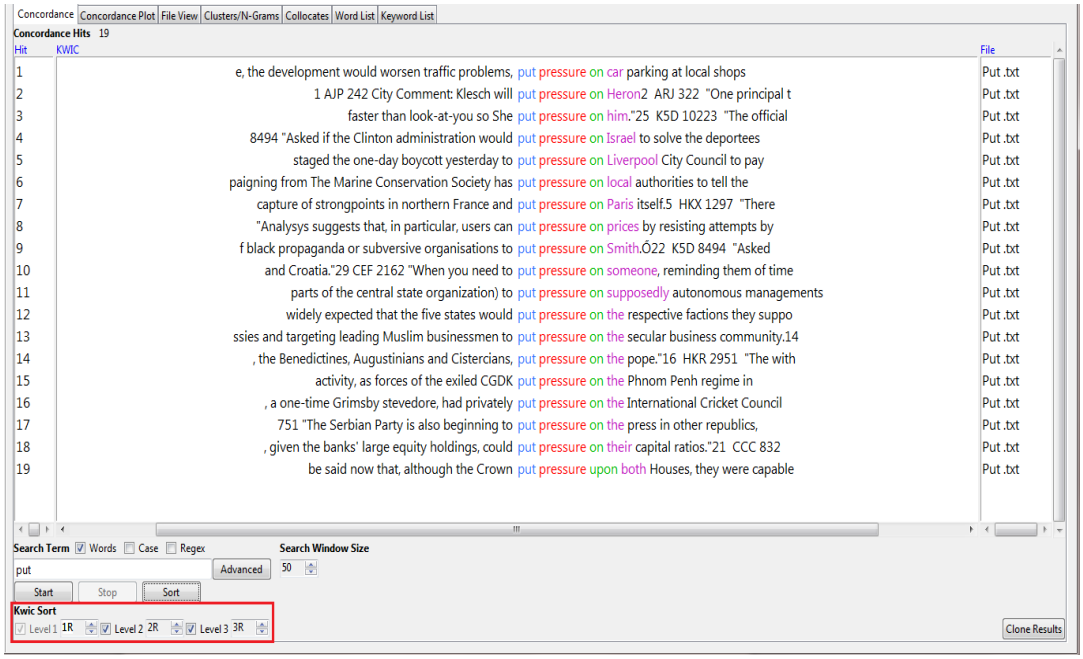
Look at the following example, where '**put**' is the keyword:

- If we want to select the words that appear to the right of '**put**':

We select 1R, 2R and 3R.



- **After selecting the levels, look at the result:**

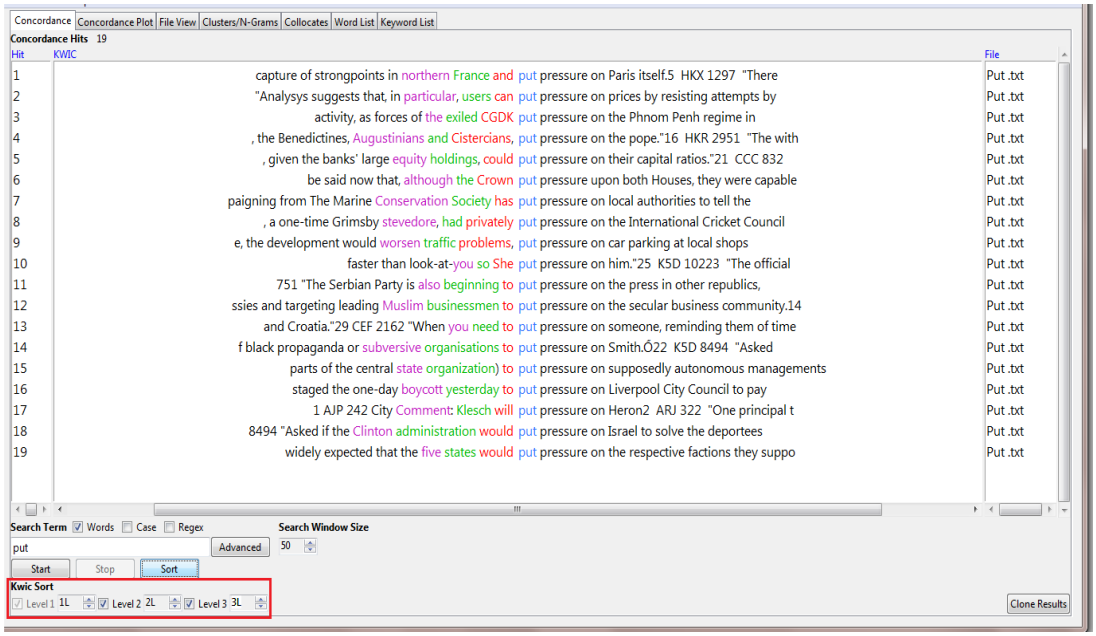


- If we want to select words that appear to the left of '**put**':

