THE EFFECTS OF TASK FEATURES ON LEXIS AND GRAMMAR IN L2 ORAL PERFORMANCE

Ilkay Gilanlioglu

VOLUME I

Thesis submitted in fulfilment of the requirements for the degree of
Doctor of Philosophy
University of London Institute of Education
July 2002
ABSTRACT

This thesis is based upon an experimental study designed to establish the effects of task features on lexis and grammar in L2 (English as a second or foreign language) learners’ oral performance by investigating the complex interactions between a wide range of interrelating variables. Specifically, task conditions (the presence or absence of planning time with descriptive vs. narrative tasks) are analysed with respect to lexical measures (word range, lexis-to-grammar ratio, lexical density, lexical choice, syllabic range, lexical strategy use and evidence for lexical stretching) and to grammatical measures (complexity and accuracy), as well as to measures of fluency.

The thesis aims to look into the relationship between lexis and grammar within the context of spoken discourse where task features like planning time and task type interact. It is particularly focussed on lexis (which has so far been underplayed in L2 acquisition research). The concept of lexical stretching is proposed, as a parallel to the already familiar notion of grammatical/interlanguage stretching, and evidence for lexical stretching is provided by drawing parallels between the quantitative, statistical analysis of oral performances and qualitative analysis of protocols held with learners on the completion of tasks.

The research study addresses such questions as the effect of the provision of planning time on lexical vs. grammatical stretching: is there a trade-off between them, and is this further influenced by task type (operationalised here as descriptive vs. narrative-based tasks)? It also examines the ways in which contextual and interpersonal factors influence interlanguage use, particularly the use of lexis and grammar.

Based on the analyses (both quantitative and qualitative), it is concluded that not only are there interdependencies between lexis and grammar, and most strikingly within lexis, but also there are contextual and interpersonal constraints on L2 learners’ output, suggesting an interaction of task features and contextual factors.
TABLE OF CONTENTS

ABSTRACT ........................................................................................................... 2
TABLE OF CONTENTS ............................................................................................ 3
ACKNOWLEDGEMENTS ......................................................................................... 12

CHAPTER ONE: INTRODUCTION TO THE STUDY

1.0 Introduction ..................................................................................................... 15
1.1 Overview of the role of lexis and grammar in English as L2 ..................................... 15
1.2 Incentive for research into lexis ......................................................................... 19
   1.2.1 Background information on the context of the study .................................. 19
   1.2.2 Personal observations .............................................................................. 21
1.3 Possible reasons for lexical retrieval problems ................................................. 22
1.4 Strengths and weaknesses of current approaches to lexis .................................... 23
1.5 The link between information processing and communicative task design .............. 24
1.6 Research design and method ........................................................................... 24
1.7 Analysis and discussion of statistical results ..................................................... 25
1.8 Focus on the learner’s perceptions of using lexis .............................................. 25
1.9 Conclusions and implications for further research .......................................... 25
<table>
<thead>
<tr>
<th>Section</th>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.0</td>
<td>Introduction</td>
<td>27</td>
</tr>
<tr>
<td>2.1</td>
<td>Product and process perspectives of lexis: definition of terms</td>
<td>27</td>
</tr>
<tr>
<td>2.2</td>
<td>Learning lexis and using lexis</td>
<td>28</td>
</tr>
<tr>
<td>2.3</td>
<td>Learning lexis as product: (single) words</td>
<td>29</td>
</tr>
<tr>
<td>2.3.1</td>
<td>Linguistic and semantic definitions of lexis</td>
<td>29</td>
</tr>
<tr>
<td>2.3.1.1</td>
<td>The orthographic perspective</td>
<td>30</td>
</tr>
<tr>
<td>2.3.1.2</td>
<td>The phonetic perspective</td>
<td>31</td>
</tr>
<tr>
<td>2.3.1.3</td>
<td>The phonological perspective</td>
<td>31</td>
</tr>
<tr>
<td>2.3.1.4</td>
<td>The semantic perspective</td>
<td>32</td>
</tr>
<tr>
<td>2.3.1.5</td>
<td>The grammatical perspective</td>
<td>33</td>
</tr>
<tr>
<td>2.3.2</td>
<td>Definition of the 'word': summary and implications</td>
<td>34</td>
</tr>
<tr>
<td>2.3.3</td>
<td>Knowledge of a word vs. coming to know a word</td>
<td>35</td>
</tr>
<tr>
<td>2.4</td>
<td>The role of memory and direct (isolationist) memorisation of lexis</td>
<td>38</td>
</tr>
<tr>
<td>2.5</td>
<td>General limitations of memorisation techniques</td>
<td>42</td>
</tr>
<tr>
<td>2.6</td>
<td>Lexis as product: multiword units</td>
<td>43</td>
</tr>
<tr>
<td>2.6.1</td>
<td>Lexical chunks and language use</td>
<td>44</td>
</tr>
<tr>
<td>2.6.2</td>
<td>Strengths and limitations of approaches to multiword units</td>
<td>45</td>
</tr>
<tr>
<td>2.7</td>
<td>Utilising multiword units in syllabus design and L2 pedagogy</td>
<td>46</td>
</tr>
<tr>
<td>2.8</td>
<td>Process views of learning lexis</td>
<td>51</td>
</tr>
<tr>
<td>2.8.1</td>
<td>Learning grammar from lexis: lexis as a pre-existing resource</td>
<td>51</td>
</tr>
<tr>
<td>2.8.2</td>
<td>Learning lexis as an incremental process: incidental learning through reading</td>
<td>55</td>
</tr>
<tr>
<td>2.8.3</td>
<td>Limitations of the views of lexis discussed</td>
<td>56</td>
</tr>
<tr>
<td>2.9</td>
<td>A case for lexis: focus on lexis in language use through regulative contextual factors</td>
<td>57</td>
</tr>
<tr>
<td>2.10</td>
<td>Outline of the alternative view</td>
<td>60</td>
</tr>
</tbody>
</table>
CHAPTER THREE: THE FRAMEWORK FOR THE STUDY

3.0 Introduction ................................................................. 66
3.1 Setting up the theoretical framework for the study: three main approaches .............................................................. 67
3.2 Aspects of information processing ........................................ 69
  3.2.1 Main components of memory and their function .......... 70
  3.2.2 Limited capacity ...................................................... 70
3.3 Information processing models ............................................ 71
  3.3.1 Controlled and automatic processing ............................. 71
  3.3.2 Declarative and procedural knowledge ...................... 72
  3.3.3 Dual-mode information processing ................................. 73
3.4 Speech production as information processing: Levelt’s model ...... 74
  3.4.1 Monitoring ............................................................. 76
  3.4.2 Planning ............................................................... 76
3.5 Main assumptions of the information-processing view ............. 78
3.6 Practice in language use leading to proceduralisation .......... 78
  3.6.1 Interaction in L2 learning: theoretical background .......... 80
  3.6.2 Pedagogical proposals: three options in L2 teaching ...... 83
    3.6.2.1 Focus on forms (Option 1) ................................ 84
    3.6.2.2 Focus on meaning (Option 2) ............................. 87
    3.6.2.3 Focus on form (Option 3) .................................. 91
3.7 Pedagogical intervention for focus on form: contextual regulation .. 93
  3.7.1 Regulating task types .............................................. 94
  3.7.2 Regulating planning time ......................................... 95
  3.7.3 Regulating topic (familiarity) .................................... 96
  3.7.4 Regulating context-gap (shared knowledge) .................. 97
  3.7.5 Regulating time available for task completion ............. 97
  3.7.6 Post-task activities ............................................... 98
  3.7.7 Task repetition .................................................... 98
3.8 The facilitative role of planning in stimulating a focus on form ..... 99
3.9 The facilitative role of planning in interlanguage (IL) development ................................................................. 101
CHAPTER FOUR: THE RESEARCH STUDY

4.0 Introduction .......................................................... 104
4.1 Hypotheses .......................................................... 106
4.2 Participants ......................................................... 108
4.3 Tasks .................................................................. 109
  4.3.1 Descriptive task .............................................. 109
  4.3.2 Narrative task .................................................. 112
4.4 Operationalisation of planning time ......................... 115
4.5 Design ............................................................. 116
4.6 Procedures .......................................................... 117
4.7 The semi-structured interview ................................ 119
4.8 Measures and reliability of codings ......................... 120
  4.8.1 Lexical measures ............................................. 120
  4.8.2 Grammatical measures .................................... 123
  4.8.3 Fluency measures ........................................... 126

CHAPTER FIVE: STATISTICAL RESULTS AND DISCUSSION

5.0 Introduction .......................................................... 128
5.1 Results for Hypotheses 1-6 ..................................... 129
5.2 Results for Hypothesis 7 ......................................... 135
5.3 Results for Hypothesis 8 ......................................... 138
5.4 Results for Hypothesis 9 ......................................... 139
5.5 Results for Hypothesis 10 ....................................... 140
5.6 Results for Hypothesis 11 ....................................... 141
5.7 Summary of results and discussion ......................... 143
  5.7.1 Lexical complexity ........................................... 145
    5.7.1.1 Lexical richness: schematic vocabulary .......... 145
    5.7.1.2 Lexical richness: variety (range) of words .... 147
    5.7.1.3 Syllabic range: monosyllabic, bisyllabic, .... 149
      polysyllabic .................................................... 149
CHAPTER SEVEN: CONCLUSION

7.0 Introduction ........................................................... 218
7.1 Conclusions with further implications .................................... 218
  7.1.1 Implications for language testing ............................... 218
  7.1.2 Implications for L2 pedagogy ...................................... 220
  7.1.3 Implications for research methodology .......................... 221
7.2 Future directions for research into planning, lexis and grammar ..... 223
7.3 A final note .................................................................. 224

BIBLIOGRAPHY ................................................................ 226

LIST OF TABLES AND FIGURES

Figure 2.1: Product approach to L2 lexical learning: linear and static .......... 62
Figure 2.2: Process approach to L2 lexical learning: non-linear and progressive .................................................. 62
Table 3.1: Three pedagogical options ...................................... 84
Table 4.1: Design of experimental groups ................................... 116
Table 4.2: Distribution of dyads by gender .................................. 117
Table 5.1a: Effects of planning and task type on lexical complexity measures: type-token ratio .................................. 130
Table 5.1b: Effects of planning and task type on lexical complexity measures: lexical-to-grammatical word ratio .......... 130
Table 5.1c: Effects of planning and task type on lexical complexity measures: lexical word range .................................. 131
Table 5.1d: Effects of planning and task type on lexical complexity measures: grammatical word range ................................ 131
Table 5.1e: Effects of planning and task type on lexical complexity 
measures: lexical density ........................................ 131

Table 5.2a: Effects of planning and task type on lexical complexity 
(syllable ranges): monosyllabic word range .................. 133

Table 5.2b: Effects of planning and task type on lexical complexity 
(syllable ranges): two-syllable word range .................. 134

Table 5.2c: Effects of planning and task type on lexical complexity 
(syllable ranges): polysyllabic word range .................. 134

Table 5.3a: Effects of planning and task type on lexical strategy use: 
L1-based lexical strategy use .................................... 136

Table 5.3b: Effects of planning and task type on lexical strategy use: 
L2-based lexical strategy use .................................... 136

Table 5.3c: Effects of planning and task type on lexical strategy use: 
lexical avoidance strategy use .................................... 136

Table 5.4: Effects of planning and task type on lexical accuracy ....... 138

Table 5.5a: Effects of planning and task type on grammatical complexity: 
clauses per C-unit .................................................. 139

Table 5.5b: Effects of planning and task type on grammatical complexity: 
words per C-unit .................................................. 139

Table 5.6: Effects of planning and task type on grammatical accuracy: 
error-free clauses .................................................. 141

Table 5.7a: Effects of planning and task type on fluency: dysfluency rate .... 142

Table 5.7b: Effects of planning and task type on fluency: pruned speech 
rate ........................................................................ 142

Table 5.8: Summary of results ........................................ 144

Figure 5.1: Significant effects of task features on L2 performance features ... 159

Figure 5.2: Monologic vs. dialogic discourse and lexis ..................... 162

Figure 6.1: Case1 (+Nar) compared to Overall Means for +Nar & –Nar: 
accuracy, complexity, fluency .................................... 171

Figure 6.2: Case1 (+Nar) compared to Overall Means for +Nar & –Nar: 
lexical measures .................................................... 176

Figure 6.3: Case1 (+Nar) compared to Overall Means for +Nar & –Nar: 
syllabic range ...................................................... 178
Figure 6.4: Case1 (+Nar) compared to Overall Means for +Nar & –Nar: lexical strategy use .......................................................... 179
Table 6.1: Correspondence of pre-planning notes to oral performance: Case1 ................................................................. 183
Figure 6.5: Case2 (+Nar) compared to Overall Means for +Nar & –Nar: accuracy, complexity, fluency ........................................... 193
Figure 6.6: Case2 (+Nar) compared to Overall Means for +Nar & –Nar: lexical measures ......................................................... 200
Figure 6.7: Case2 (+Nar) compared to Overall Means for +Nar & –Nar: syllabic range .............................................................. 202
Figure 6.8: Case2 (+Nar) compared to Overall Means for +Nar & –Nar: lexical strategy use .......................................................... 203
Table 6.2: Correspondence of pre-planning notes to oral performance: Case2 ................................................................. 206
Table 6.3: Synthesising Case1 & Case2 ............................................. 214

LIST OF APPENDICES

Appendix 4.1a: Descriptive Task: Kitchen – Copy (A)/Master .................. 257
Appendix 4.1b: Descriptive Task: Kitchen – Copy (B)/Jumbled ............... 258
Appendix 4.2a: Descriptive Task: Study – Copy (A)/Master .................... 259
Appendix 4.2b: Descriptive Task: Study – Copy (B)/Jumbled ................. 260
Appendix 4.3a: Narrative Task: Skiing Holiday – Speaker’s Copy .......... 261
Appendix 4.3b: Narrative Task: Skiing Holiday – Listener’s Copy ........... 262
Appendix 4.4a: Narrative Task: Sweet Home – Speaker’s Copy .......... 263
Appendix 4.4b: Narrative Task: Sweet Home – Listener’s Copy .......... 264
Appendix 4.5: Instructions for Task Implementation .................................. 265
Appendix 4.6: The Retrospective Semi-structured Interview ................. 273
Appendix 4.7: Transcripts of the Experimental Data: PART I/Analysis I ... 278
Appendix 4.8: Transcripts of the Experimental Data: PART II/ Analysis II ................................................................. 384
Appendix 4.9: Transcripts of the Experimental Data: PART IIII
Analysis III ................................................................. 494
Appendix 4.10: Measures and Symbols in Data Analyses ................. 615
Appendix 4.11: Data Coded by Coder 1 (IG: Researcher) .................. 630
Appendix 4.12: Data Coded by Coder 2 (RS: Independent Coder) ....... 674
Appendix 4.13: Extract of Computer Output of Intercoder Reliabilities ...... 717
Appendix 4.14: Definition of Measures with Guidelines for Coding:
Fluency, Complexity, Accuracy and Lexical Strategies ............... 721
Appendix 4.15: Grammatical Words (Closed-class words) ................... 731
Appendix 4.16: Other Words ................................................. 745
Appendix 4.17: Specifications on Grammatical and Lexical Word
Counts (PART II/Analysis II) .................................... 747
Appendix 4.18: File for Syllable Counts (‘Polysyllable’) ..................... 749
Appendix 5.1: Extract of Computer Output of Analysis I: Results 1 ...... 766
Appendix 5.2: Extract of Computer Output of Analysis II: Results 2 ...... 789
Appendix 5.3: Extract of Computer Output of Analysis III: Results 3 ...... 798
Appendix 6.1a: Transcripts of Protocol with Case 1 ......................... 813
Appendix 6.1b: Hand-written pre-planning notes of Case 1 ................ 817
Appendix 6.2a: Transcript of Protocol with Case 2 ........................... 818
Appendix 6.2b: Hand-written pre-planning notes of Case 2 ............... 823
ACKNOWLEDGEMENTS

First of all, I am most grateful to Dr Rob Batstone, my supervisor, without whose unfailing encouragement and advice this study would never have been completed. Moreover, his patience and understanding were most appreciated.

My thanks are also due to Professor Henry Widdowson and Professor Guy Cook for the stimulating environment they have created in the Academic Group Research Seminars, from which I have greatly benefited. I would also like to thank the other members of the Group as well as the fellow research students for their comments on the two presentations (at the proposal stage and after data collection) I did in the course of preparing the thesis.

I am further indebted to Banu Barutlu, the Director of School of Foreign Languages, and Naz Dino, the Chairperson of the Department of Basic English, at the Middle East Technical University for granting me permission to carry out the experimental study and use the resources in the Department. My thanks are due to my colleagues who put me in contact with their students, and particularly to those students who volunteered to participate in the study.

I also acknowledge Ozlem Gurkan’s help with doing some of the drawings used in the study, and Fusun Konyali’s assistance with arranging the rooms where the pictures used in the experiment were taken. I would also like to thank Aysegul Deliyusuf for offering her expertise in computers and for the technical support she provided in writing the computer programme used in the analysis, and Erday Bilsoy for letting me use his scanner to scan the pictures. My thanks also go to Richard Spiby for independently coding a portion of the data for various measures, and Nilgun Sungurtekin for acting as an independent coder in syllable counts.

I am further grateful to Dr Jane Hurry and Charlie Owen for their advice on statistics.
My thanks also go to Sybil Spence for her patient proofreading of the study. I would also like to give my sincere thanks to my niece Havva Dinc, and Anil Soyumert for their interest in the research.

I also have a number of relations and friends in London that I would like to thank for their support, friendship and hospitality: Funda and Izzet Gilanlioglu, Cemaliye, Hasan and Erkin Behjet, Salih Gilanli and Belgin Alkis.