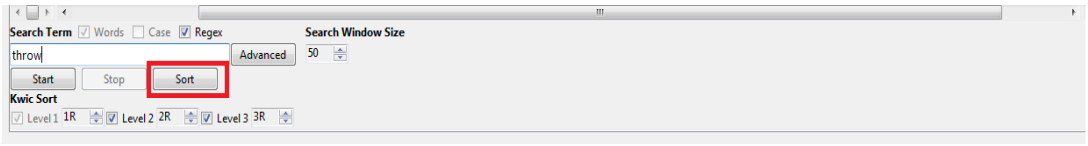
  We select 1L, 2L and 3L.



- **After selecting the levels, look at the result:**



Do not forget to press the 'Sort' button after selecting the levels.



Now, we will do the same steps again! But with different items

Before closing AntConc down, after the 'X' button is pressed, a box will pop up saying 'are you sure you want to exit AntConc?'. Choose 'YES'.

Or, Click on '**File**' in the **menu bar on the left frame of the main window**. Delete the file by choosing '**Close All Files**' in the '**File**' **menu**.

Now let's investigate 'lexical patterns'.

Run an investigation on the following lexical patterns:

1. Near synonyms: stop, end and finish

First, upload a text file by following these three steps:

1. Click on '**File**' in the **menu bar on the left frame of the main window** (Figure 3).

2. Select a file by choosing '**Open File(s)**' in the **File menu**.

3. Select the file named (near synonyms.text.) and click '**Open**'.

To make sure that the upload is complete, look at the **Corpus Files** icon. The number of uploaded files, or '**Files Processed**'.

After uploading the file, we can generate the concordance lines by following these steps:

1. Type the verb '***stop****' into the search box.

2. Click on the '**Start**' button.

3. Set the sorting level to the words that appear to the right of '**stop**:

We select 1R, 2R and 3R.

NOW:

- Look at the resulting list of collocates. What semantic categories do you notice?

We will repeat the same steps with other verbs:

- Look at the resulting list of collocates. What semantic categories do you notice?
- What does this information tell us about *those verbs*?

Click on '**File**' in the **menu bar on the left frame of the main window**.

- Delete the file by choosing '**Close All Files**' in the '**File**' **menu**.

2. Collocations:

Adj + N: heavy rain; strong tea, strong coffee

First, upload new text files by following the same steps:

1. Click on '**File**', in the **menu bar on the left frame of the main window**.
2. Select a file by choosing '**Open File(s)**' in the **File menu**.
3. Select the files named (rain.text.; tea, coffee.text) and click '**Open**'.

After uploading the file, we can generate the concordance lines by following these steps:

1. Type the word '*rain*' into the search box.
2. Click on the '**Start**' button.
3. **Set the sorting level to** the words that appear to the left of '**rain**':

We select 1L, 2L and 3L.
NOW:

- Look at the resulting list of collocates: What does this information tell us about the word 'rain'?
- Do the same for the nouns 'tea' and 'coffee'.

Click on '**File**' in the **menu bar on the left frame of the main window**.
Delete the file by choosing '**Close All Files**' in the '**File**' **menu**.

3. Make + N

First, upload a new text file by following the same steps:

1. Click on '**File**', in the **menu bar on the left frame of the main window**.
2. Select a file by choosing '**Open File(s)**' in the **File menu**.
3. Select the files named (make1.text.; make2.text.) and click '**Open**'.

After uploading the file, we can generate the concordance lines by following these steps:

1. Type the word '*make* into the search box.

2. Click on the '**Start**' button.

3. **Set the sorting level to** the words that appear to the right of '**make**':

We select 1R, 2R and 3R.