Last but not least, I am indebted to my family – my parents, brothers and my sister – for their unflagging support and their confidence in me.
To my parents, Ayten and Enver Gìlanlıoglu
CHAPTER ONE

INTRODUCTION TO THE STUDY

1.0 Introduction

In this chapter, I will first present an overview of the role of lexis and grammar in English as a second or foreign language (L2). This overview will be followed by some background information on the context where the research study was undertaken – the Department of Basic English of School of Foreign Languages (SFL) at the Middle East Technical University (METU). The observation that learners in this learning environment were generally dissatisfied with their success in learning and producing lexis as well as the way lexis was treated in the syllabus and in the classroom gave me a strong incentive to explore the prospect of exploiting the spoken discourse. A major implication suggested is the link between task design and information processing, which then will form the framework for the experimental work. In this framework, I will focus on current approaches to lexis. The rest of the chapter outlines the research design and method used in the study, the analysis and discussion of statistical results, the learner’s perspective based on semi-structured interviews and the conclusion, respectively.

1.1 Overview of the role of lexis and grammar in English as L2

For L2 learners of English lexis and grammar are two challenging areas of language. At the same time, most L2 learners would agree that using the appropriate lexis and grammar has a significant effect on how well messages are communicated in speech as well as in writing. Given the crucial role of lexis and grammar in achieving effective communication, L2 learners cannot afford to dispense with lexis or grammar. However, as far as spoken discourse goes (and particularly at initial stages of L2 development), lexis is called upon relatively more often to establish meaning.

1 The term ‘L2’ is used to refer to second or foreign language throughout the thesis.
than grammar. Though L2 learners draw more on shared knowledge and context in oral communication and thus rely less on grammar, lexis remains an indispensable means for achieving communication. Lexical resources are the ‘survival kit’ that the L2 learner falls back on when grammatical resources do not suffice. It is no wonder that on a visit to another country learners carry dictionaries or phrase books, rather than grammar books. The *Penguin Books* series of phrase books are popular examples: *German Phrase Book*, Hitchin and Norman, 1968; *Swedish Phrase Book*, Waters and Norman, 1972; *Greek Phrase Book*, Stangos and Norman, 1973; *Romanian Phrase Book*, Vorvoreanu and Norman, 1973. In addition, other commercially available books on collocation (e.g. *LTP Dictionary of Selected Collocations* edited by Hill and Lewis, 1997) and phrasal verbs (e.g. *Phrasal Verbs* by Collins Cobuild, 1989) have been in increasing demand recently.

Lexis and grammar are complementary to each other in communication. They both have a communicative role to play. Words serve to establish meaning. When contextual clues suffice, words do well on their own. As Widdowson (1990:82) exemplified it, in the context of the operating theatre the surgeon’s utterance ‘Scalpel!’ would mean ‘Pass me that particular scalpel’. So on some occasions, such as the case of the operating theatre, communication can be achieved through lexical means only. There seems to be no need for grammar. What makes this possible is the presence of sufficient contextual clues, that is, ‘shared knowledge’. If, however, there is insufficient contextual support, words will be subjected to some adaptation and arrangement to fine-tune the message (i.e. narrow down contextual possibilities) so as to achieve communication. This is where grammar comes in. As Widdowson (1990:83) points out, in the context of the operating theatre ‘words alone are enough to indicate meaning because of the high degree of contextual determinacy’; however, ‘on other occasions, indeed on most occasions, we cannot count on the context complementing words so closely, occasions when more precision is needed to identify the contextual features which are to be related to the conceptual meaning of the words to achieve indexical meaning [emphasis in original]’. Grammatical elaboration then is necessary when words (without or insufficient contextual cues) fall short of pointing to the required meaning.
Lexis and grammar act upon each other to determine meaning. The extent to which lexis and grammar are deployed is decided according to the amount of shared contextual knowledge for the required meaning. Widdowson (1990:86) wrote:

The greater the contribution of context in the sense of shared knowledge and experience the less need there is for grammar to augment the association of words. The less effective the words are in identifying relevant features of context in that sense, the more dependent they become on grammatical modification of one sort or another.

There seems to be no hard and fast distinction between lexis and grammar. They are complementary to each other and it seems that they are placed on a continuum. Lexical phrases (Nattinger and DeCarrico, 1992) or lexicalised sentence stems (Pawley and Syder, 1983) are a case in point. These phrases have also been referred to as *lexico-grammatical units* (Widdowson, 1990:92) since they do not satisfactorily fit either category – lexis or grammar. They are formulaic in nature as they seem to be stored in the memory as chunks and produced as such, rather than composed by applying syntactic rules. They are ready-made units. When recalled and used in communication, they seem to increase fluency ‘... simply because they are stored and retrieved as whole chunks’ (Nattinger and DeCarrico, 1992:114). Among the examples provided by Pawley and Syder (1983) are the following:

- I see what you mean.
- That’s easier said than done.
- It’s easy to talk.
- Think twice before you do that.

There is still variation among these ‘lexico-grammatical units’. Some are fixed (i.e. they do not seem to allow any adaptation), whereas some are more flexible (i.e. they are more tolerant of adjustment).

In sum, from a communicative perspective, grammar and lexis seem to be complementary to each other. Context appears to be a determinant in the extent to which grammar and lexis are drawn upon. Lexis and grammar should then be seen along a continuum rather than as two distinct categories since there appears to be no hard and fast distinction between them. This is evident from formulaic expressions, also referred to as *lexico-grammar*, which fail to fall into either the category of lexis
or grammar unproblematically. However, such ‘formulaic lexico-grammatical units are left rather in limbo’ within the view that treats grammar and lexis apart (Widdowson, 1990:92). Not only do they pose a problem in terms of categorisation as they vary in their lexical or grammatical character but also of the way in which they might be treated in L2 learning/teaching.

From the L2 learner’s viewpoint, learning and using lexis appears to be a formidable task to tackle. My experience in the context of L2 teaching has been that L2 learners of English have often reported lexis to be the most ‘serious’ problem – one that forms a major barrier to their learning and communication. I have repeatedly encountered the following question: how can I improve my vocabulary. Conventionally, the advice the learner gets is that they should use various memorisation strategies through, for example, flashcards (where the L2 word is written at the front and the L1 translation at the back) or the keyword technique (where the L2 word is associated with a sound-like L1 word). Alternatively, one can suggest that the learner use mind webs where the new L2 word is somehow associated with previously learnt vocabulary. Others believe that the learner facing this problem should read more. Reading in L2 is thought to help them improve their vocabulary. Although such alternative pieces of advice may contribute to the learner’s grasp of lexis to a varying extent, they usually do not put his/her mind at ease. Such kind of advice seems to be helpful at the receptive level, but perhaps not as useful at the productive level. Put another way, the learner will continue to raise concerns about not being able to recall and use the lexis appropriately as the need arises in oral communication. Rarely is the learner advised that s/he should improve his/her vocabulary in actual language use in oral communication. Nor does the syllabus or methodology cater for such a means for vocabulary development. At least this has been the case in the Department of Basic English at the Middle East Technical University. This specific need to exploit the spoken mode of communication in improving learners’ vocabulary was the primary motivation for the present research study.
1.2 Incentive for research into lexis

Several factors gave me incentive to undertake the present research study. One source of motivation was the features of the learning environment where the research study was carried out. Another factor that motivated the current study is based on my personal observations of the ways in which lexis was treated, and particularly learners' dissatisfaction with their productive vocabulary skills. These factors led to a consideration of utilising the spoken mode as a pathway to facilitating vocabulary use and learning.

1.2.1 Background information on the context of the study

The study was carried out at the Department of Basic English (DBE) of School of Foreign Languages (SFL) at the Middle East Technical University (METU). METU is a reputable English-medium university in Ankara. Being a multi-national university, METU accepts students from a wide range of countries. Students from the Middle East constitute the majority of the overseas student population. Most students, however, are Turkish-speaking and English is their L2.

METU requires high standards of the candidates. They are usually offered a place based on their success in a centralised University Entry Exam. Most departments at METU accept students ranking in the top one-hundred band. Considering that the number of students taking the exam each year is, on average, around one and a half million, those who are offered a place are high-calibre. Generally speaking, METU students can also be characterised as motivated, hardworking and ambitious.

The Department of Basic English of School of Foreign Languages, where the experimental work was carried out, offers intensive English programmes to those students who register at METU but who are not proficient in English. They can be exempted from the language requirement and start their undergraduate programmes on condition that they have a TOEFL score of 550 (or an equivalent IELTS score) or that they get at least 60% in the Proficiency Test administered by the SFL. Otherwise,
they have to attend an intensive English programme for one or two semesters, depending on their level of proficiency in English. Following the Proficiency Test, students who are not proficient enough to pursue their studies in their chosen majors are given a Placement Test. The students are grouped according to the results of this test. There are five groups: Beginners, Elementary, Pre-intermediate, Intermediate and Upper-intermediate. The number of hours of instruction ranges between four and six hours per day, i.e. between twenty and thirty hours per week. It is only the Upper-intermediate group students that are allowed to take a Proficiency Test at the end of the first semester. Generally, the majority of these students transfer to their departments based on the results of the January Proficiency Test. The rest attend the intensive English programmes for one year at the DBE.

The DBE designs intensive English programmes for Elementary to Upper-intermediate level to teach the four basic language skills – listening, reading, writing and speaking – so that students will be able to cope with the subject matter in their respective departments. However, in terms of skill development, reading seems to receive greater attention. As regards language areas, it is grammar that is strongly emphasised. There is greater concern for grammatical accuracy and developed reading skills. Lexis, on the other hand, receives relatively less attention, though it is considered to be an essential component of L2 development. What is more, it is treated rather haphazardly. There are neither clear indications in the syllabus as to what kind of lexis learners need to be familiar with, nor how such lexis can be better learned. The common classroom practice is one in which learners are encouraged to learn vocabulary either through reading or through individual strategies that are mainly based on some form of memorisation.

In brief, while grammar and reading are stressed in the syllabus as well as in classroom practice, lexis seems to be underplayed.
1.2.2 Personal observations

Over the years, I have repeatedly observed that learners find vocabulary difficult to deal with. Several reasons may account for this learner perception. One common cause is that learners are faced up to lexis at the very first contact with L2. This means that they should inevitably prioritise communication and therefore vocabulary from initial stages. It is usually the lack of lexical resources that the L2 learner blames in case of communication breakdown.

Another factor that makes learning vocabulary a difficult task is that there is an infinite number of words (as opposed to finite number of grammar rules). Thus, learning lexis tends to be an on-going process. In addition, lexis is difficult to automatise, but easy to forget. That is, lexis needs to be recycled, practised and learned, particularly in context. In my experience, a single encounter of a lexical item is usually not enough for it to register. Thus, I have seen that one-shot coverage of a lexical item rarely figured in learners’ output. And such inadequacy emerged clearly when learners engaged in meaningful practice where the so-called ‘previously taught’ vocabulary was supposed to be called upon. Rather disappointingly, only a very small percentage of the vocabulary ‘taught’, if at all, would actually be realised.

Thus, a major conclusion I have drawn based on the aforementioned observation is that there is a mismatch between ‘presented’ and ‘produced’ vocabulary. The words presented to learners do not necessarily crop up in their oral performance. Over the years, my students, like many others, have often suffered the frustration of ‘knowing’ a word but not being able to retrieve and use it during on-line communication. Generally, learners’ self-expression is constrained by a limited use of vocabulary in spoken discourse. In the case of meaningful language use, learners tend to be more concerned about the handicap of lexis than that of grammar. This consequence, however, runs counter the assumption that L2 learners’ vocabulary development (at university level) is unproblematic. But this perception of learning lexis is in itself problematic as it assumes a one-to-one relationship between the learning and use of lexis. Additionally, it shows that ‘item learning’ or ‘learning through a single encounter (or even a couple of encounters)’ is considered ‘mastery of the word’. The
reality is not that straightforward, though. It usually takes many encounters for a lexical item to be fully mastered. My experience is that before a lexical item appears in oral production learners need to have been exposed to this item several times at least and actually to have repeatedly found themselves in a situation where there is a need for that item to communicate a message.

In brief, L2 learners' lexical problems in on-line communication may be due to the difference between learners' perception of learning lexis and teachers' conception of how lexis is learned.

1.3 Possible reasons for lexical retrieval problems

Lexical retrieval problems also arise from methodological operations. One of such practices is the use or non-use of context. Lexical items are usually provided in context; however, learners do not often get the chance to practise using them in similar contexts in real time. Especially, speaking and language use in discourse is de-emphasised because of the constraints imposed by a certain syllabus – structures and functions – and the intensive programme. To illustrate, at the DBE (METU) the syllabus needs to be covered in a fixed period of time. Exams are monthly and several units need to be covered by the exam date and between pop-quizzes within the week.

The overloaded syllabus, coupled with time pressure, allows little time for communicative language use. In other words, there are limited opportunities for learners to try out their own language and gain experience in language use so that they can see what they can do with it. Moreover, even if some of the tasks are claimed to be communicative, they are not usually designed to stimulate focus on form. As a result, form is most likely to be bypassed.

The likelihood of form being bypassed during communication implies that designing tasks appropriately is crucial. Equally important are the implications of information processing for task design. I propose that information processing be looked at first so that better-suited tasks can be designed.
1.4 Strengths and weaknesses of current approaches to lexis

Before it is made clear which view of lexis the present study takes, two approaches to lexis will be discussed: product- and process-oriented approaches.

These approaches are based on different views of lexis. Each view is expounded in some detail in regard to its strengths and weaknesses. These approaches emerging from different views will be compared and contrasted in reference to the assumptions they rest on.

Traditional approaches are commonly underlay by the assumption that views lexis as an end in itself. They argue that vocabulary is best learned by consciously working on it, that is, by using strategies directed at explicit learning (e.g. memorisation, different forms of association techniques). An underlying assumption in more recent approaches, however, is that most vocabulary is learned incrementally and incidentally without the need for any particular external treatment.

These two assumptions seem to be placed on opposite poles. In other words, the former is based on intervention and conscious decisions about learning lexis while the latter is essentially non-interventionist. Although there may be room for both in L2 lexical development, neither appears to be capable of accounting for lexical learning alone. In addition, the latter seems to be contradictory to the constraints on information processing. Research evidence shows that when meaning is the focus of attention, form is usually bypassed. On the other hand, for proceduralisation to take place practice in language use is required, but this practice needs to be suited to stimulate focus on form.

Concerning lexis, the research study points into a new direction where focus on lexical aspects can be stimulated through the use of lexis in tasks that are designed to facilitate such focus.
Once the current approaches to lexis and possible directions are discussed, Chapter Three brings into focus the processes responsible for speech production in an attempt to set up the framework for the study.

1.5 The link between information processing and communicative task design

Basically, in Chapter Three I will attempt to explore the characteristics of information processing with reference to speech production. I will particularly look into how information processing is constrained by several crucial factors such as attention, limited capacity, controlled vs. automatic processing. I will argue that these factors have a bearing on communicative task design. It is the link between information processing and task design that Chapter Three is concerned with. It specifically deals with the ways in which information processing informs the design of communicative tasks.

Once the theoretical basis for the thesis is laid, the following chapter will describe how tasks can be designed and implemented to induce in learners a focus on lexis. This is the task that Chapter Four undertakes.

1.6 Research design and method

The methodology chapter (i.e. Chapter Four) first outlines the hypotheses as well as some possible connections between task features and lexical aspects under investigation. Next, it describes the tasks, task features and the design and implementation of tasks. In addition, it gives information about participants and explains the data collection methods. Finally, it reports that the research study uses two sets of data – statistical and protocol data. These two sets of data are analysed and discussed in the two chapters that follow – Five and Six – respectively.
1.7 Analysis and discussion of statistical results

Here the effects of task type and planning on lexical measures are investigated in comparison to previous research results. The findings are reported and discussed. A major criticism offered here is that the findings of previous research are generally based on crude statistical data, therefore it might not tell us the whole story. Moreover, the protocol data (i.e. data through semi-structured interviews) revealed some diversity in individual approaches. Thus, the learner perspective was seen as worth pursuing. Chapter Six seeks to do just that.

1.8 Focus on the learner’s perceptions of using lexis

In Chapter Six, two case studies differing in certain respects are presented. The data is analysed according to the patterns that emerged from the retrospective interviews. This data is compared to the statistical findings for those two cases. Striking interdependencies were found between lexis and grammar, and particularly within lexis. Such evidence was considered novel in planning studies.

The chapter also focuses on the difference between individual approaches to lexis (i.e. risk-taking vs. risk-avoiding) and how it influences using lexis. Finally, evidence of lexical stretching is suggested.

The last part of the thesis summarises the conclusions of the study and suggests implications for L2 pedagogy and directions for future research.

1.9 Conclusions and implications for further research

Chapter Seven is composed of mainly three sections. The first section will present the implications of the findings of the present study. The next part will attempt to demonstrate how the results relate to previous research. The final section will report on the implications of the study. There will be implications for L2 pedagogy (i.e. task
design and implementation, syllabus design and lexical development), for research methodology (i.e. statistical data vs. qualitative data) and for further research.
CHAPTER TWO

PERSPECTIVES OF LEXIS: CURRENT VIEWS AND POSSIBLE DIRECTIONS

2.0 Introduction

In this chapter, I argue that lexis in SLA research has been underrated whereas grammar has been emphasised. This trend has naturally produced relatively less research into lexis, which in turn led to a false belief in L2 pedagogy that lexis deserves less attention in the L2 classroom. Thus, lexis has been a language area that has generally been taken for granted. However, for the past decade there has been a fresh interest in lexis which is beginning to change some misconceptualisations of it. The accompanied growing research is beginning to redress the neglected role of lexis in L2 learning and teaching. In the light of new evidence, L2 methodologies are being reviewed and alternative proposals are suggested.

This chapter will review and critique product and process approaches to lexis and subsequently will seek to explore alternative directions.

2.1 Product and process perspectives of lexis: definition of terms

Throughout this chapter, product and process views of lexis will be discussed. Prior to such a discussion, it is necessary to define these terms. By a product view of lexis, I will refer to an approach to lexis which is concerned with the organisation of lexis from a lexicographer’s perspective using different aspects of the word: orthographic, phonetic, phonological, semantic and grammatical. This view concerns the knowledge of lexis, but not how this knowledge occurs. In other words, the learning processes of lexical use and learning are not accounted for, and therefore it is static. Yet, such a view is useful in that it raises in learners an awareness of various lexical features and
promotes the self-study of lexis, particularly through memory techniques as well as reading and listening.

On the other hand, process views of lexis are concerned with the deployment of lexis in language use. Thus, they are dynamic and better able to capture the processes involved in using and learning lexis. Not only do they account for the knowledge of lexis but also for how such lexical knowledge is realised.

2.2 Learning lexis and using lexis

Another distinction that needs to be made is one between learning lexis and using lexis. In terms of lexis, these two notions are not usually clarified, rather they are confused with one another. For the purposes of the present study, it is important to draw this distinction.

Some approaches that view lexis as product emphasise the learning of lexis through conventional techniques such as the keyword technique (discussed in this chapter) and L1 words with their L2 translations on lists. These approaches usually concentrate on single words. The degree to which these words are learned is generally measured by retention tests in experimental conditions. Though long-term retention can be achieved in certain instances, it tends to decrease over time. Other approaches are more concerned with multiword units (or phrases) rather than single words. These approaches also represent a product view since they treat lexis as a ready-made resource. They emphasise the usefulness of such a stock of vocabulary, but there is much less account of how the learner comes to acquire it. The main problem with the product views of lexis is that learning lexis is not complicated and that once it is learned it will presumably be used when required.

The process views of lexis, on the other hand, generally emphasise the using of lexis in communication; however, the conditions and processes in which lexis is learned are not well-accounted for. It is believed that using language will naturally provide the conditions for lexical learning to take place. However, as we have discussed earlier,
attention to form is often bypassed while meaning is the priority in communicative tasks.

In sum, in product views of lexis, learning, though useful, is limited in the sense that the actual use of what is learned is only assumed. On the other hand, process views of lexis emphasise the use of lexis and assume that lexis is learned in an unproblematic manner through such practice, i.e. language use. As a result, both views of lexis have shortcomings in accounting for the relationship between using and learning lexis. The present study gives the most attention to those areas which have received the least attention in the literature. It focuses on the using and learning of lexis from a process-oriented perspective, and particularly looks into the conditions in which a focus on lexis can be stimulated.

2.3 Learning lexis as product: (single) words

In this section the linguistic and semantic definitions of (single) words and what knowledge of a word involves are discussed. I claim that all these definitions generate from a product view of lexis and therefore they are inadequate in accounting for how lexis is learned.

2.3.1 Linguistic and semantic definitions of lexis

References on vocabulary aimed at the L2 language learner and teachers usually have a section on what a word is and what it is to know a word (see, e.g. Nation, 1990, 2001; Schmitt, 2000; Carter, 1987; Wallace, 1982). Definitions are followed by lengthy lists of criteria for explaining what exactly we know when we know a word. Let us first look at several definitions of a ‘word’ from different perspectives.
2.3.1.1 The orthographic perspective

The first is an orthographic definition, which says that 'a word is any sequence of letters (and a limited number of other characteristics such as hyphen and apostrophe) bounded on either side by a space or punctuation mark' (Carter, 1987:4).

One problem with this definition is that 'not all languages mark word boundaries' such as Chinese (Carter, 1987:4) and Japanese (Singleton, 2000:7) and that some 'language varieties ... do not usually appear in written form (e.g. local varieties of Colloquial Arabic) or 'they have never been written down (e.g. many of the indigenous languages of the Americas)' (Singleton, 2000:7). In English, for example, there are words that create problems: will not is written as two words but cannot as one word; instead of is written as two words, and in place of as three words (Carter, 1987:4). Singleton (2000:7) offers two further reasons for the inappropriateness of defining words in terms of orthography: the appearance of the written language after spoken language, and the exclusion of the abstract realisations of the word:

Also, there seems to be something rather odd about defining words in terms of the written medium given that ... the word is in no sense a product [emphasis in original] of literacy, and given that, both in the history of human language and in the development of the individual, written language arrives on the scene well after spoken language. We can note further that defining words in terms of letter-sequences and spaces is very much a form-oriented, token-oriented exercise which takes absolutely no account of more abstract conceptions of the word.

The orthographic definition might be of interest to lexicographers and to those dealing with words in quantitative terms (e.g. a word count of an essay) in general, but not particularly so to the applied linguist. As Carter (1987:4) put it, 'it is not sensitive to distinctions of meaning or grammatical function. Moreover, as Singleton points out, it does not address the abstract realisations of the word.
2.3.1.2 The phonetic perspective

Characterising the word in phonetic terms (i.e. according to the way it sounds) also seems problematic. Such a characterisation is based on the assumption that words are separated from each other by pauses in speech. However, the reality is rather different. ‘In fact, individual words can rarely be pinpointed in physical terms in the ordinary flow of speech, which is in the main a continuous burst of noise’ (Singleton, 2000:7). For example, a live commentary on football in an unfamiliar language on the radio illustrates the lack of phonetic independence of words. According to Singleton (1999, 2000), this lack of phonetic independence of words explains linguistic changes such as the deletion and addition of /n/:

... [S]ome words in English, have lost their initial /n/ because this was felt to belong to the indefinite article (e.g., auger < Old English nafu-gar; apron < Old French naperon), while others have ‘stolen’ the /n/ from the indefinite article (e.g., an ewt > a newt; an eke-name > a nickname). (Singleton, 1999:12)

In brief, although pausing between words is possible, the fact that speakers do not normally pause between words makes this perspective limited.

2.3.1.3 The phonological perspective

From a phonological perspective, the word is defined on the basis of sound by commonly using stress patterns and vowel harmony. In languages such as English there is one stressed syllable which can occur in different positions (e.g. renew, renewable, renewability, etc.) (Singleton, 2000:7). Vowel harmony is another phonologically based criterion. It operates in languages such as Finnish, Hungarian and Turkish. When vowels in a word are in harmony it means that the vowel in the first part of the word determines the selection of the subsequent vowels. The following examples in Turkish illustrate the point: hazir-la-mak (to prepare); temiz-le-mek (to clean).
In short, Singleton (2000:8) states that phonological characterisation of the word is also limited in that it is language-specific, or at best, ‘specific to language-types’ (i.e. they do not apply across languages) and that they are not reliable (e.g. words like *and*, *but*, *by* are recognised as words in English but are not normally stressed in speech).

2.3.1.4 The semantic perspective

Probably the most popular approach to defining the word is the *semantic* characterisation. The word is defined as ‘the minimum meaningful unit of language’ (Carter, 1987:5). Compound words pose difficulty in this form of characterisation as seen below:

For example, there are single units of meaning which are conveyed by more than one word: *bus conductor, train driver, school teacher, model railway.* And if they are compound words do they count as one word or two? (Carter, 1987:5)

Another problem with viewing words as minimum units of meaning is that ‘there are actually units below [emphasis in original] the level of the word which function as semantic units’, that is, ‘bound morphemes such as inflections of plurality (e.g., the *s* in *cats*) and tense (e.g., the *ed* in *wanted*) and affixes such as *pre* (as in *predetermine*) and *ish* (as in *brownish*) (Singleton, 1999:13).

Similarly, (McCarthy, 1990:3) speaks of words as ‘freestanding items of language that have meaning.’ He also makes a distinction between ‘bound morphemes’ and ‘freestanding morphemes’, stating that ‘a word must consist of at least one potentially freestanding morpheme’. In the case of *re-write*, for example, there are two morphemes but only *write* is freestanding. So the morpheme *write* cannot be further subdivided. What is meant by learning words in a language is sometimes single morphemes (or ‘roots’), or roots with bound morphemes (such as ‘prefixes’ or ‘suffixes’), i.e. ‘derived words’, or sometimes ‘compound words’, which consist of more than one root but denote a single concept such as ‘window-dressing’ and ‘jack-in-the-box’ (McCarthy, 1990:3-4).
Additionally, bound morphemes can determine the full meaning of a word. Take, for example, the word *unfriendly* (un-friend-ly). The bound morphemes *un-* suggests negativity (i.e. not) and -ly means ‘in a ... manner/way’ (Singleton, 2000:9).

In sum, as Carter (1987:6) put it, ‘intuitively, words are units of meaning but the definition of a word having a clear-cut meaning creates numerous exceptions and emerges as vague and asymmetrical’.

2.3.1.5 The grammatical perspective

Singleton (1999: 13) argues that the least problematic characterisation of the word is the grammatical definition, which is based on the criteria of ‘positional mobility’ and ‘internal stability’. Positional mobility refers to the ability of words to occur in different positions in an utterance. That is, they are not fixed to particular places in an utterance. For example, the parts of the sentence *The dog showed his sharp teeth angrily* can be re-ordered without violating any syntactic rules:

- The dog angrily showed his sharp teeth.
- Angrily the dog showed his sharp teeth.
- His sharp teeth the dog showed angrily.

Words are thought to be internally stable in the sense that the order of morphemes within words does not change. For instance, the component morphemes in the word *re-furbish-ment* remain constant, i.e. variants such as *furbishrement, *furbishmentre, *rementfurbish, *mentrefurbish, *mentfurbishre* are not permissible in English.

Though the grammatical definition seems to apply across languages, some words present limited positional mobility. For instance, the article *the* in English – recognised as a word – occurs before the noun or any elements defining it in a noun phrase: *the task, the difficult task, the extremely difficult task*, etc. It is generally the grammar words such as articles and prepositions that impose restrictions in positional mobility.
2.3.2 Definition of the ‘word’: summary and implications

Although the grammatical definition of a word is said to be the least problematic and most applicable across languages, all perspectives have inadequacies, which incapacitate any unproblematic definition. In addition, there is yet another type of word that is not encompassed by any of the above classifications: the multi-word units of vocabulary such as ‘idioms’ (see McCarthy, 1990). Idioms, which occur as fixed forms consisting of more than one word but still behave syntactically differently from compound words, should be viewed as distinct lexical items, like basic roots, derived words, and compounds (McCarthy, 1990; Carter 1987). For instance, the idiom *to rain cats and dogs* cannot be further subdivided without a loss in meaning. Since the existence of idioms seems to upset attempts to define ‘a word’ neatly, another term, *lexeme*, has been suggested. The term *lexeme* is defined as ‘the basic contrasting unit of vocabulary in a language’, and as ‘the abstract unit which underlies different grammatical variants to account for the inconsistencies that a *word* creates’ (Carter, 1987:6). The item ‘bring’, for example, is seen as a *lexeme*, whose possible variants are ‘bring’, ‘brings’, ‘brought’, ‘bringing’. Thus, ideally, dictionaries should take *lexeme* as the basic unit of organisation.

The problems concerning the definition of a ‘word’ outlined by Carter (1987) and McCarthy (1990) so far may be valid in terms of lexicographic, and perhaps organisational and analytic purposes (i.e. what is to be taken as the unit of organisation and analysis); however, they seem to represent a rather isolationist approach to vocabulary learning. First, these isolationist views underestimate the role of context. Language does not take place in a vacuum, but rather in context. In other words, language learners can and do make use of the context to distinguish between different meanings of a word. Indeed, the meaning of lexis will vary according to the context in which it is used. Second, studying words as ‘product’ does not tell us much about their complex and abstract representations. Thus, pedagogically speaking, such definitions have little value but, of course, this does not mean they are valueless. For instance, from a communicative perspective of L2 learning the definition of the word would be of less relevance than what learners actually do with words. However, this issue is a matter of concern in learning and teaching L2 vocabulary in isolation, which
is implicit in approaches that propose a direct, explicit and cumulative view of learning L2 lexis. The main reason why I have focused on various definitions of a word is that the perspectives from which these definitions have been suggested implicate the perspectives adopted in L2 vocabulary learning and teaching.

In line with this isolationist view, traditional approaches to L2 teaching have been 'synthetic' in their lexical aspect, as Wilkins (1976:2) argues:

A synthetic language teaching strategy is one in which the different parts of language are taught separately and step-by-step so that acquisition is a process of gradual accumulation of the parts until the whole structure of the global language has been built up. In planning the syllabus for such teaching the global language has been broken down probably into an inventory of grammatical structures and into a limited list of lexical items.

These approaches also suggested learning L2 words through 'atomistic' ('synthetic' in Wilkins' terms) techniques such as using lists of L2 words with their L1 translation equivalents and keywords (Singleton, 1999:50-51). The keyword technique is discussed in some detail in this chapter.

2.3.3 Knowledge of a word vs. coming to know a word

The arguments about the best definition of a 'word' have been inconclusive. Another attempt that creates similar problems is to tackle the question as to what it is 'to know a word'.

A set of criteria in regard to what 'knowing a word' means is outlined by Nation (2001:27), which is a revised version of that of Nation (1990), and is essentially based on the distinction between receptive and productive knowledge of vocabulary. The criteria suggested are as follows:
### What is involved in knowing a word

<table>
<thead>
<tr>
<th>Form</th>
<th>spoken</th>
<th>R</th>
<th>What does the word sound like?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>P</td>
<td>How is the word pronounced?</td>
</tr>
<tr>
<td>written</td>
<td></td>
<td>R</td>
<td>What does the word look like?</td>
</tr>
<tr>
<td></td>
<td></td>
<td>P</td>
<td>How is the word written and spelled?</td>
</tr>
<tr>
<td>word parts</td>
<td></td>
<td>R</td>
<td>What parts are recognisable in this word?</td>
</tr>
<tr>
<td></td>
<td></td>
<td>P</td>
<td>What word parts are needed to express the meaning?</td>
</tr>
<tr>
<td>Meaning</td>
<td>form and meaning</td>
<td>R</td>
<td>What meaning does this word form signal?</td>
</tr>
<tr>
<td></td>
<td></td>
<td>P</td>
<td>What word form can be used to express this meaning?</td>
</tr>
<tr>
<td>concept and referents</td>
<td>R</td>
<td>What is included in the concept?</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>P</td>
<td>What items can the concept refer to?</td>
</tr>
<tr>
<td>associations</td>
<td></td>
<td>R</td>
<td>What other words does this make us think of?</td>
</tr>
<tr>
<td></td>
<td></td>
<td>P</td>
<td>What other words could we use instead of this one?</td>
</tr>
<tr>
<td>Use</td>
<td>grammatical function</td>
<td>R</td>
<td>In what patterns does the word occur?</td>
</tr>
<tr>
<td></td>
<td></td>
<td>P</td>
<td>In what patterns must we use this word?</td>
</tr>
<tr>
<td>collocations</td>
<td></td>
<td>R</td>
<td>What words or types of words occur with this one?</td>
</tr>
<tr>
<td></td>
<td></td>
<td>P</td>
<td>What words or types of words must we use with this one?</td>
</tr>
<tr>
<td>constrains on use</td>
<td>(register, frequency ...)</td>
<td>R</td>
<td>Where, when, and how often would we expect to meet this word?</td>
</tr>
<tr>
<td></td>
<td></td>
<td>P</td>
<td>Where, when, and how often can we use this word?</td>
</tr>
</tbody>
</table>

**Note:** In column 3, R = Receptive knowledge, P = productive knowledge
Similar criteria with some overlap have earlier been set out to define the knowledge of
the word (see e.g. Wallace, 1982; Taylor, 1990). Such were first encouraged by the
linguistic theory (i.e. structuralism), which puts grammar (and sounds) at the centre of
language learning and leaves out lexis (Richards, 1976; Levenston, 1979); and it treats
lexis the way it does grammar – prescriptively.

A major addition Nation (2001) makes to the earlier criteria he suggested (Nation,
1990) is the component of ‘use’ – particularly ‘constraints on use’ such as register and
frequency. Thus, the importance of being able to use lexis productively and
appropriately is recognised. Yet, the view that underlines the above criteria and those
suggested earlier inherently assume that the storage and retrieval of lexis are
unproblematic. Although there is mention of operations such as collocation and
association, this view makes no reference to the processes of learning lexis through
so-called operations. It is therefore not pragmatic but predominantly semantic.

A proposal of vocabulary learning needs to address the processes whereby the
learner’s L2 lexicon forms. For example, it needs to account for how strings of lexis
are registered through collocation and accessed in communication. In brief, a view of
lexis that concerns itself with mere explanation of what the knowledge of a word
involves is restricted in the sense that it presupposes the existence of that knowledge,
and therefore by-passes the processes that trigger the formation of such knowledge. In
other words, it does not account for how the learner comes to acquire such
knowledge.

The knowledge of a word and its retrieval in use are integrated into a model suggested
by Poulisse (1993). According to this model of lexical access applied to
communication strategies, lexical items are characterised by certain features such as
part of speech (i.e noun, adjective, verb), animate vs. inanimate, colour, size, and so
on. For instance, the word shark would be characterised by lexical features such as
[noun], [+animate], [+fish], [+grey], [+man-eater]. Lexical retrieval in this model
involves the activation of semantically related fields to narrow down the options to
the word needed. If the exact match cannot be found, then, the item with the closest
features is retrieved. The mental lexicon is viewed as a complex network of associations organised not only semantically but also phonologically and syntactically. Poulisse’s (1993) lexical access model implies that learning lexis may follow a similar route: establishing new connections to accommodate the new item or fit it in with existing network of connections by assigning it certain lexical features.