- What does this information tell us about the word 'make'?

Do you have any questions?

Conclusion

- How do you think corpus uses may or may not help while teaching English at the Northern Borders University.

Appendix 7: The questionnaire (pre- and post-) (Study Two)

Instructions

Thank you for agreeing to participate in this survey entitled 'A Survey on Teachers' Attitudes towards the Use of Corpus Linguistics in the Classroom'. This survey is designed to be completed within a short amount of time. It consists of two parts and concerns the use of corpus data, corpus-based resources and the corpus approach in the English language classroom. This is not a test, so there are no right or wrong answers, and all responses will be kept strictly confidential. We are interested in your opinion. Please give your answers sincerely, as only this will guarantee the success of the investigation. Thank you very much for your help!

Part I

Your Number: _____

1) Background information

1. What is your gender?

☐Male ☐Female

2. What is your mother tongue?

☐Arabic ☐English ☐Other; please specify: _____

3. What age category do you fall into?

☐< 25 ☐25 to 30 ☐31 to 40 ☐41 to 50 ☐51 to 60 ☐ Over 60

4. I hold the following degree(s):

☐Bachelor ☐Master ☐PhD ☐Other; please specify: _____

5. Have you received any English language teacher training?

☐Bachelor of Education ☐Post-graduate certificate in education ☐None

☐ Other; please specify: _____

6. How long have you been teaching English?

☐< 1 year ☐1 to 4 years ☐5 to 10 years ☐11 to 20 years ☐ > 20 years

7. I mostly teach the following: (Choose all that apply.)

☐ Beginner level ☐ Intermediate level ☐ Advanced level

8. On average, how many hours do you teach per week?

_____

9. Have you ever heard of the word *corpus*, and do you know what it means? Choose one of the answers below.

☐ I have never heard of that word before.

☐ I have heard of it before but have no idea what it means.

☐ I have heard of it before, and I have a rough idea what it means.

☐ I am fairly familiar with corpus linguistics, but I have never done any practical work with corpora.

☐ I have already done some work with corpora.

10. Using your own words, define *corpus.* Even if you do not know or are not sure what it

means, try to explain how you understand the term.

_____

11. Using your own words, define *concordance*.

_____

2) Use of authentic materials (AMs) in English language classes

Authentic materials are real texts produced by native speakers or writers, which are not designed for teaching purposes, but for the speakers of the language such as TV programmes, newspapers and magazines.

Below is a series of statements about your beliefs and attitudes towards the use of authentic materials in language teaching. These statements have no correct answers. They are designed for you to indicate the extent to which you agree or disagree with the ideas expressed. Place a checkmark in the space under the number that is closest to your agreement or disagreement with the statements by using the following scale: [1] I strongly disagree, [2] I disagree, [3] I am not sure, [4] I agree and [5] I strongly agree.

Statements	1	2	3	4	5
1. AMs help improve students' language proficiency more than textbooks do.					
2. I feel confident using AMs in my classroom.					
3. Activities that are planned from excerpts taken from AMs can improve reading and writing skills in Saudi EFL classrooms.					
4. I am willing to use AMs to teach speaking skills.					
5. I prefer to use authentic texts as supplementary materials to textbooks in my classes.					
6. I become annoyed when I am unable to explain to students cultural differences that appear in some of the AMs.					
7. Selecting appropriate AMs is difficult.					
8. Using AMs motivates students to do more reading outside the classroom.					
9. AMs introduce students to how language is used in the real world.					
10. I am willing to use AMs to teach vocabulary.					
11. AMs can particularly help improve the basic skills (reading, writing, speaking and listening) of EFL students in Saudi universities.					
12. I feel that I cannot relate AMs to learners' life experiences.					
13. AMs help overcome some cultural barriers to language learning.					
14. Designing appropriate tasks when using AMs is difficult.					
15. Teachers must rely on AMs to improve language skills in Saudi EFL classrooms.					