2.4 The role of memory and direct (isolationist) memorisation of lexis

A significant role in language learning has been attributed to memory. N. Ellis (1996) proposes that short-term memory capacity is one of the determining factors in the eventual level of achievement in vocabulary and grammar. Two basic types of memory are suggested: long-term memory and short-term memory (or working memory). Schmitt (2000:131) distinguishes between these two types of memory as follows:

Long-term memory retains information for use in anything but the immediate future. Short-term memory is used to store and hold information while it is being processed. It normally can hold information for only a matter of seconds. However, this can be extended by rehearsal, for example, by constantly repeating a phone number so that it is not forgotten. Short-term memory is fast and adaptive but has a small storage capacity. Long-term memory has an almost unlimited storage capacity but is relatively slow.

Schmitt (2000:131) argues that ‘the object of vocabulary learning is to transfer the lexical information from the short-term memory, where it resides during the process of manipulating language, to the more permanent long-term memory’.

An effective way of doing this is to make associations between the target item and some pre-existing information in the long-term memory. Relating one piece of lexical information to another in the mental lexicon can be realised in various ways. Examples of imaging techniques include: semantic feature analysis, semantic mapping, and the keyword approach (Coady, 1993). Semantic feature analysis presents learners with semantic relationships not only between and among words but
also between their own background and new information (Carter, 1987; Carter and McCarthy, 1988). Semantic mapping techniques show how new words are incorporated into meaning networks between known and unknown words (Stoller and Grabe, 1993). Stoller and Grabe (1993:34) further maintain that ‘both semantic feature analysis and semantic mapping lead to better vocabulary retention because new lexical items are introduced in semantic networks.’

Of the memory techniques, probably the most popular and arguably the most effective one is the keyword approach. The effectiveness of the keyword method has been confirmed by many studies (see Pressley, Levin and Delaney, 1982; Levin and Pressley, 1985; Cohen, 1987). Pressley, Levin and Delaney (1982) survey a wide range of studies (almost fifty) concerned with the keyword technique. They conclude that the keyword technique is definitely helpful in learning foreign language vocabulary and that it is superior to other techniques such as rote repetition, placing vocabulary in a meaningful sentence, and using pictures as synonyms. N. Ellis (1994:257) argues that ‘the common explanation for the success of these systems is that the keyword enables subjects to combine in a single associative image the referent of one native word with that of a second native word which sounds like the foreign word’.

This technique – a way of establishing a strong link between the form of an unknown word and its meaning (Nation, 2001) – involves two stages following the encounter of the word and familiarity with its meaning. The first stage is to think of an L1 word (keyword) which sounds like the target word. It is usually difficult to find good keywords words (Hall, 1988); however, N. Ellis (1994:257) reports that ‘the keyword does not have to sound similar to the foreign word – an approximation can serve as a retrieval cue for the FL [foreign language] word’. In the second stage, the learner thinks of a visual image in which the meaning of the target word is combined with the meaning of the keyword. To illustrate, tay is a Turkish word meaning ‘pony’ in English. It sounds like the English word tie. In fact, it is pronounced almost in the same way as the word tie. The language learner, then, creates a mental image where s/he imagines a pony wearing a tie.
Ellis and Beaton (1993) found the keyword technique to be less effective with abstract words and keywords of ‘low imageability’. In other words, since the method is based on ‘an imagery mediation between the L1 word and the keyword, if either of these are abstract and difficult to image then the method fails’ (N. Ellis, 1994:258).

Furthermore, Meara (1980) argues that there are three problems with the keyword technique. Firstly, it overlooks the complex patterns of meaning relationships that establish a complete and fully formed lexicon. The second problem is that experiments on the technique study laboratory subjects rather than real language learners. Thirdly, though it facilitates recognition, it is less clear whether the keyword technique results in active control (i.e. productive use) over words learned in this way.

It is perhaps in order here to briefly define the distinction between receptive and productive vocabulary (as perceived and used for the purposes of the present study). This distinction has also been referred to as active/passive vocabulary (Meara, 1990).

‘Receptive vocabulary use involves perceiving the form of a word while listening or reading and retrieving its meaning’ whereas ‘productive vocabulary use involves wanting to express a meaning through speaking or writing and retrieving and producing the appropriate spoken or written word form’ (Nation, 2001:24-25).

Similarly, Ellis and Beaton (1993) report that the technique is much less effective in productive vocabulary learning than in learning to comprehend the L2. That is, there needs to be great overlap in form between the keyword and the target word so that the productive recall is successful. They show that for effective productive vocabulary learning the technique must be complemented with repetitive practice at producing the L2 word forms. N. Ellis (1994:258-259) argues that ‘there is no mechanism in the keyword method to allow retrieval of the whole L2 word from the keyword’, thus the technique does not lead to an increase in the whole foreign word recall; consequently, ‘imagery mediation does not contribute to the lexical productive aspects of L2, but it

Melka Teichroew (1982) demonstrates that the terms of receptive and productive are used inconsistently with reference to test items and the extent to which a word is known and argues that the relation between these terms is arbitrary and should be viewed along a continuum (cited in Nation, 2001).
does forge L1-L2 linkages’. Singleton (1999:51) makes a similar statement suggesting scepticism of the effectiveness of the technique in productive language use:

The atomistic techniques [i.e. learning lists of L2 words with their L1 translation equivalents or through the keyword technique] mentioned can no doubt be helpful in the early stages of an L2 programme in giving learners a foothold in the L2 lexical system. On the other hand, mastery of individual forms and meanings in isolation is absolutely no guarantee of a capacity to recognise or appropriately deploy the words in question in context [emphasis added]. Accordingly, an exclusive or even a very heavy reliance on atomistic techniques is unlikely to be a recipe for unqualified success.

Hall (1988) also has reservations about the technique and suggests that for the keyword technique to be effective extended training is required. In a survey of a number of studies on the keyword technique, Nation (2001:314) concludes that the results of these experiments (amounting to ‘well over one hundred’) ‘are not unanimous, but there is a very large amount of evidence supporting its use, and if it is fitted into a balanced programme any possible weaknesses, such as long-term retention and availability for productive use, will be lessened’.

The basic criticism, then, centres on the keyword not being as effective for the productive use of lexis. Indeed, the main problem is that it assumes a point of departure – the word being a ‘product’ to begin with – as evident in Nation (2001:311): ‘It [the keyword technique] involves two steps after the learner has met the unknown word and has found or been provided with its meaning [my emphasis]’. Clearly, it is assumed that the word has been noticed and intake, at least at the level of awareness, has taken place. It also implies that the meaning of the word is somehow already sorted out by the learner. So the task of the language learner is to commit the word to the memory with the hope that it can be retrieved when needed. The process is not so straightforward, however. As the above discussion suggests, memory techniques are powerful in that they have quick return with large amounts of vocabulary and are a source of motivation for particularly beginner language learners (Nation, 2001). They are also enjoyable to use by language learners (Gruneberg, 1992; Gruneberg and Jacobs, 1991). However, their scope for the productive use of lexis is limited. For such vocabulary to become proceduralised repeated access in
language use is necessary. In parallel, Schmitt (1998) also found that receptively learned words are more likely to be forgotten than those learned productively. This again indicates that practice through language use in discourse plays a vital role in vocabulary learning.

Direct memorisation of lexis has had pedagogical implications too. Advocates of this view have recommended the direct teaching of large amounts of vocabulary to language learners. For instance, West’s (1953) *General Service List* recommended 2,000 words to L2 and L1 teachers. The claim was that knowing these words would enable the learner to access 80% of words that they may encounter in any written text. Bilingual dictionary making has also been motivated by the same assumption.

In addition, as direct learning and teaching has immediate pay-off, that is, a reasonably large number of words can be learned in a relatively short time, various methods of vocabulary learning and teaching have adopted this view. Reviews of such teaching models have been provided (Carter, 1987; Carter and McCarthy, 1988; McKeown and Curtis, 1987; Nation, 1978). Moreover, Schmitt (2000) cites examples of reference books illustrating explicit vocabulary learning exercises, namely, *Techniques in Teaching Vocabulary* (Allen, 1983), *Vocabulary* (Morgan and Rinvolucri, 1986), *Teaching and Learning Vocabulary* (Nation, 1990), and *Implementing the Lexical Approach* (Lewis, 1997).

### 2.5 General limitations of memorisation techniques

The general limitations of memorisation techniques can be summarised as follows:

- They are useful as they have a quick return, but the long-term retention of words learned through such techniques is limited.
- Lexis is seldom learned in a single encounter (Meara, 1980; Nation, 2001; Bogaards, 2001).
• Words have different meanings in different contexts, so the isolationist memorisation of lexis is limited.
• There are degrees of knowing a word (Nation, 2001), i.e. learning one feature or meaning of a word does not necessarily mean that the word is known.
• They may aid receptive vocabulary but do not seem to facilitate productive retrieval.

In summary, the operation of these learning techniques is relatively clearer; however, the scope of such techniques for language learning is limited. Particularly, the productive use of lexis in communication is de-emphasised or not catered for.

2.6 Lexis as product: multiword units

Corpus studies have provided us with evidence that in addition to single words there is a good amount of vocabulary that exists in strings but behave as single entities. These words are called multiword units (Carter, 1998). Here are a few examples from Carter (1998:66):

- as a matter of fact
- if I were you
- light-years ago
- as far as I know
- you can say that again
- how do you do?
- I thought you’d never ask
- like it or lump it

Some of these multiword units are 'fixed' whereas others allow some modification. Idioms, for example, are among the most fixed of lexical phrases. The idiom *kick the bucket* 'would lose its meaning if any component were changed – for example, punt the bucket' or through lexical or grammatical changes – ‘*kick the big bucket, kick the buckets*’ (Schmitt, 2000:97). In addition to idioms, compound words, phrasal words, fixed phrases (e.g. ladies and gentlemen, not gentlemen and ladies) and proverbs are different types of multiword units (McCarthy, 1990; Carter and McCarthy, 1988).
2.6.1 Lexical chunks and language use

The previous section has been concerned with the linguistic classification of multiword units. In this part, these units will be dealt with with a view to language production. The exploration of these formulaic expressions and their collocational patterns has shown that they are so common that they get memorised. When speakers use these prefabricated units in communication they use them as wholes, rather than re-compose them. Several labels have been used for these units: prefabricated routines (Bolinger, 1976), gambits (Keller, 1979), lexical chunks (Lewis, 1993), and lexical phrases (Nattinger and DeCarrico, 1992). I will use the term lexical chunks to refer to such units as they are stored in the mind and acted upon in language production.

Schmitt (2000: 101) states that 'there is a good psycholinguistic basis for believing that the mind stores and processes lexical phrases [chunks] as individual wholes' and suggests that the main reason concerns the structure of the mind. It can store enormous amounts of knowledge in the long-term memory, but can process only small amounts of it under communicative pressure of speech. As the processing capacity of the mind is limited, it uses the vast resource in the long-term memory for compensation by storing lexical chunks that are frequently needed as individual whole units. These chunks are retrieved and deployed in on-line communication without having to compose them from scratch by applying lexical and grammatical rules. That is, these chunks are treated as whole units, rather than having to employ a rule or pattern to comprehend or produce them. Thus, the main advantage of this ready-to-use resource is reduced processing time (Nation, 2001), that is, it helps to reduce the processing capacity load in real-time communication.

Another advantage of pre-formed lexical chunks is that they are in great number – many thousands – (Pawley and Syder, 1983) and are related to functional language use, thus they facilitate pragmatic competence (Schmitt, 2000). In addition, the use of lexical chunks aids both the speaker and the listener. The ability to act upon lexical chunks facilitates fluency in speech production by ‘reducing processing difficulty’
through combining chunks (Lewis, 1993:121), as well as easing the processing load for the listener in interpreting utterances (Schmitt, 2000.).

According to Nation (2001:320), there are two interrelated disadvantages of 'chunking': storage and availability for creative combinations with other parts. The first disadvantage is storage. Nation (2001:320) argues that 'there are many more chunks than the components of chunks, and if the chunks are also stored in long-term memory then there will be a lot of items to store', which may cause problems with accessibility. Second, if these chunks are stored unanalysed (i.e. as whole individual units), then they will be unavailable for creative combinations with other parts.

2.6.2 Strengths and limitations of approaches to multiword units

The strengths of multiword units can be summarised as follows:

- They are based on a lexico-grammatical view, where lexis and grammar are seen as inseparable.
- The pragmatic aspect of lexis is emphasised, i.e. the facilitative role of multiword units in communication.
- They are based on authentic corpora studies, samples of which are derived through frequency and collocation. They better represent the role of lexis in discourse.

In terms of pedagogy, however, there are limitations to multiword units:

- Learning processes underlying multiword units are not clear.
- Multiword units are presented in similar ways to direct approaches, or they are presented in texts and expected to be noticed and used by learners.
- The relationship between input and output is considered unproblematic.
In sum, the scope of multiword units in terms of pragmatics is wider. In addition, they fit in nicely with the dual-mode information-processing system proposed by (Widdowson, 1989; Skehan, 1996) discussed in Chapter Three. However, learning processes involved are not clearly accounted for. That is, an unproblematic relationship is assumed between input and output. Contrary to this assumption, such units often go unnoticed in meaning-driven communicative tasks – form is bypassed as meaning is prioritised.

2.7 Utilising multiword units in syllabus design and L2 pedagogy

The idea of utilising such a ready-to-use resource in L2 teaching has led to lexical approaches (e.g. Lewis, 1993; Willis, 1990). One of the most notable advantages of having access to such a resource is that under the pressures of communication they are retrieved without much effort, almost automatically, so this enables the language user to focus attention on other aspect of language while staying engaged in communication. Based on his experience with concordances with the COBUILD project, Sinclair (1991:110) emphasises the role of formulaic expressions (multiword units), which he terms ‘idiom principle’, in communication and sees them as motivated by economy of effort. Peters (1983) also confirms the crucial economising role of chunks in speech production.

Given the advantages, one might argue that language teaching should be based on ‘chunks’. This view, however, raises several problems. First, a lexical syllabus is essentially ‘synthetic’ in nature since it is based on some pre-selected items as the unit of analysis. Willis (1990) criticises the structural syllabus on the grounds that it presents the language learner with a series of language items in isolation. However, he argues that the notional-functional syllabus is more communicative in the sense that it attempts to specify the syllabus in terms of meaning – what it is to be communicated. He further maintains that the methodology used by the notional-functional syllabus does not differ significantly from that used by the structural syllabus in that they are both reliant on a cycle of presentation, practice and production. Put another way, a
direct relationship between input and intake is assumed. Yet in spite of this, Willis argues for a language syllabus which is based on some itemisation of language and careful selection of the frequent items to which the learners will be ‘exposed’. This is, in a sense, a contradiction as teaching and learning do not necessarily overlap. It must be the experience of many L2 teachers that some language ‘taught’ to learners goes unnoticed despite all efforts, even the second or third time around, while some other language is quickly ‘picked up’ first time it is met. The justification Willis offers for the selection of certain patterns of language to include in the syllabus is that random exposure is of little value and that it must be organised. Willis (1990:14) writes:

I have suggested, however, that a successful methodology must rest on language use. ... We must look for a methodology which aims quite deliberately at language use rather than a methodology which offers language use as a by-product. We should try to devise a methodology which is based on using language in the classroom to exchange meanings and which also offers a focus on language form, rather than a methodology which focuses on language form and which only incidentally focuses on use.

Second, it is not clear as to how such lexical phrases can be best learned and taught. There is a tendency though towards grading the input to avoid ‘difficulties’ and ‘complexities’ at an early stage of learning (Willis, 1990). However, the distinction between complex and difficult lexical phrases and simple and easy ones is subjective. In other words, it is not clear whether fixed ones (i.e. those that do not allow modification) or variable ones (i.e. those that allow some modification) are less complex or easier for beginners. Nattinger and DeCarrico (1992:186) suggest that lexical phrases ‘with variable slots’ (i.e. those that allow modification) would be appropriate for beginners:

... [W]e have suggested that the most effective lexical phrases to teach in beginning stages would be those with a number of slots, since these would lead students more quickly to syntactic analysis. But that notion itself needs to be put to an empirical test. All of these questions need to be investigated in terms of different student populations and teaching environments.

Like Willis, Nattinger and DeCarrico (1992:129) propose the grading of lexical phrases from simple to complex, the former being introduced at the beginning stages
while the latter at 'advanced' level. As seen, decisions as to what lexical phrases to teach at what level, except for the frequency of concordances in corpora, are not empirically based. Another important problem that is evident in Nattinger and DeCarrico's (1992) statement above is that these phrases are viewed more in terms of grammar. It is not only assumed that exposing learners to such phrases will lead to their internalisation without any problems, but also that grammar will develop from these units equally without a hitch. In other words, acting upon such a stock of chunks in communication will enable learners to grammaticize (Rutherford, 1987).

Thirdly, single lexical items are not fully accounted for. Lewis (1993:196) dismisses the grammar/vocabulary dichotomy and emphasises lexical chunks by arguing that 'language is not words and grammar; it is essentially lexical'. However, as well as lexical phrases, there are items existing independently – not necessarily in the form of chunks. Lewis’ lexical approach and its implementation is primarily concerned with multi-word prefabricated chunks; however, 'most words even isolated from context carry definite meaning – dog, accidental, produce' (Lewis, 1997:216g). Thus, the focus is on lexical chunks, and de-lexicalised verbs (e.g. have nothing to do, to take your time, to put someone at their ease) which 'have little or no meaning outside the context of particular use' (Lewis, 1997:216g).