16. I am willing to modify the curriculum to include AMs in my classroom.					
17. AMs increase students' knowledge of vocabulary items that they need in real-life situations.					
18. I find AMs interesting.					
19. I am willing to use AMs to teach listening skills.					
20. It is difficult to meet all students' needs when using AMs. *					
21. AMs cause cultural conflicts that hinder comprehension.					
22. AMs are difficult for students to comprehend.					
23. I am willing to use AMs to meet the individual needs of students.					
24. AMs increase students' familiarity with the use of grammar rules in their native language.					
25. I like using AMs to develop communication skills because they show how language is used in the real world.					
26. The use of AMs is time consuming.					
27. I am willing to provide support to my students during the use of AMs.					
28. AMs help develop interest in the language learning process of Saudi EFL students.					
29. AMs meet students' needs.					
30. I prefer to use AMs instead of textbooks in my classes.					
31. I am discouraged from using AMs because of students' level of English.					
32. I am willing to use AMs to teach reading.					
33. Accessing AMs is difficult.					
34. AMs play an effective role in motivating students.					
35. I do not mind switching to the use of AMs in everyday teaching.					
36. AMs make students frustrated.					
37. I am willing to use AMs to teach writing.					

1. How often do you use authentic materials (AMs)?

☐Always ☐Often ☐Sometimes ☐Seldom ☐Never

2. Why do you use or not use AMs in English language classes?

_____

3. At what level do you think that exposure to authentic texts should start?

☐Beginner level

☐Intermediate level

☐Advanced level

_____

3) Computer skills and attitude towards computer use

1. How often do you use a computer per week (for teaching purposes)?

☐Never ☐Less than 30 minutes

☐More than 30 minutes ☐1 hour

☐2 hours ☐3 hours

☐4 hours ☐More than 4 hours

2. Have you received any in-service training on the use of computers for instruction purposes?

☐Yes ☐No

Below you will find a series of statements about your beliefs and attitudes towards the use of computers, in general. These statements have no correct answers. They are designed for you to indicate the extent to which you agree or disagree with the ideas expressed. Place a checkmark in the space under the number that is closest to your agreement or disagreement with the statements by using the following scale: [1] I strongly disagree, [2] I disagree, [3] I am not sure, [4] I agree and [5] I strongly agree.

Statements	**1**	**2**	**3**	**4**	**5**
1. Generally, I feel OK about trying a new program on the computer.					
2. Doing well in computer classes is important for me.					
3. Learning about computers is worthwhile.					
4. If I start to work with a computer, I find it difficult to stop.					
5. Working with computers is not important in my job.					
6. I do as little work with computers as possible.*					
7. I do not feel threatened when others talk about computers.					
8. I cannot think of any way that I will use computers in my career.					
9. I use a computer on a regular basis.					
10. I am not the type who does well with computers.					
11. I can perform important tasks on a computer.					
12. I experience a sinking feeling whenever I think of trying to use a computer.					
13. Knowing how to work with computers will increase my job opportunities.					
14. Computers make me feel uneasy and confused.					
15. I use computers in many ways in my life.					
16. Working with a computer makes me very nervous.					
17. I usually investigate different kinds of software programs.					

18. When I encounter a problem with using a computer and I cannot immediately solve it, I persevere until I find the answer.					
19. I like to experiment with new software programs.					
20. Computers make me feel uncomfortable.					
21. I am not good with computers.					
22. Learning about computers is a waste of time.					
23. I expect to have little use for computers in my daily life.					
24. I need a firm mastery of computer use for my future work.					
25. I work with computer-aided instruction (any computer use in educational settings).					
26. Anything that a computer can be used for, I can do just as well some other way.					
27. I hate using a computer in the classroom.					
28. I think that using a computer is very difficult for me.					

4) Perceptions of teachers' and learners' role in class

Below you will find a series of statements about your beliefs and perceptions towards teachers' and learners' role in language teaching. These statements have no correct answers. They are designed for you to indicate the extent to which you agree or disagree with the ideas expressed. Place a checkmark in the space under the label that is closest to your agreement or disagreement with the statements by using the following scale: [1] I strongly disagree, [2] I disagree, [3] I am not sure, [4] I agree and [5] I strongly agree.

Statements	**1**	**2**	**3**	**4**	**5**
1. Training learners to take responsibility for their own learning is useless because they are not used to such an approach.					
2. I am not willing to negotiate and use tasks and activities to suit students' needs.					
3. Organising your teaching to suit the needs of all students is impossible in a large class.					
4. Because the learner comes to the language classroom with little or no knowledge of the language, he/she is in no position to suggest what the content of the lesson should be or what activities are useful for him/her.					
5. I do not mind using the communicative approach in everyday teaching.					
6. I am happy to supplement the textbook with other materials and tasks to satisfy the widely varying needs of students.					
7. I do like my role as a facilitator in the learning process.					