Although Sinclair and Willis attempt to address single words to some extent, Lewis (1993) criticises their view of lexical syllabus on the grounds that it is confined to 'words' (as being 'word-based') and that the syllabus specification is determined fundamentally by frequency of items in corpus data. He stresses that this view is problematic because the most frequent 'words', as found in corpora, are thought to be words of low semantic content; however, he points out that these words are frequent because they have different meanings and appear in complex patterns. For example, the frequent words such as to, with, have are considerably more difficult to master than items of higher meaning content such as accident, soot, slump (Lewis, 1993:109). In addition, Lewis (1993) maintains that frequent words may have infrequent meanings which, when presented together, can create confusion for learners at the beginning stages of learning. Despite his criticisms discussed above,
Lewis' (1993) 'lexical approach' still views single words ('de-lexical' or 'de-lexicalised' words) in patterns, as evident below:

The Lexical Approach ... is specifically not a lexical syllabus, [emphasis in original] and explicitly recognises word patterns for (relatively) de-lexical words, collocational power for (relatively) semantically powerful words, and longer multi-word items, particularly institutionalised sentences, as requiring different, and parallel [emphasis in original] pedagogical treatment.

Consequently, the emphasis is on lexical chunks and de-lexicalised verbs because they appear in a wide range of patterns and are often thought of as part of grammar. Single words, however, receive less attention.

Fourthly, lexical approaches emphasise receptive language skills such as listening rather than productive skills. In other words, production should be delayed until learners have met certain chunks of language; however, it is not clear either when the optimum time is or what lexis learners are to be exposed to. Lewis (1993:193) writes: 'Listening, listening and more listening. ... With caution, increase teacher talking time!' The rationale suggested is that like initial L1, L2 should be based on receptive skills, particularly listening, since what we produce is based on what we have previously met (Lewis, 1993:8). However, the concern implicit in this view is for grammar. Likewise, Ellis (1999:88) argues for a parallel case for grammar:

... [A]t the elementary level, there would be only communicative tasks (receptive rather than productive in the first instance). At the intermediate stage, once learners had established a lexical base for the acquisition of grammar, the focus on code (which could include pronunciation and discourse as well as grammar) would kick in, growing progressively larger as time passed, until it occupied close to half of the total time available with advanced learners.

Like Lewis (1993), Ellis (1999) hypothesises that the early stages of L2 acquisition is lexical rather than grammatical. It would be sufficient to receptively introduce some lexis to learners, from which they will extract grammar.
Another case can be made for lexis here. If it is true that language learning in its initial stages is lexical, then there should be nothing wrong with starting to practise it in productive language use from the early stages. L2 speakers differ from L1 speakers in that they already speak one language and that they are cognitively mature. As well as the L1 lexicon, which, for example, may aid with cognates, the L2 learner has access to 'extralinguistic' knowledge such as world knowledge and strategic knowledge (i.e. 'conscious control over cognitive resources') to make meaning in context (Nagy, 1997:79-81). Furthermore, the spacing of receptive and productive use of language as separate systems run counter to lexical learning as an incremental process. According to Melka (1997), receptive and productive vocabulary are less likely to be distinct but more likely to be the interacting parts of one unique system marking degrees of knowing rather than representing poles of 'knowing' and 'not knowing'. In brief, Ellis (1997) and Lewis (1993), who reject 'learning speaking by speaking', consider language learning in terms of grammar, that is, grammaticising from lexis. Thus, insofar as lexical learning is concerned, there is no convincing evidence for the L2 learner to delay using language productively from the early stages.

Last but not least, lexical approaches do not take principled account of individual variation. Lewis (1993:185) advocates that learners should be trained towards 'a willingness to take risks, to try out new language'. However, he does not suggest ways in which more risk-taking with lexis can be encouraged. More precisely, we should first ask the question whether this is possible at all, and if it is, then to what extent this can be achieved. In Chapter Six, I will seek to demonstrate how the individual approaches to risk-taking can influence the use of lexis in spoken discourse.

Consequently, the views discussed above are rather product-oriented perspectives of lexis, not addressing the issue of how a resource of lexical chunks is acquired and how it can be best facilitated through pedagogical tools.
2.8 Process views of learning lexis

The following section will discuss process views of lexis in comparison to product views.

2.8.1 Learning grammar from lexis: lexis as a pre-existing resource

Another common perspective of lexis presupposes some knowledge of lexis in the learner to begin with. It can be considered process-oriented in that it addresses learning, but it is concerned with learning grammar from lexis, rather than ‘learning lexis’. Methodologies based on this understanding usually aim to develop this supposedly pre-existing knowledge of lexis in the learner.

This view of lexis is implicit in Widdowson’s (1989) arguments about communicative competence, and particularly in the connection between *analysability* and *accessibility*. Analysability refers to sorting out rules and patterns in language, while accessibility corresponds to being able to act upon linguistic knowledge in communication.

Widdowson (1989) points out that if analysability of knowledge led to more generality of use, then the structural approach to language teaching would be communicative in this sense. However, such an approach does not promote the necessary accessing ability. He also stresses that very little of access is dependent on analysis by referring to ready-to-use prefabricated lexical units, which are completely or partially assembled. In this vein, Widdowson (1989:135) recognises the role lexis has to play in communicative competence as he writes:

... communicative competence is not a matter of knowing rules for the composition of sentences and being able to employ such rules to assemble expressions from scratch as and when occasion requires. It is much more a matter of knowing a stock of partially pre-assembled patterns, formulaic frameworks, and a kit of rules, so to speak, and being able to apply the rules to make whatever adjustments are necessary according to contextual
demands. Communicative competence in this view is essentially a matter of adaptation, and rules are not generative but regulative and subservient.

From this view of communicative competence, then, several important issues arise. First, knowledge, whether analysed or unanalysed, needs to be accessed. Analysability is restricted by accessibility. That is, further analysis and rule application are called for when the need arises, i.e. to make an utterance appropriate for the given context. In this view, grammar is associated with analysis whereas lexis is associated with memory.

Second, lexis is considered to play a much bigger part in communicative competence than was traditionally thought. According to this concept of communicative competence, 'the executive use of language involves the selection from store of some pre-assembled unit which is then adjusted by contingent reference to rule to fit particular contexts' (Widdowson, 1989:135). Initially, these might be simple lexical chunks whose meaning in association with context is apparent, thus no further grammatical adjustment would be required. Then, when the association of lexis and context becomes insufficient for the meaning to be accessed, grammatical rules are acted upon to make the necessary adaptations and adjustments so that the lexis fits the particular communicative purpose.

Similarly, in a paper that has influenced recent lexical studies, Pawley and Syder (1983) argued that native speakers draw on ready-made lexical chunks, i.e. prefabricated phrases, rather than process new syntactic constructions. Other work in lexis has confirmed such observations (Willis, 1990; Sinclair, 1991; Nattinger and DeCarrico, 1992; Lewis, 1993). However, this work has concentrated more on the predictability of patterns of lexical chunks rather than how they are learned. It is based on the assumption that the relationship between input and intake is unproblematic. In addition, there is no account of the lexis that has been 'taken in', that is, what happens to such lexis from that point on.
The third important point is the acknowledgement of the role of context. That is, the degree to which some linguistic knowledge (but not necessarily grammatical knowledge) is accessible is the result of the negotiation of meaning between context and lexis, in which, if resources do not suffice to establish the meaning, grammatical rules are called in to assist. So, accessibility is determined by the efficacy of the association of lexis and context, which, if needed, might turn to grammatical rules for help to establish the intended message.

Widdowson (1989:136) claims that if such a concept of communicative competence is to be adopted in language teaching, then, ‘we arrive at a recognition of the need to shift grammar from its pre-eminence and to allow for the rightful claims of lexis’. In this respect, he concludes that the study and teaching of language is more than grammar and that rules of use are useless unless they are acted upon.

Although Widdowson’s perspective is a process-oriented one, it is still problematic. He sees grammar as emerging from lexis as the communicative need arises. However, there is no clear account of the growth of lexis in the first place. In other words, it is unclear in terms of lexis in this argument how the L2 learner comes to acquire his or her ‘stock’ or ‘store’ of vocabulary. Evident in such quotations from Widdowson (1989:135) as ‘... selection from store of some pre-assembled unit ...’ and ‘... [communicative competence] is a matter of knowing a stock of partially pre-assembled patterns ...’, it is presupposed that such vocabulary already exists. In brief, grammar is treated as process but lexis as product, that is, the learning aspect of lexis is not addressed.

In parallel, Ellis (1999:85) argues that grammar grows out of lexis. In his view, too, lexis functions as a subservient resource:

If grammar teaching is to accord with how learners learn, then, it should not be directed at beginners. Rather it should await the time when learners have developed a sufficiently varied lexis to provide a basis for the process of rule extraction [my emphasis]. In crude terms, this is likely to be at the intermediate plus stages of development. There is a case, therefore, for reversing the traditional sequence of instruction, focusing initially on the
development of vocabulary and the activation of strategies for using lexis in context to make meaning [my emphasis] and only later seeking to draw learners’ attention to the rule-governed nature of language.

Ellis (1999) maintains that grammar rules will eventually be extracted from lexis provided there is enough exposure and basis of lexical knowledge. He says very little about how this repertoire of lexis will develop, except that a ‘focus’ on the development of lexis is needed and that ‘strategies’ and ‘context’ are important in developing this resource. Again, it is not clear how such strategies and context can be exploited in helping learners to learn lexis. Nor is it clear whether such lexical knowledge is to be explicit or implicit.

Moreover, Widdowson (1989:133), associating lexis with memory, distinguishes between two kinds of lexis, each at the opposite end of a spectrum: ‘fixed phrases that cannot be dismantled’ and independent lexical items, which he describes as ‘collocational clusters which can be freely adjusted as sentence constituents’. He claims that ‘knowledge of these [fixed phrases], like so much lexical knowledge, is a matter of memory’, but does not account for the relatively independent lexical items. Memory does, of course, play an important role, but it does not suffice. Such vocabulary needs to be accessed, and it needs to be accessed at relative speed in communication. Thus, as far as the acquisition of L2 lexis is concerned, the opportunity of actual language use is twofold. It serves to commit lexis to the memory in context, and it also aids the process whereby stored lexis is accessed in communication, which, in return, aids the restructuring of the current stock and therefore the acquisition of new lexis. The approach proposed in this study claims that vocabulary can best be activated and learned through use in discourse, which, in turn, can create opportunities for higher degrees of learning or further learning.
2.8.2 Learning lexis as an incremental process: incidental learning through reading

Native speakers as well as non-native speakers come to know thousands of words. Schmitt (2000) states that the vocabulary of an educated adult native speaker of English is between fifteen and twenty thousand word families. Similarly, many L2 learners of English know thousands of word families. Such a huge amount of vocabulary is unlikely to be acquired through formal study alone, either in the case of L1 or L2. Schmitt (2000:116) argues that most of it 'has to be “picked up” through simple exposure during the course of language use' in L1 as well as L2. N. Ellis (1994:216) also argues that ‘whatever the exact number [referring to different estimates of vocabulary size], it is clear that direct teaching of vocabulary cannot be the source of these gains and that the natural language learner must acquire considerable amounts of vocabulary without instruction’.

This position originates from the Input Hypothesis, which claims that comprehensible input is essential and that language is acquired by understanding messages (Krashen, 1982, 1985, 1989). The view of vocabulary acquisition based on this position is incidental learning. That is, the ‘language acquisition device (LAD) assimilates vocabulary from the evidence provided in natural language’ while ‘your conscious focus is on the message, not form’ (N. Ellis, 1994:212). It has been thought that reading was necessary and an adequate means for learning vocabulary. This view represents a process view of lexis and is concerned with the learning of lexis; however it is non-interventionist. In other words, it is assumed that lexis can be acquired during the process of reading incidentally.

So far different perspectives of lexis have been discussed. Before the change of direction is detailed, the limitations of the previous views will be summarised to prepare the grounds for a fuller description of the model.
2.8.3 Limitations of the views of lexis discussed

The views of lexis, which I have generally referred to as product-oriented or as process-oriented concerned with learning grammar, present a rather narrow conceptualisation of the lexicon as well as of lexical learning and teaching. The major aspects of lexis that are either poorly dealt with or not addressed can be summarised as follows:

- Direct or isolationist learning of lexis is over-emphasised whereas learning of lexis in language use is de-emphasised.
- The learning aspect of lexis is mostly restricted to item-learning, which is highly controlled, or at best, to learning through reading incidentally.
- Productive use of lexis in spoken discourse is ignored.
- Abundant use of tasks is suggested, but task types and task conditions that can impact on lexical use remain largely unexplored.
- Individual variation is virtually left out of the syllabus – lexical or not – except for some evasive ideas about learner training.

The proposed alternative model recognises the value of explicit learning of lexis, but argues that a generative use of lexis in discourse is more effective in terms of the communicative use of lexis. I believe it is many L2 teachers' experience that learners feel frustrated when they simply cannot find the (right) words to say what they mean. They would, though, perform remarkably better if asked to answer in writing comprehension questions on a reading text where similar vocabulary was required. This indicates that such vocabulary is not known to the degree that can be drawn on under communicative pressure. Moreover, contextual and individual factors (intrapersonal and interpersonal) will interact in this process of making meaning.

The concern of the study is with spoken discourse rather than the written discourse. However, this does not mean that vocabulary use in written discourse is less important. The main reason for the emphasis of the research study on the spoken discourse is the fact that it is relatively under-researched. This is also endorsed by
frequent observations that L2 learners often have problems retrieving vocabulary that they think they know in spoken discourse. Databases of concordances in corpora are rich and useful data but they are essentially limited to the 'product' itself. What is of more relevance to language pedagogy are the processes through which such data is composed by language users. It should be noted here that there are significant differences between the vocabulary of spoken and written discourse, each having different pedagogical implications. McCarthy and Carter (1997:39) argue that the differences between the two discourses suggest that 'the emphasis shifts away from the purely content words, and embraces items such as discourse markers and vague terms, and the lexicon is seen as dynamic, with abstract concepts such as synonymy and antonymy gaining a real sense of usefulness'. The notion of the nature of the words used in spoken discourse is a major area under discussion in the present study.

2.9 A case for lexis: focus on lexis in language use through regulative contextual factors

So far we have seen that the learning aspect of lexis has been concerned with the role of lexis as 'product' rather than 'process'. Explicit vocabulary learning strategies and chunk learning have been highlighted but learning processes have been neglected. Lexical views have considered lexis from an analytical perspective (i.e. analysing the structure of words, collocations, and so on) and have basically ignored a more representative contextualised perspective of lexis, namely, of lower-level idealisations.

The process view of lexis derives from the claimed relationship between discourse and the learning of lexis. It advocates that lexis is gradually automatised just as grammar is. Language use in spoken discourse is considered to be a medium in which processes like noticing and intake are supported and automatisation can be facilitated. It is argued that more complex and varied lexis can be elicited from learners through design features of tasks.
This can be countered in two ways. First, it could be argued that compared to grammar lexis is simple and easier to internalise. Learners' acquisition of language is lexical in initial stages; grammar develops only later (Lewis, 1993; Ellis, 1999). Another argument could be that lexis is 'just there' – it takes care of itself; it finds its way through the learner's interlanguage. Additionally, it is impossible to physically trace a word through its acquisitional stages to account for how lexis is learned.

The main misconception here, however, is that learning lexis is viewed as simple but the lexicon is seen as complex. Our understanding of how the lexicon (as well as interactions between L1 and L2 lexicons) operates may be poor, but what is particularly ignored is how lexical knowledge is internalised and organised. The proposed view of lexis puts forward that the gradual automatisation principle applies to lexis as well as grammar. It is based on the idea that for a word to become automatised repeated encounters are necessary. However, as Nation (2001:4) put it, this area of research is under-researched:

... Learning a word is a cumulative process involving a range of aspects of knowledge. Learners need many different kinds of meetings with words in order to learn them fully [emphasis added]. There is still little research on how vocabulary knowledge grows and how different kinds of encounters with words contribute to vocabulary knowledge.

The approach to L2 acquisition argued for in the present study, however, can be characterised as a 'process', a non-linear one. This is exactly where the crucial potential power of discourse comes in. It is claimed that it is through discourse that lexis can best be internalised. The assumption underlying this approach is essentially one that views acquisition of L2 lexis as a process most effectively achieved through using lexis in discourse. Not only does this approach encompass the contextualised manifestations of lexis, but also it fosters cognitive processes (i.e. noticing, intake, restructuring, automaticity (proceduralisation)) integral for an L2 to take place through language use in communication.

Noticing can be facilitated through negotiation in language use. As defined by Nation (2001:64), noticing involves 'decontextualisation' – to focus on a word as a language
item by removing it from the message. Research has shown that negotiation can have a positive effect on learning lexis. That is, negotiated lexis is more likely to be learned than lexis that is not negotiated (Ellis, Tanaka and Yamazaki, 1994; Newton, 1995). Through negotiation learners can notice lexis that is new or lexis that has been used differently, which fills a gap in the learner's interlanguage (Schmidt and Forta, 1986). Nation (2001:63) notes that noticing can also occur in different ways such as 'when learners look up a word in a dictionary, deliberately study a word, guess from context or have a word explained to them'. This may be true, but noticing is necessary but not sufficient for automatisation. When using language in discourse, learners see not only whether these previously noticed words have been taken in, but also to what extent they can draw on them to realise a communicative goal. This brings us to the issue of retrieval in language use.

Nation (2001:67) distinguishes between two types of retrieval: receptive and productive retrieval. 'Receptive retrieval involves perceiving the form and having to retrieve its meaning when the word is met in listening or reading' while 'productive retrieval involves wishing to communicate the meaning of the word and having to retrieve its spoken or written form as in speaking or writing' (ibid.). The proposed model in this study focuses on the 'productive retrieval' of lexis in speaking. As Ellis (1999:89) put it, implicit knowledge is 'a highly complex process, involving intake and gradual restructuring, ... which is not amenable to one-shot (or even to several shots of pedagogic ministrations'). Thus, the repeated opportunity to retrieve a word increases the chances of that word being learned because each time the word is retrieved the form-meaning link is strengthened, which makes the next retrieval relatively easier (Baddeley, 1990). In other words, the repeated access to the word will lead to the word being automatised.