8. I am willing to organise my teaching to suit the needs of all.					
9. I become frustrated when students do not support my role as a facilitator.					
10. I do not like the learner-centred approach for language teaching.					
11. I am willing to use the learner-centred approach in everyday teaching.					
12. For most students, language is acquired most effectively when it is used as a vehicle for doing something else and not when it is studied in a direct or explicit way.					
13. I believe in students' ability to learn English independently.					
14. Tasks and activities should be negotiated and adapted to suit students' needs rather than imposed on them.					
15. I do not enjoy my role as a facilitator in the learning process.					
16. I am willing to provide training for learners to take responsibility for their own learning because learners are not used to such an approach.					
17. A textbook alone cannot cater to all the needs and interests of students. The teacher must supplement the textbook with other materials and tasks to satisfy the widely varying needs of students.					
18. Negotiating the type of activities and tasks that suit each student's individual level is challenging for me.*					
19. I am willing to allow students to suggest the content of the lesson.					
20. I love using the communicative approach in teaching English.					
21. The role of the teacher in the language classroom is to impart knowledge through activities, such as giving explanations, presenting examples and writing.					
22. The teacher as an 'authority' and as an 'instructor' is no longer adequate to describe the teacher's role in the language classroom.					
23. I do not feel confident asking students to suggest their preferred content for the lesson.					
24. I am willing to change my role from an instructor to a facilitator to guide students in learning for themselves.					
25. The learner-centred approach to language teaching encourages responsibility and self-discipline and allows each student to develop his/her full potential.					

Thank you for taking the time to complete this part of the questionnaire.

Part II:

Your Number: _____

(5) Evaluation of the introductory sessions

Below you will find a series of statements about your evaluation of the provided introductory sessions. These statements have no correct answers. They are designed for you to indicate the extent to which you agree or disagree with the ideas expressed. Place a checkmark in the space under the number that is closest to your agreement or disagreement with the statements by using the following scale: [1] I strongly disagree, [2] I disagree, [3] I am not sure, [4] I agree and [5] I strongly agree.

Statement	**1**	**2**	**3**	**4**	**5**
1. The course usefully explained what a corpus is.					
2. The presented tools were usefully explained.					
3. I had difficulty following the course materials (the handout).					
4. The tasks and exercises in the course materials were ineffective in improving my knowledge of corpus approaches in teaching.					
5. The course explained well what a corpus can be used for.					
6. The course provided a useful introduction on how to use corpora in the classroom.					
7. The hands-on activities were not useful.					
8. The teacher's presentations were clear and easy to follow.					
9. Overall, the corpus approaches explained in the course are a very useful resource for my English teaching.					
10. The presented materials were explained sufficiently.					
11. The teacher was helpful during the hands-on activities.					

Answer the following:

1. How would you rank the course?

Failing	**Satisfactory**	**Good**		**Very good**	
2	3	3+	4	4+	5

2. Which unit/activity did you like the most? Why?

_____

_____

_____

3. Which unit/activity did you like the least? Why?

_____

_____

_____

4. What would you add/delete/change in the sessions?

_____

_____

_____

(6) Attitude towards the uses of corpora in language teaching

Below you will find a series of statements about your attitude towards the uses of corpus linguistics in language teaching. These statements have no correct answers. They are designed for you to indicate the extent to which you agree or disagree with the ideas expressed. Place a checkmark in the space under the label that is closest to your agreement or disagreement with the statements by using the following scale: [1] I strongly disagree, [2] I disagree, [3] I am not sure, [4] I agree and [5] I strongly agree.

Statements	**1**	**2**	**3**	**4**	**5**
1. I would feel OK about trying the corpus tools for use in my teaching.					
2. I would enjoy talking to other teachers about corpus approaches and resources.					
3. I want to use the corpus tools in my upcoming English teaching courses.					
4. Working with corpus resources would make me nervous.					
5. Training teachers on the use of corpus tools would be important to gain confidence in the uses of the corpus approach in the classroom.					
6. A corpus could be a very useful resource to improve students' proficiency level.					
7. Using a corpus for my students would be more helpful for reading than writing in English.					
8. I would be discouraged from using corpora because their texts are too difficult to understand.					
9. If I learned more about the uses of corpora, I would come to like them more.					
10. . Extensive teacher training on using corpus approaches and techniques (one term) would be unnecessary for their successful use in the classroom.*					
11. I think that using the corpus approach in my classroom would be very difficult.					
12. Learning about corpus uses may increase my proficiency level in English.					