Another advantage of accessing lexis in spoken discourse is that learners can stretch their vocabulary. Put another way, they can not only hear familiar words used differently but also they attempt to use such words in different contexts. This will lead the learner to reconsider the meaning and uses of the word and restructure the lexicon so as to allow the new meaning to integrate into the network of existing vocabulary.
Nation (2001:68-69) labels this type of lexical use *creative* or *generative use* and defines it as follows:

Generative processing occurs when previously met words are subsequently met or used in ways that differ from the previous meeting with the word. At its most striking, the new meeting with the word forces learners to reconceptualise their knowledge of that word. ... a word is used generatively if it is used in speaking in a way which is different from its use in the textual input.

Nation (2001:70) suggests that there are degrees of generation and provides an example to illustrate ‘low’ and ‘high’ degrees of generative use of lexis: if the learner uses the expression *chronic pain* in the form of *very chronic pain*, then, this would indicate a low degree of generation. But if the learner extends the expression *chronic pain* to *chronic backache* or *illness*, then, this could be taken to be a high degree of generation, ‘perhaps indicating the word has begun to be integrated into the learner’s language system’.

### 2.10 Outline of the alternative view

The proposed approach can be delineated in reference to three major assumptions:

(a) Lexis is gradually learned through opportunities for repeated access in use.
(b) Different task types can provide the context for different kinds of discourse which yield different kinds of lexis.
(c) The regulation of planning time can promote lexical use and increase opportunities for lexical stretching (i.e. a parallel to interlanguage stretching), which can aid lexical learning.

The first premise views language use in discourse as a medium in which and as a means by which lexis is learned. It is hypothesised that repeated access in use enhances lexical learning.
The second major assumption attempts to establish a link between task design and lexical learning. The claim is that task types can generate different discourse types, which yield particular types of lexis. It should be noted here that the term ‘task’ refers to the pedagogic material, but the key characteristic of the tasks is their discourse type. Thus, the tasks used in the present study are viewed in terms of discourse type. Two task types, i.e., descriptive and narrative, are associated with two discourse types, i.e., dialogic and monologic, respectively. Dialogic and monologic discourse types are investigated in relation to two types of lexis – procedural and schematic – respectively, each of which serves a different purpose in communication. Procedural vocabulary serves to get at specific vocabulary through description and definition. This type of vocabulary is considered to be of vital importance to L2 learners, especially at the early stages of language learning. Schematic vocabulary, on the other hand, involves the content words that define independently particular frames of reference (Widdowson, 1983).

Finally, the claim framed by the third major premise is that through a careful regulation of the psycholinguistic construct of planning time increased opportunities for lexical stretching can be introduced and thus lexical learning can be enhanced. It is claimed that planning time impacts upon lexical features such as lexical complexity, accuracy and richness.

In summary, the process approach to L2 lexical learning argued for in this study rests on three premises: learning lexical items by using them (involving psychological processes such as noticing, restructuring, retrieval and stretching), the connection between task type and type of vocabulary, and the manipulable psycholinguistic construct of planning as well as its effects on lexical complexity, accuracy and richness.

Now that the process approach adopted in the study has been characterised, let us attempt to summarise its main features in comparison to the conventional product approach:
Though relatively under-researched, the process approach, as opposed to the product approach, rests on the underlying view that lexical access, and therefore lexical learning, results from a network of interacting factors in discourse. The specific factors that the present study focuses on are discourse type and availability of planning time.

Here I will attempt to describe in some detail the rationale behind the process approach to L2 lexical learning with reference to the cognitive processes already discussed.

The starting point is language use (i.e. the use of language in discourse). This presumably results in some noticing (i.e. provide learners with opportunities to notice items or gaps). The noticed piece of language, then, is likely to lead to restructuring of
the current system of interlanguage. Restructuring provides material for proceduralisation through practice, which may then lead to further restructuring. Parallel concepts are suggested for the learning of lexis. Repeated exposures to words in discourse will trigger the restructuring of the learner lexicon. The more the learner draws on such lexis under the communicative pressures of discourse, the more likely it is for it to become automatised.

Each step in the cycle looks back to the previous step and forward to the next step. The cycle serves to link the current interlanguage system with future integrations/developments. Furthermore, it links discourse with practice through language use − lexis in particular − in context. The starting point − use − however, is generally seen as the most problematic. For there appear to be different understandings of ‘use’. I use the term ‘use’ to refer to discourse as a tool for interlanguage development. The research study reported here sees discourse type as well as planning time as factors that can influence the type and complexity of lexis. The manipulation of these constructs can increase opportunities for lexical stretching by pushing the learner to call on under-practised lexis of his/her idiosyncratic lexicon.

It has been argued elsewhere that the emphasis in L2 pedagogy has been on grammar and lexis has not received enough attention. Recently, ‘chunks of phrases’ or ‘prefabricated phrases’, still being treated as grammatical units, have been prevalent in lexical studies. However, the learner’s lexicon is not composed entirely of ‘chunks’. Although the current study recognises the value of ‘chunks’ in their own right, pedagogically speaking, current lexical approaches (Willis, 1990; Lewis, 1993) indeed display a partial picture of L2 vocabulary learning.

The alternative view proposed here sees language learning as more individual and contextual (Firth and Wagner, 1997). It argues that the extent to which learner language can be manipulated is largely influenced by contextual factors and individual differences. From this perspective, lexis is regarded as personal, contextual and therefore more complex than statistical data is capable of displaying. An extended discussion supported by evidence from case studies is presented in Chapter Six.
In summary, the process approach to learning L2 lexis is pragmatic and seeks to overcome the limitations of the traditional product (linear) approach (discussed earlier) by ...

- ensuring that the product can be acted on by the learner;
- catering not only for fixed phrases or prefabricated chunks but also for independent lexical items;
- reinforcing particular types and aspects of lexis emerging;
- encouraging an ongoing restructuring of the learner's system (i.e. lexicon) and thus fostering lexical development;
- accommodating interaction and negotiation of meaning to aid the processes of restructuring and proceduralisation;
- affording the learner opportunities for lexical stretching through manipulation of task features;
- prompting the learner to allocate his attentional resources variably on different tasks while actively engaged with language use.
- enabling repeated encounters of lexis;
- fostering elaborate networking of lexis; and
- increasing the degree/level of learning of known lexis and helping to add new aspects to current networks.

Thus, the process approach provides a basis for learners to develop a relatively more deployable and expandable stock of lexis, as opposed to a restricted store of lexis of lower degree of deployability. Nevertheless, it should be noted that the argument here is not that we ought to dispose of the product approach, but rather re-accommodate it in a functionally more effective mechanism, i.e. the process approach, to be able to exploit its potential.

This scope in mind shaped the design of the research study (see Chapter Four). It was designed with the hope that it would reveal crucial evidence of the complexity of lexis as impacted by contextual (i.e. task features – discourse type and planning time) and
individual factors. Such evidence was sought through quantitative and qualitative analyses of the data.

This chapter has presented a review of current approaches to lexis with their shortcomings in terms of language learning and production, followed by a proposal whereby a focus on lexis may be induced and manipulated within the medium of spoken discourse. The next chapter aims to set up the framework for the study by drawing on the theoretical background to speech production as information processing as well as its pedagogical implications.
3.0 Introduction

This chapter is composed of two main parts. The first part (3.1-3.5) reviews the contemporary literature that is relevant to the approach taken in the current study – the information-processing approach. This approach is more commonly represented as a performance model which is concerned with cognitive processes of language in use. Following a discussion of the information-processing approach to language in some depth, the research study describes the speech production model it adopts. In the next section, with its focus on speech production, i.e. output, it sets out the assumptions on which the framework is based.

The second part (3.6-3.9) gradually extends from the theoretical background presented in the first part to the more relevant theory-based pedagogical issues which are concerned with language use as spoken discourse. These issues are addressed in reference to theoretical underpinnings of the approach adopted in the study. First, it discusses the advantages and disadvantages of language use in a non-interventionist context (i.e. negotiation of meaning in interaction and meaning-driven communicative tasks). Second, it argues for the need for principled pedagogical intervention (i.e. through contextual regulation) to induce focus on form. Finally, it introduces two manipulable contextual factors (i.e. planning and task type) that may push learners to the limit of what they are capable of producing and thus provide them with opportunities for interlanguage stretching, and lexical stretching in particular.
3.1 Setting up the theoretical framework for the study: three main approaches

Language has been studied from various perspectives. These perspectives can be grouped into three major approaches: the rationalist deductive approach, the empirical inductive approach and the sociocultural approach. The emphasis of the first two approaches is on the study and modelling of human cognition, while the third approach examines language from a socio-cultural context. Each of these approaches has its own emphasis on a particular aspect of language and therefore none of them is without problems. Recently, though, there have been increasing attempts to incorporate into a more comprehensive and representative model different components of language, namely, complex models that account for competence as well as performance\(^3\) (Mitchell and Myles, 1998:99).

The first approach is the rationalist deductive approach. This approach, usually associated with Chomsky’s (1965, 1980) universal generative grammar theory, is also called a linguistic approach. According to this approach, humans are endowed with a special ability to learn a language. This ability is what Chomsky has famously referred to as LAD (Language Acquisition Device). It has been argued that, in the case of L1, it is the LAD that internally processes the input (i.e. language that the learner is exposed to) and therefore makes possible the acquisition of language. In the case of L2 acquisition, ‘input either goes through this module (direct access) or it does not (no access), or it relates to it via the L1 linguistic competence (indirect access)’ (Cook, 1996:66). The linguistic approach, as Chomsky (1965) argued, should be concerned with the goal of building a theory of an L2 competence. The main concern of the linguistic approach, then, is with abstracting what learners ‘know’, rather than explaining ‘how’ this knowledge is used. The former is referred to as competence – the abstract representation of linguistic knowledge in the mind enabling the language user to create and understand novel utterances, and the latter as performance – actual language use. The linguistic approach is a competence model which does not account

\(^3\) The terms competence and performance will be referred to and defined in this section.
for performance and therefore for variability in learner language. It studies what learners know from what they do through certain idealisation processes such as ‘regularisation’, ‘standardisation’ and ‘decontextualisation’ to provide invariable data for the theoretical linguist to study and model the underlying competence of the learner (Gregg, 1990; Ellis, 1994). On the other hand, there has been increasing evidence of extensive variability in learner language (Ochs, 1979; Tarone, 1985; Ellis, 1987; Crookes, 1989; Ortega, 1995, 1999; Foster and Skehan, 1996). In sum, linguistic approach has as its strength the potential of explaining the underlying structure of competence based on the generative description of rules; however, it does not account for performance and therefore variation in learner language.

The second approach is the *empirical inductive* approach. This approach, as opposed to the rationalist deductive approach, can best be characterised as a performance model (e.g. Anderson, 1983). It is basically a cognitive view of language that is concerned with cognitive processes of language in use. Its orientation to cognitive processes prioritises the role of the mind. The role that the mind is assigned is a unitary one. That is, human cognition encompasses higher order processes such as language acquisition and use, memory and problem solving. All these processes are viewed as different manifestations of the same underlying system. This means that language acquisition and use is not seen as different from other cognitive processes, although more complex. With the development and spread of computers, this view of language has come to be known as the information-processing model. In this model, computer terminology such as input-output, storage-retrieval/access, processing (speed or rate) has commonly been used to explain language production.

The third approach studies language in a socio-cultural context. The emphasis is on the individual as a ‘social being’. Learners are viewed as ‘constructors of their own learning environment, which they shape through their choice of goals and operations’ (Mitchell and Myles, 1998:162). It is believed that language knowledge and use emerge from the interaction between the individual and the cultural context. A long tradition of this view of language is best represented in the work of Piaget (1929), Vygotsky (1934). More recently, this tradition of research is prevalent in Donato

Having briefly outlined the three main approaches, the present study will primarily follow the information-processing approach, with elements such as individual and contextual factors from the socio-cultural approach. A cognitive view of language production connects with using lexis in the sense that both the representation of and access to the lexicon are complex. Exploiting one’s lexicon in language use is seen as a complex skill involving some processes. These processes are likely to be influenced by psychological conditions such as attention and consciousness. In addition, individual and contextual factors – which the information-processing view does not account for – are also seen as influences on using lexis in oral production. Consequently, the information-processing approach is the theory that underpins the main argument in the thesis, but I also draw on the socio-cultural theory (see Chapter Six) to shed further light on the intricacy of using lexis.

3.2 Aspects of information processing

Information processing in the general sense is a notion that stems from the cognitive approaches in psychology. It aims to describe and explain the way in which the human mind takes in information from the environment and converts it in an accessible form. Information processing models have been concerned with how the mind stores and transforms information in memory, and how this information is retrieved and used in language production. Thus, *memory* is one of the cornerstones on which information-processing models rest. As well as memory, there are other crucial notions such as *limited capacity* and *controlled and automatic processing* that psychological research has produced to explain the way in which the human mind operates. These notions will be briefly defined so as to be able to demonstrate the relevance of information processing models to language production.
3.2.1 Main components of memory and their function

Memory is thought to have three main components: sensory stores, short-term memory (working memory) and long-term memory. Crudely speaking, information from the input (e.g. in terms of language, it is the language that the learner is exposed to or surrounded by (Gass, 1988)) is taken in by sensory stores. This information in the sensory stores is subsequently processed by working memory (short-term memory); however, it can be held there for only a very short time. When further processing is applied, the information in working memory may be integrated with the long-term memory before it evades. It has been suggested that working memory holds information that is active and is ready to be processed while the information in the long-term memory is inactive (Anderson, 1983; Baddely, 1986).

3.2.2 Limited capacity

The information-processing approach views the mind as being a limited capacity processor (Anderson, 1983; McLaughlin, 1987). This limitation is mainly concerned with the focus of attention.

At a given time, one is able to attend to only a portion of input, not all. The input to which attention is directed has the potential to be noticed. As Schmidt (1990:132) put it, noticing refers to private experience. It refers to ‘conscious registration’ of ‘surface level phenomena and item learning’ (Schmidt, 1995:29). In terms of language, noticed input is that which becomes salient or stands out as a result of attention or particular features such as frequency, affect, prior knowledge (Gass, 1988:202-3). Recent research in SLA has demonstrated that attention and noticing play a central role in language learning (Schmidt, 1990). Schmidt and Frota (1986) claim that the more the learner notices, the more likely that s/he will learn more; and that it may be that the learner who notices most is the one who pays attention most. Attentional resources, however, are limited (VanPatten, 1990). As indicated by Carr and Curran (1994), some acts of cognition occupy almost the entire information processing
system, which makes it difficult for the learner to carry out another task simultaneously. In such a case, the attention-demanding task receives the 'focused attention'; in other words, the components of the 'limited-capacity processing' system are committed to the attention-demanding task, not allowing the learner to do another task at the same time. Thus, the question that arises is that of how attentional resources are allocated. According to Hulstijn and Hulstijn (1984), the allocation of attentional resources by the learner to either information content or linguistic form in production is possible. VanPatten (1990) reports that attention to meaning and attention to form are in competition, attention to meaning usually being prioritised.

3.3 Information processing models

This section is concerned with three notions crucial to information processing models: controlled and automatic processing, declarative and procedural knowledge, and dual-mode systems.

3.3.1 Controlled and automatic processing

Despite their limitation in attending to and processing information, humans are able to acquire a diversity of complex skills. A proposal as to how this is achieved has been put forward by Shiffrin and Schneider (1977). This proposal involves two processes: controlled processing and automatic processing.

Controlled processing involves 'the temporary activation of nodes in a sequence' (McLaughlin and Heredia, 1996:215). Such activation is attentionally controlled by the processor. As attention for controlled processes is necessary, only one sequence can be controlled at a time without causing interference (ibid.). Controlled processing, however, is 'constrained by the limitations of the Short-Term Memory (STM)' (Mitchell and Myles, 1998:86). Despite such constraints, controlled processes are 'relatively easy to set up, alter, and apply to novel situations' (McLaughlin and

Automatic processing, on the other hand, results from repeated activation of initially controlled sequences. As automatic processing operates on the ‘associative connections in long-term storage, most automatic processes require an appreciable amount of training to develop fully’ (McLaughlin and Heredia, 1996:214-5). With practice in the form of many trials this activation becomes a learned response and therefore can form as a skill that can be drawn on rapidly, i.e. automatically (Shiffrin and Schneider, 1977).

Controlled and automatic processes are seen on a continuum. As controlled processes become automatic with practice, more attention is freed up to allocate to other higher levels of processing. Thus, controlled processing forms the basis for automatic processing in which the processor moves to increasing levels of difficulty (Shiffrin and Schneider, 1977).

3.3.2 Declarative and procedural knowledge

Anderson’s (1983) ACT* (Adaptive Control of Thought) is similar to controlled-automatic processing, but basically the terminology is different. In this model, practice also plays a crucial role, that is, practice leads to automatisation. The individual’s long-term memory is conceived of comprising declarative and procedural knowledge (Anderson, 1983). The former is the knowledge of that (similar to controlled processes), and the latter is the knowledge of how (not unlike automatic processes) (Mitchell and Myles, 1998:87). In other words, declarative knowledge is directly accessible to introspection and can be acquired bit by bit whereas procedural knowledge is not available to introspection and can only be acquired through executing the skill (Wendel, 1997).
In the ACT* model, skill acquisition is explained as a process of moving from declarative knowledge to procedural knowledge. For example, having knowledge about the mechanics of driving a car (e.g. changing the gear according to speed, or which foot is responsible for which operation – clutch, acceleration, brakes) does not necessarily mean that one successfully is able to drive. To be able to learn how to drive the declarative knowledge about the controls of the car needs to become proceduralised through many trials, i.e. after a period of sustained practice. The process of proceduralisation applied to language learning will be discussed in section 3.6 below.

3.3.3 Dual-mode information processing

Language use and language acquisition are constrained by the ways in which a limited-capacity information-processing system operates. Widdowson (1989) and Skehan (1996) proposed a dual processing capacity which represents rules and exemplars. In other words, the dual-system information-processing model has two components: rule-based and exemplar-based systems (Carr and Curren, 1994). The rule-based system enables generative use of rules and it is analytic and flexible; on the other hand, the exemplar-based system is dependent on the accumulation of large numbers of formulaic units. According to Carr and Curren, the former supports structural learning while the latter supports exemplar-based learning. To Skehan (1996:41-42) the exemplar-based (lexical mode) system is a resource composed of large numbers of formulaic chunks; it is memory-based and is utilised when ‘accessibility and time pressure are paramount’; on the other hand, the rule-based (syntactic mode) system is drawn on when the speaker needs to be precise or creative. It has been argued that language processing is not always analytic and rule-based but rather demonstrates a shift between the two modes (Pawley and Syder, 1983; Widdowson, 1989; Sinclair, 1991). It has been found that the processing difficulty of a task leads to more use of formulaic units (Bygate, 1988).
This model is better equipped to address real-time language use than those that are concerned merely with the analytic mode. In this view, the underlying system exploits rules to create formulaic chunks 'which are then available for access as units for processing with minimal computational demands' (Skehan, 1998:90).

A major constraint that affects L2 processing and use is that attentional resources are limited (Schmidt, 1995). VanPatten (1990) shows that, everything being constant, language processing is primarily meaning-oriented and comprehension does not necessarily involve an engagement with form. However, through some pedagogic intervention attention can be channelled towards form by setting up the conditions for noticing as well as manipulating these conditions to increase the chances of such noticing to link with interlanguage development (VanPatten, 1990; VanPatten and Cadierno, 1993; Fotos, 1993). Similarly, Skehan (1998:91) argues:

As a result, the primacy for meaning, in the context of a limited-capacity information-processing system, means that there will be a greater predisposition towards the exemplar, memory-based system, and the internally generated pressure for syntactization will not come into play. In other words, there is a danger that the second language learner will not progress beyond the first of the three stages mentioned above [i.e. lexicalization ➔ syntacticalization ➔ relexicalization].

One implication for the L2 language learner is that continual pressure should be provided to encourage analysis (Widdowson, 1989), and help avoid depending on exemplar-based systems all the time. It should be noted that the main concern here is with grammar.

3.4 Speech production as information processing: Levelt’s model

Levelt (1989) applies the information processing framework to language production. In this model, language production is viewed as a complex cognitive skill similar to other cognitive skills. According to Levelt, a complex cognitive skill can be broken into its processes and sub-processes.
Assuming that speaking in monolingual and bilingual speakers shares many features, de Bot (1992:2) proposes that a general model of speech production be used, such as that proposed by Levelt (1989). This model entails four main processing stages of speech production:

1. ‘Conceptualizer’ (decisions are made as to which variety of language to use, in conformity with situational factors, and also which communicative goals to be realised in the spoken message)
2. ‘Formulator’ (the ‘pre-verbal message’ is converted into a speech plan by the selection of the appropriate words from the lexicon and by the application of grammatical and phonological rules)
3. ‘Articulator’ (the speech plan is converted into actual speech)
4. ‘Speech comprehension system’ (gives the originator of the spoken message feedback on whether there are phonetic mistakes or mistakes in overt speech and affords the speaker the opportunity to make adjustments in the ‘conceptualizer’ (Ellis, 1994: 130-31).

The four components in Levelt’s model use procedural knowledge while the lexicon as well as the component comprising discourse model, situation knowledge, encyclopaedia, etc. represents stores of knowledge which is declarative. ‘Procedural knowledge is not accessible through introspection. Declarative knowledge is largely examinable through conscious thought and reflection’ (Nation, 2001:37).

According to this model, it is the choice of words that determines grammar and phonology of sentences, so grammar is linked to the knowledge of words. Nation (2001:37) states that this linkage between word knowledge and grammar ‘underlines the importance of meeting words in use as a way of developing vocabulary knowledge. It also shows how the decontextualised learning of vocabulary is not sufficient, although it may be useful, for ‘knowing a word’.’

de Bot (1992:6 cited in Ellis, 1994:131) emphasises that in the Levelt model ‘the different components are at work simultaneously’ and ‘that various parts of the same
sentence will be at different processing stages.’ Implicit in this proposal, though, the planning referred to is on-line planning rather than pre-planning (types of planning are discussed in this part below).

There are two psycholinguistic operations that play an important role in speech production: monitoring and planning.

3.4.1 Monitoring

Monitoring is a psycholinguistic operation in which language learners may monitor their output; in other words, they ‘pay conscious attention to specific elements of the utterance in order to correct or improve them’ (Ellis, 1994:131). Krashen, in his argument for the monitor hypothesis, claims that the learned system, not the acquired system, acts as a ‘monitor’ or ‘editor’ which makes minor changes or refining to what has been produced by the acquired system. As Lightbown and Spada (1993:27) put it, ‘in a given utterance, it is impossible to determine what has been produced by the acquired system and what is the result of monitor use.’ It is, therefore, quite hard to collect evidence for monitored speech in order to test the hypothesis. In Hulstijn and Hulstijn’s (1984) study, for instance, monitoring plays an important part. It should be noted, however, that monitoring is beyond the scope of the present study.

3.4.2 Planning

Planning, being a psycholinguistic operation like monitoring, has been viewed as a manipulable construct and connections have been drawn between planning and interlanguage (IL) development.

Initially, planning has been considered in terms of L1 and applied to L2 without a thorough understanding of L2 processing stages. In her discussion of production in L1, Ochs (1979:55) differentiates between ‘planned’ and ‘unplanned’ discourse, the
former referring to ‘discourse that lacks forethought and organisational preparation,’ and the latter to ‘discourse that has been thought out and organised (designed) prior to its expression’. Ellis (1994:131), however, argues that L2 variability research has narrowly focused on the impact of ‘planning time’ in speech production, ‘influenced no doubt by the fact that, whereas L1 production is largely automatic, L2 production is often not, so that the amount of time a learner has to plan the different processing stages is likely to affect output.’ In L2 output, planning has often been viewed as a favourable condition on the part of the learner. As Long (1989:14) points out, planning time leads to the production of more complex language, and ‘planned tasks “stretch” interlanguages further and promote destabilization more than unplanned tasks.’

There have been various conceptualisations of the construct of planning in the literature. First, there is planning emerging from familiarisation with the topic and task. The degree of familiarity and experience with the topic and task at hand may lead to performances dependent, to a varied extent, on planned or pre-packaged knowledge (i.e. pre-existing schemata) and language (cf. Ochs, 1979; Givon, 1979). Second, there are micro-planning and macro-planning, which can be characterised as on-line psycholinguistic processes (see co-planning below) employed in the formulation of any message (see Butterworth, 1980b; and Levelt, 1989; Dechert and Raupach, 1980; and Dechert, Mohle and Raupach, 1984). Crookes (1991:115) sees these two as subdivisions of planning and states that the former ‘is concerned with purely local functions, like marking clause boundaries and selecting words ... and, as it turns out, speakers only start to search for a word when it is needed for the next phrase’, while the latter ‘concerns the long range semantic and syntactic organisation of a sizeable chunk of speech and therefore cannot be carried out locally’ (Butterworth, 1980:159, cited in Crookes 1991). Finally, there is also ‘pre-planning, which takes place before speech, and co-planning, which occurs at the same time as speech’ (Crookes, 1991:115). Yet, as seen, whether or not formal opportunity for planning exists, a certain degree of planning is to be expected. Put another way, learners may exercise some degree of planning despite the absence of formal pre-task planning. To this end, since planning appears to be a matter of degree and type, no-
planning in these conditions can be better defined as minimal planning (see Crookes, 1988a). The current study’s focus, however, is on pre-planning or pre-task planning, characterised as a manipulable task condition in which learners are given time to plan, rather than on-line planning (co-planning), which occurs simultaneously with speech.

3.5 Main assumptions of the information-processing view

The information-processing view is based on several assumptions:

(a) Cognitive processes are responsible for all kinds of skills, e.g. L1 and L2 acquisition, problem solving.
(b) Learning is viewed as a complex skill. This skill is acquired by a move from declarative knowledge to procedural, or from controlled to automatic processing.
(c) Due to limited attentional capacity, individuals focus mainly on meaning rather than form during communication in real time.
(d) Practice in language use is crucial to language development as skill.

3.6 Practice in language use leading to proceduralisation

Practice in language use has been considered necessary in the proceduralisation of subskills and the restructuring of the interlanguage system. The notion of restructuring, not unlike Gass’ (1988) integration, plays an important role in the development of automaticity (McLaughlin, 1990). For a complex skill like language learning to take place practice is indispensable. Such practice is said to be likely to lead to automated language as well as to conditions for the ‘restructuring’ of the mental representations in the learner’s interlanguage. When the learner uses the language, s/he becomes better aware of the representational framework in her/his internal system, which acts as a trigger for restructuring. McLaughlin (1990:125) argues that practice can lead to two distinct effects: (1) ‘improvement in performance
as sub-skills become automated'; (2) 'restructuring and attendant decrements in performance as learners reorganise their internal representational framework.'

Language production is referred to as *output* in Gass' (1988) framework, which constitutes the realisation of language knowledge in actual use. Swain (1985) argues that comprehensible input is not a necessary and sufficient condition for acquisition, and that learners need the opportunity to produce 'comprehensible output', which drives their language development forward by providing a context for meaningful use in which hypotheses about the L2 are tested out and a transition from semantic analysis to syntactic analysis is achieved. Swain's (1985) argument relates to Gass' (1988) claim about 'levels of comprehended input.' Language use will aid the learner in converting comprehended input into intake through detailed analyses of the grammar (Gass, 1988).

The cognitive psychological approach sees second language acquisition as the acquisition of a complex skill. This skill is acquired or automated through experience and practice. At the beginning, the learner has to pay attention to any aspect of the language in order to incorporate it into his internal system. Once this has been done, it gradually gets automatized through practice, allowing the learner to focus attention on some other aspect of the language. This, then, leads to a piecemeal buildup of language knowledge on which the learner calls automatically in comprehension and production (Lightbown and Spada, 1993).

However, the build-up of knowledge systems as a non-linear, cumulative process eventually leading to automaticity through practice sometimes cannot account for what the learner knows and uses automatically. Such automatized knowledge seems to emerge, without sustained practice, from the interaction of the current interlanguage system and the newly incorporated knowledge. The incorporated piece of language may cause a 'restructuring' in the system, resulting in either significant sudden progress for the learner or in 'apparent back-sliding when a systematic aspect of learner language suddenly incorporates too much or incorporates the wrong things' (Lightbown and Spada, 1993:25).
McLaughlin (1990), drawing on relevant literature, suggests that second language development may involve an interaction between lexical and syntactic processes and that restructuring takes place as one or the other predominates. With respect to lexical restructuring, McLaughlin (1990:122), seeing second language development as embodying 'mapping two lexical and conceptual systems onto each other', points out that lexical items are either incorporated into the existing system or, as is the case in many instances, since there is no one-to-one match between the L1 and L2 semantic systems, the learner has to restructure the current system, or develop a new concept to accommodate the new items, that is to fit them into the reorganised system. It is clear that practice in language use is necessary for automaticity to develop; moreover, it lays the conditions for lexical and syntactic restructuring.

The problem, however, is that such practice is assumed to take place in interaction while interlocutors negotiate meaning. This assumption is prevalent in the interactionally-based pedagogical proposals (e.g. Krashen, 1980). The following section goes into interaction in L2 learning.

3.6.1 Interaction in L2 learning: theoretical background

Second language learners acquire new language when they have the opportunity to negotiate solutions to problems they encounter during communication. This assertion, which originated from the work of Long (1981) and has been referred to as the Interaction Hypothesis (Ellis, 1990), advances two claims about L2 acquisition.

One claim, the origin of which is in Krashen’s (1980) input hypothesis, is that comprehensible input is necessary for acquisition. Whereas Krashen argued for simplified input and contextual support in order to make input comprehensible, Long argued for the importance of negotiated interaction. Long’s (1981) finding showed that although there were few ‘input’ differences between speech addressed to L2 learners and speech addressed to native speakers, several ‘interaction’ differences were found. For instance, no difference was noted as to type-token ratio or number of
S-nodes/T-units (i.e. a T-unit is an independent clause with an associated dependent clause; and S-nodes are tensed or untensed verbs), but the frequency of conversational modifications (e.g. comprehension checks, confirmation checks and clarification requests) was significantly different.

Another claim advanced by the interaction hypothesis is that the use of these conversational devices by the L2 learners helps to resolve comprehension problems arising by achieving negotiation of meaning, and thus helps to make input comprehensible to the learner. It is hypothesised that L2 acquisition is promoted if learners have opportunities to solve communication problems by making use of conversational modification devices (Long, 1981, 1983a). In this respect, Long (1981) showed that two-way tasks (e.g. picture sorting) afford the learner more conversational adjustments than do one-way tasks. The interaction hypothesis, then, argues for comprehensible input achieved through meaning negotiation, rather than simplified input, and sees it as a process promoting L2 acquisition.

The claim that negotiated modification promotes comprehension has been addressed in a study by Pica, Young and Doughty (1987). They compared two types of input: (a) premodified input; and (b) interactionally adjusted input. The results showed that interactionally adjusted input led to higher levels of comprehension (88% vs. 69%). This study provides support for the claim advanced by the interaction hypothesis that modification of conversation through negotiation leads to better comprehension. However, the study did not address the issue as to whether learners need to actively take part in negotiated interaction or whether it was enough for them to have access to interactionally adjusted input by others. In a later study, Pica (1992) attempted to answer this question by studying three groups: negotiators (who were actively involved in negotiation of meaning); observers (who just observed the negotiators, but did not negotiate themselves); and listeners (who just listened to the teacher read directions based on interactionally modified input without any opportunity for interaction and who did the task later). The results as to the levels of comprehension of the three groups were 88%, 78% and 81%, respectively. Although the results were not statistically significant, Pica concluded that interactionally modified input is
especially important at the early stages of L2 acquisition, which conforms to Long’s (1983b) claim.

The interaction hypothesis has had its critics, however. It has been suggested that elaborate input produced by interactional negotiation does not always appear to promote comprehension (Derwing, 1989; Ehrlich, Avery, and Yorio, 1989). Derwing (1989) and Ehrlich, Avery, and Yorio (1989) suggest that the greater quantity of input resulting from negotiation does not necessarily lead to better comprehension. Rather, as it seems, the quality of negotiated input plays a more important role. Long (1989:10) suggests that small group interaction (including pair work), provides the learners with the opportunity for ‘more individualised negotiation for meaning’ which ‘should increase both the quantity and quality of comprehensible input ...’. By the term ‘individualised’ Long means the context where input can be adjusted with more precision when the listener or reader is an individual (the other member of a dyad, for example) than a large group of people, who inevitably possess differing proficiencies, i.e. the whole class. Another criticism is that of a social perspective. Hawkins (1985) and Aston (1986) argue that learners may come to achieve comprehension after negotiation since they would not want to appear the party that frequently shows signs of incomprehension. To Aston (1986), excessive ‘trouble-shooting’ may undermine communication from a social perspective.

Despite some doubts resulting from the lack of replicated studies, the first claim of the interaction hypothesis (i.e. that negotiation of meaning aids comprehension) has received considerable support and is largely established; however, the second claim (i.e. that comprehension results in acquisition) calls for more empirical support to be better established. Nonetheless, it is widely believed that language use, interaction in spoken discourse in particular, provides the conditions for all the key stages of L2 acquisition. Engaging in language use can provide opportunities for learners to re-notice and restructure their interlanguage system and pave the way to proceduralisation through sustained practice (Batstone, 1994). Swain (1985) has also argued that ‘pushed output’, that is, pressure to produce concise and appropriate language, may aid learners in testing hypotheses about the L2 and engage them in
syntactic rather than semantic processing. Faerch and Kasper (1986) point out that acquisition can only take place when the learner notices a 'gap' in his linguistic knowledge. Interaction, particularly in spoken discourse, then, can be characterised as the bedrock of processes involved in language learning.

Having said that, just giving the learner opportunities for interaction will not suffice. Neither will comprehensible input or interactional input alone. For example, comprehensible input might hinder learners' operating on their upper limits of their interlanguage (particularly those at later levels of proficiency) and thus obviates the need for interlanguage stretching. Similarly, if learners are too often exposed to interactional input which is poor, then the language they will proceduralise is likely to be of poor quality as well. In this respect, we need to engineer interaction in such a way that the opportunities it provides for learners can be maximised and be better benefited from. Newton (1995) finds that negotiation of meaning can promote vocabulary learning; however, he claims that vocabulary learned through negotiation amounts to only 20%. Nation (2001) concludes that this is probably because only a few vocabulary items can be negotiated without interrupting the communication task. Nation notes that negotiation of meaning should not be taken at face value and thus other complementary ways of noticing as well as the design of the features that set up the conditions for more negotiation should be drawn on.

3.6.2 Pedagogical proposals: three options in L2 teaching

Three main options in L2 teaching will be discussed: (Option 1) Focus on forms; (Option 2) Focus on meaning; and (Option 3) Focus on form (Long, 1997; Long and Robinson, 1998; Doughty and Williams, 1998a). Long and Robinson (1998) look into these three options in terms of L2 course design and teaching grammar. There is, however, no mention of the role of lexis.
The three basic options are outlined below:

Table 3.1: Three pedagogical options

(taken from Long and Robinson, 1998:16)

Let us now look at these options and try to assess what each has to offer to L2 lexical acquisition.