13. Using the corpus approach would help my students to learn the meaning of vocabulary.					
14. I am willing to use corpus data for learner-centred activities (such as role play or solving problems in writing).					
15. Students should have extensive training before the corpus approach is applied in learning.					
16. Using a corpus for my students would be more helpful for writing than for reading in English.					
17. I am willing to initiate the use of computer-based corpus instruction in the institution where I teach.					
18. Using corpus resources for my students would be helpful for learning how vocabulary is used in different contexts.					
19. The concordance tool would help me find examples of everyday language.					
20. .Teacher training on using corpus approaches and techniques would be time-consuming and would require at least one term.*					
21. Students' low proficiency level may be an obstacle in using the corpus data in the classroom.					
22. I believe that I would encounter difficulties in using the corpus resources in the classroom because of the speed of my college's Internet connection.					
23. I am willing to use corpus data for teacher-centred activities.					
24. Using corpus resources for my students would improve their English reading skills.					
25. I believe that using corpus resources would be difficult because of limited access to a computer/the Internet.					
26. If I were to use the corpus approach in the classroom, I would train students for at least two weeks.					
27. Using corpus data for my students would be helpful for learning grammar.					
28. I am willing to use corpus data to teach collocations.					
29. I would encounter difficulties with the technical aspects of using corpora.					
30. .Teacher training on corpus uses may have no influence on their use in the classroom.*					
31. The difficult vocabulary on the concordance output would frustrate me.					
32. If I had difficulty with the English language in general, I would search for help in the corpus.					
33. Corpus tools would be useful for teachers' direct use in the classroom.					
34. Corpus data would be useful for teachers in preparing teaching materials.					
35. The training for teachers on corpus uses would be an important factor for the use of the corpus approach in the classroom.					
36. I believe that I would encounter difficulties in using corpora because of the time and effort spent on analysing the data.					

37. My English proficiency level might be an obstacle in using corpora in my teaching practice.					
38. I would be confident in using the corpus approach in the classroom.					
39. I might feel uncomfortable in using corpus resources because of the incomplete sentences in the concordance output (sentences cut off).					
40. Training on using the corpus approach would be essential before applying it in the classroom.					
41. Using corpus tools might make me feel uneasy and confused.					
42. The corpus approach should be introduced in all EFL courses.					
43. I am willing to use corpus data for the creation of concordance-based teaching materials.					
44. Using corpus resources for my students would improve their English writing skills.					
45. I would love learning new ways of applying corpus uses in the classroom.					
46. If I were in doubt about the use of a word, I would search the corpus to find an answer.					
47. Corpus resources would be more helpful than a dictionary for my English classes.					
48. I am willing to use corpus data to teach the differences between the spoken and written varieties of English.					
49. Training on using corpus resources (e.g. AntConc) would be essential before applying them in the classroom.					
50. I would have chosen to focus on corpus linguistics earlier in my studies if I had the option.					
51. I would feel uncomfortable in analysing the concordance output.					

Answer the following:

1. How do you think teachers and learners would benefit from corpus data?

_____

_____

_____

2. What are your views regarding the advantages and disadvantages of the application of corpus linguistics in English language teaching?

_____

_____

_____

3. What are the possible positive and negative aspects of teaching through the use of corpora in your classroom?

_____

_____

_____

4. In relation to your own future teaching, do you think you would use corpora as a resource in the preparation of your teaching and/or teaching materials? Why/why not?

_____

_____

(7) Attitude towards corpus uses for teaching General Verbs (GVs) at the intermediate level

Below you will find a series of statements about your attitude towards the use of the corpus linguistic approach for teaching GVs (e.g. make, have, do, get, give, take*) in language teaching. These statements have no correct answers. They are designed for you to indicate the extent to which you agree or disagree with the ideas expressed. Place a checkmark in the space under the label that is closest to your agreement or disagreement with the statements by using the following scale: [1] I strongly disagree, [2] I disagree, [3] I am not sure, [4] I agree and [5] I strongly agree.*

Statement	**1**	**2**	**3**	**4**	**5**
1. GVs would somehow be difficult to teach when applying the corpus approach.*					
2. The corpus approach would be useful for the students to learn GVs at the intermediate level.					
3. I feel I would not be able to teach students how to use this corpus approach for learning GVs.*					
4. Although using this approach for teaching GVs would have some benefits, I would not use it with my students.*					
5. My students would need help all the time in using this approach because they are not independent.					
6. I would be willing to use this approach only as a supplementary resource in the classroom to enrich the curriculum with GV examples.					
7. The corpus approach would increase students' knowledge of GVs, which they need in real-life situations.					
8. I would enjoy using AntConc for teaching GVs.					

9. This approach would help students become aware of the different meanings associated with GVs.					
10. This approach to learning GVs would help reduce verb misuse.					
11. I would be willing to modify the curriculum to include corpus-based activities on GVs in the regular classroom.					
12. The corpus skills proficiency of the teacher would influence students' attitudes towards this approach for learning GVs.					
13. .					
14. I think that the corpus approach used to teach GVs would be time-consuming in terms of preparing the teaching materials.					
15. I think that my students' proficiency level would make selecting GV materials difficult when applying this approach.					
16. I would be frustrated to use this approach for teaching GVs if the students received insufficient training on it.					
17. I would not mind switching to the use of this approach in everyday teaching to find examples of GVs instead of using textbooks.					
18. Learners' limited knowledge of GVs may demotivate me from using this approach.					
19. I think that the corpus approach used to teach GVs would be time-consuming in terms of lesson time.					
20. The corpus approach would be useful for learning GV collocates.					
21. I would enjoy training students to use the corpus approach for learning GVs.					
22. I would be willing to use this approach if students found it helpful for learning GVs.					
23. This approach would help students produce new examples of GVs.					
24. I would not be willing to use this approach to teach GVs in my classroom because it would add too much work to the preparation of teaching materials.					

Thank you for taking the time to complete this part of the questionnaire[13].

[13] The items with * had been deleted form the analysis to improve the reliability of the questionnaire see Chapter 7.

Appendix 8: A sample of the analysis conducted on one of the open-ended questions in the questionnaire (Study Two)

See the attached CD.

Appendix 9: Interview guide questions (Study Two)

The first set of questions:

1. What age category do you fall into?
    a. 25–30, 31–40, 41–50, 51–60
2. How long have you been teaching English? And where?
3. What is your mother tongue?
4. Which level do you currently teach?
5. Have you received any English language teacher training?
6. What is your highest qualifications(s)?
7. On average, how many hours do you teach per week?
8. Have you ever heard the term corpus before taking part in this study?

The second set of questions:

Authentic materials

9. Do you prefer the use of authentic materials for teaching English? Why or why not?
10. If you use authentic materials, how do you think they can improve a learner's level?
11. How do you think the cultural factor in authentic materials affects English learning in the classroom?
12. What are the barriers, if any, to using authentic materials in your classroom?

Computer skills

13. Can you evaluate your computer skills in both general and classroom use?
14. Are you willing to use new technologies, such as corpus tools and software, to teach English? Why or why not?

Teacher's role

15. Can you describe the role of learners in your normal classroom?

16. How do you see your role as a teacher? For example, are you there to transmit knowledge only?
17. Can you discuss the roles of teachers and learners from your perspective?

The corpus approach in the classroom

18. How do you evaluate a course?
19. How do you derive benefit from a course?
20. Will you use the corpus approach in your teaching? Why or why not?
21. Can you evaluate the corpus approach used with intermediate students for learning GVs?
22. In general, what are the advantages and/or disadvantages of using the corpus approach and tools in teaching English?
23. Can the course help you in preparing your own teaching materials?

Closing questions

24. Would you like to add anything?
25. Do you have any specific comments on your experience in the course (for example, on hand-outs, presentations, instructors or content)?

Appendix 10: Interview transcriptions (Study Two)

Appendix 10.A. Hafya interview (in-service teacher, exploratory interviews)

See the attached CD.

Appendix 10.B. Ella interview (in-service teacher, post questionnaire interviews)

See the attached CD.