3.6.2.1 Focus on forms (Option 1)

The first option, focus on forms, is often characterised as the traditional approach, which includes methods like Grammar Translation, Audiolingual, Audio-Visual, Silent Way, Total Physical Response, and so on. As far as syllabus design is concerned, they are synthetic approaches (Wilkins, 1976). That is, the teacher or
textbook writer breaks the language down into its segments (e.g. phonemes, words, collocations, morphemes, sentence patterns, notions, functions, and so forth) and sequences them according to rather intuitive decisions of frequency, valency or difficulty. The learner is presented with these items one at a time and is expected to eventually synthesise the pieces and later use them. Long (1997) notes that synthetic syllabi (lexical, structural, and notional-functional, for example) go with synthetic methods and classroom practices (e.g. repetition exercises, transformation exercises, explicit negative feedback, and so on).

The main theoretical attacks on the ‘focus-on-forms’ approach include:

1. It employs no needs analysis to determine the students’ preferred learning styles (see Kinsella, 1995; Reid, 1987, 1995; Gilanlioglu, 1993; Oxford et al., 1991, 1992).

2. Linguistic grading – both lexical and grammatical – results in simplified pedagogic materials. Thus, input is restricted and relatively poor.

This means that input is stripped off the new items that learners need to encounter for acquisition. It has been argued earlier that such ‘impoverished’ input is rather unlikely to aid acquisition. Long and Ross (1993) found that input elaboration retains comparable gains without depriving learners of encounter with the new items and also without bleeding a text semantically. This holds true of lexis as well. Lexical items removed from input or constantly replaced with simpler versions will avoid learners encountering them in context, and therefore eradicate the chances of such new items being internalised.

3. Focus on forms ignores language learning processes, and adopts an unsubstantiated behaviourist model.

As Long and Robinson (1998:16) put it, ‘of the scores of detailed studies of naturalistic and classroom language learning reported over the past 30 years, none
suggests, for example, that presentation of discrete points of grammar one at a time (albeit in "spiral" fashion), as dictated by a synthetic syllabus of some kind, bears any resemblance except an accidental one to either the order or the manner in which naturalistic or classroom acquirers learn those items.' Similarly, Rutherford (1987) noted that SLA is not a process of accumulating entities.

In addition, research findings have shown that learning new words or rules rarely, if ever, takes place as a one-time, categorical event and that learners pass through developmental stages (R. Ellis, 1994a; Gass and Selinker, 1994; Hatch, 1983; Larsen-Freeman and Long, 1991). Moreover, the target items taught separately and expected to be mastered separately are often intimately linked to other items. This has a bearing on L2 acquisition. There is also evidence that lexical acquisition is often not sudden and categorical, but involves developmental patterns (Blum and Levenston, 1978; Laufer, 1990; Meara, 1984; Shirai, 1990). Thus, a focus-on-forms approach is essentially too restricted in scope as far as L2 acquisition is concerned.

4. Synthetic syllabus design leaves out learners, which overlooks the major role they will play in language development.

Research has not only shown that acquisitional sequences do not match instructional sequences (R. Ellis, 1989; Lightbown, 1983), but also that it would be wrong to assume that what we teach is what students learn (Pienemann, 1984; Mackey, 1995). Learning is characterised as individual. Therefore, as far as lexical acquisition is concerned, it can be inferred that the best we can do for L2 learners is to provide and engineer the conditions for acquisitional stages so that we can aid them as they pass through such developmental stages.

5. No matter how experienced and skilful the teacher or the textbook writer is, the lessons are bound to be rather boring, resulting in a fall in learners' motivation, attention, and attendance.
6. The claim that many people have learned an L2 through focus-on-forms instruction neglects the fact that these people have learned despite it and that many have failed.

3.6.2.2 Focus on meaning (Option 2)

Focus on meaning came as a reaction to focus on forms and represented a shift in focus. It exhibits an equally narrow view of language learning, suggesting that L1 acquisition of young children occurs much in the same way as does L2 acquisition of adolescents and adults, and that it will suffice for an L2 learner, just as it does for an L1 learner, to ‘incidentally’ or ‘implicitly’ acquire language through exposure to comprehensible target language samples. This position can be found, for example, in the work of Corder (1967), Dulay and Burt (1973), Felix (1981), Krashen (1985), and Wode (1981). Others have proposed that replicating the L1 conditions will provide the optimum ground for second or foreign language learning to take place (Allwright, 1976; Krashen and Terrell, 1983; Newmark, 1966, 1971; Newmark and Reibel, 1968; Prabhu, 1987).

Focus on meaning option takes as its starting point the learner and the learning processes, as opposed to language, and its syllabus can be described as analytic (Wilkins, 1976).

Focus on meaning has gained prominence mainly because of the frustration with the structural methods and practices. Prabhu’s (1987) procedural syllabus is a case in point. The Structural-Oral-Situational (S-O-S) method was based on (1) ‘the use of structurally and lexically graded syllabuses’; (2) ‘situational presentation of all teaching items’; (3) ‘balanced attention to four language skills (but with listening and speaking preceding reading and writing)’; and (4) ‘a great deal of controlled practice using techniques such as the substitution table and choral repetition’ (Prabhu, 1987:10). These principles contrasted with procedures used in the traditional grammar-translation method such as translation and memorisation of written texts,
and studying grammar explicitly. The S-O-S was criticised on the grounds that although learners learned language structures reasonably well in a classroom-practice situation, they seemed to be unable to use them in other situations with the same success; in addition, learners’ success in learning the language structures was satisfactory in the short term, but rather unsatisfactory in the long run (i.e. at the end of a period of several years) (Prabhu, 1987). The Bangalore Project (Communicational Teaching Project), in response to such dissatisfaction with the structural approach to syllabus design (Brumfit, 1984), ‘was based on the precept that language form can be learnt in the classroom entirely through a focus on meaning, and that grammar construction by the learner is an unconscious process’ (Beretta, 1990:321).

Yet another issue regarding the discussion on focus on forms and focus on meaning is that of ‘deployability’. ‘True grammatical competence was seen to be deployable – in the sense that it came into play in direct response to a need to communicate – without any linguistic elicitation and with equal levels of accuracy within and outside the classroom’ (Prabhu, 1987:16). The criticism of and discontent with the focus on forms pedagogy was mainly that learners seemed to be unable to use (i.e. deploy) the language with ‘an acceptable level of grammatical accuracy’ when necessary outside the classroom. ‘Communication in the classroom’ – in the sense of meaning-focused activity – ‘was seen to be a form of pedagogy likely to avoid those two problems’ (Prabhu, 1987:16). Both focus-on-forms pedagogy and focus-on-meaning pedagogy share the objective of facilitating learners’ internalisation of the grammatical system. The former uses procedures such as planned progression (ordering of grammatical elements in such a way that is thought to facilitate the learning process), pre-selection (learners being exposed to one grammatical point at a time), and form-focused activity (increasing encounters with language samples containing a particular element); whereas the latter develops pedagogic procedures that would ‘(1) bring about in the classroom a preoccupation with meaning and an effort to cope with communication and (2) avoid planned progression and pre-selection in terms of language structure as well as form-focused activity (or planned language practice) in the classroom’ (Prabhu, 1987:17).
Although focus on meaning seems to be theoretically more coherent than focus on forms, it has some problems.

1. As in focus on forms, there is no needs analysis to guide the curriculum content and delivery.

2. There is growing evidence that maturational constraints and sensitive periods in SLA may get in the way to achieving native-like levels in an L2 (Curtis, 1988; Long, 1990, 1993; Newport, 1990). It suggests that some older children, adolescents and adults regularly fail to master target-like L2 competence, not due to lack of opportunity, motivation or ability, but because they no longer have access to innate abilities they utilised in their early childhood. If this is the case, then, just replicating the L1 conditions for an L2 learner will not suffice. It also goes to demonstrate that a total non-interventionist approach does not necessarily lead to successful L2 learning. Indeed, it is mainly the discontent with the focus-on-forms methods and teaching devices that led to the rise of focus on meaning. Communicative approaches have also been challenged. It has been claimed that communicative approaches introduce the social dimension to language learning and emphasised that social appropriacy is as important as grammatical correctness. However, Prabhu (1987) argues that proposals for communicative teaching seemed to aim at activating or extending the grammatical competence learners have already acquired for real-life use, that is, social discourse or academic study, hence assume a level of competence to begin with. They did not seem to address themselves to the issue of developing in learners that grammatical competence (Ibid).

3. Whereas L2 learners in focus on meaning contexts make considerable progress, some, for example, of those in Canadian immersion programs (after about 12 years of classroom immersion), fail to attain native-like grammatical competence – showing failure to mark articles for gender (Swain, 1991). Although such items have been repeatedly in input, they have not been noticed, perhaps because of lack of salience or absence of negative feedback (in focus on meaning positive feedback is utilised as opposed to negative feedback). Other research has
produced similar findings suggesting ‘premature stabilization’ despite prolonged exposure to an L2 (Pavesi, 1986; Schmidt, 1983).

4. There has been some evidence of positive feedback being insufficient in L2 acquisition. Some L2 forms tend to be unlearnable from positive evidence alone, that is, mere exposure to the input (White, 1991). Positive evidence may be sufficient in indicating to the learner what is grammatical, but not what is ungrammatical.

5. A pure focus on meaning to the exclusion of focus on forms is not sufficient. Studies have shown instruction with attention to code features can promote learning (Ellis, 1994; Long, 1983c, 1988). It has also been argued that comprehensible L2 input is necessary, but insufficient (Long, 1997).

As can be seen, the main focus in this option – focus on meaning – is on grammar and it is assumed that learners will internalise grammar through pure focus on meaning in communication. Lexis, however, does not seem to be much of a concern. There is no explicit indication, nor an implicit one, as to how learners will achieve lexical development. It is probably assumed that vocabulary will take care of itself in the course of focus on meaning. Although meaning-focused communication creates for learners favourable conditions in which processes such as noticing, re-noticing, structuring, restructuring and proceduralisation can take place, it is insufficient. For, in addition to the reasons already discussed, attention can be drawn and directed towards a particular aspect of language to increase the likelihood of its being noticed, which may go unnoticed otherwise (Schmidt, 1993). Put another way, a pure non-interventionist view of L2 lexical development in particular would be inadequate, and perhaps misleading, as it would be of L2 development in general.
3.6.2.3 Focus on form (Option 3)

Given that both the extreme interventionist focus on forms and pure noninterventionist focus on meaning have problems, Long (1991, 1997) and Long and Robinson (1998) propose a third option which they call ‘focus on form’, rather than focus on forms, and which they claim captures the strong points about an analytical approach while it tackles its shortcomings.

Focus on form, it is claimed, refers to how attentional resources are allocated during a meaning-focused activity, and involves briefly drawing students’ attention to linguistic elements such as words, collocations, grammatical structures, pragmatic patterns, and so forth, in context, as they occur incidentally while the main focus is on meaning or communication, resulting in temporary shifts in focal attention triggered by perceived comprehension or production problems (Long and Robinson, 1998).

Option 3, then, offers systematic provision of attention to language as object with the purpose of reinforcing noticing (Schmidt, 1993), that is, registering items in the input in order to store them in memory. However, the basic difference is that whereas in Option 1 language forms are predetermined by an external linguistic description, in Option 3 they are determined by the learner’s developing system. From a psycholinguistic viewpoint, focus on form is learner-centred and is centred on the learner’s internal syllabus. Key points that should be highlighted here are focus on form occurring incidentally as a function of some sort of interaction, and allocation of attentional resources. There have also been different understandings and uses of ‘focus’. Prabhu (1987:27) attempts to clarify the terminology as follows:

1. **Rule-focused activity** in which learners are occupied with a conscious perception or application (or memorization or recall) of the rules of language structure.
2. **Form-focused activity** in which learners are occupied with repeating or manipulating given language forms, or constructing new forms on the model of those given.
3. **Meaningful activity** in which learners repeat, manipulate, or construct language forms with attention not only to the forms themselves but to the meanings or contexts which are associated with them.
4. **Meaning-focused activity** in which learners are occupied with understanding, extending (e.g. through reasoning), or conveying meaning, and cope with language forms as demanded by that process. Attention to
language forms is thus not intentional but incidental to perceiving, expressing, and organising meaning.

It is perhaps in order to quote Doughty and Williams (1998b:4) here: ‘We would like to stress that focus on form and focus on form are not polar opposites in the way that form and meaning have often been considered to be. Rather, a focus on form entails a focus on formal elements of language, whereas focus on form is limited to such a focus, and focus on meaning excludes it.’

Turning our attention to L2 lexical acquisition, a sound, realistic and operational view of lexical development appears to sit well with the focus-on-form perspective. The approach proposed to L2 lexical learning in this study rests mostly on the principles outlined in the focus-on-form option. Having said that, there are, however, except for a brief reference to words such as ‘linguistic elements’, no arguments as to how L2 lexical learning occurs in the first place, and how it can be facilitated within the focus-on-form option. This is also evident in the writing of Doughty and Williams (1998b, 1998c). They attempt to incorporate lexical acquisition into the focus-on-form perspective but their argument suffers seriously from absence of a sound rationale. In fact, it is not supported by adequate empirical evidence. Drawing merely on one or two arguments on lexis in reading, namely, Krashen (1989) who argues that the best way to learn lexis is through reading, and Coady (1997), who terms this position as context alone, Doughty and Williams (1998c:212) state that ‘it is likely that focus on form can enhance lexical acquisition.’ They, however, avoid making clear and strong statements about it. The authors’ cautious, indeed uneasy, position, which is obvious in the words they use in their statement, is explanatory of the scant evidence as a natural result of limited attention to L2 lexical acquisition. This view can also be found here:

... [A]lthough SLA is most often thought of in terms of the development of IL sound system and grammar, other levels of linguistic form cannot be ignored as potential candidates for focus on form ... [A]lthough there is, as yet, little evidence of the efficacy of attention to the form of language at the discourse and pragmatic levels [my emphasis], we believe that the principle will still apply. Thus, it is important to see the term form [emphasis in original] in the broadest possible context, that is, that of all the levels and components of the complex system that is language’ (Doughty and Williams, 1998c:212).
Another problem obvious in the above statement is the effect of attention to form on language use in discourse. More importantly, it is not clear if and to what extent such focus on form can be engineered. I hypothesise in the current study that differing degrees of focus on different types of vocabulary can be stimulated through the use of particular task types and the introduction of pre-task planning.

Yet another point unaccounted for is the role of explicit learning of lexis. It can be said that Option 3 totally rejects this alternative; however, there is growing evidence suggesting that direct learning of lexis can improve lexical knowledge (N. Ellis, 1994; Nation, 2001).

In summary, clearly, focus on form is needed for language items to get integrated into the learner’s interlanguage. Interaction where there are opportunities for negotiation of meaning is useful in that learners may notice a ‘gap’ between their interlanguage and the target language through attention. However, the role of negotiation of meaning should be taken with caution. Foster (1998), for instance, found that negotiation of meaning does not happen as often as expected. The danger here is that communicative tasks are meaning-focused, thus learners focus primarily on meaning and secondarily on form (Van Patten, 1990). For this reason, form is usually bypassed or sidestepped (Batstone, 1999; Ellis, 1999).

This problem of ‘form’ often going unnoticed while ‘meaning’ receives the focus of attention in communicative tasks indicates a necessity for pedagogical intervention geared to inducing in learners a focus on form. The following section suggests ways in which such intervention can stimulate focus on form.

3.7 Pedagogical intervention for focus on form: contextual regulation

This part is devoted to a discussion of features of task design, and regulation of task features as well as their effects on learner language. It looks into the manipulable contextual factors to stimulate a focus on form while retaining the meaning-driven
nature of the communicative task. It should be noted that the term ‘form’ has usually been used to refer to grammar. The production of lexis, however, has been considered rather quantitatively (i.e. number of tokens, parts of speech, frequencies, etc.). The nature and function of lexis perceived from a process-oriented perspective and how it is influenced by the regulation of task features have not yet been investigated. It is this investigation that the study set out to carry out.

Within the psycholinguistic approach informed by cognitive theories there has been a considerable amount of research in the area of SLA. It has been shown that through careful and principled task design learner language can be regulated (Ellis, 1987; Crookes, 1989; Ortega, 1995, 1999; Foster and Skehan, 1997; Skehan and Foster, 1997, 1999). Such task features that can be regulated in the interest of a particular aspect of language being focused on are, namely, task type, planning time, topic (familiarity), context-gap (shared knowledge), time available, and post-task. Appropriate regulation of these elements and their interactive potential in process teaching can influence the quality of language that learners produce.

In discussing the regulation of language use, Batstone (1994:78) points out that ‘interlanguage stretching requires a careful regulation of task design’, which process teaching aims to achieve, and highlights the advantages of such regulation as follows: (1) it can influence the learner’s allocation of attentional resources indirectly; (2) it can guide the learner to attend to form or meaning more, and shift from one to another; (3) it can create opportunities for the learner to notice gaps and restructure his internal working system, and ultimately to proceduralise this knowledge (the main objective of process teaching); and finally, (4) it can promote learner-centredness as learners take on more responsibility for their learning.

3.7.1 Regulating task types

Concrete/immediate tasks, though evidence is mixed, are easier than abstract/remote tasks (Foster and Skehan, 1996; Skehan and Foster, 1997), thus concrete tasks reduce
information-processing load, affording the learner more attentional resources to direct to accuracy and fluency (Skehan, 1998). Another task type distinction (Skehan (1998) refers to it as ‘task goal’) widely used in L2 research is convergent vs. divergent (see Chapter Four for descriptions). Convergent tasks, which involve an agreed-outcome, require many ‘local’ agreements, thus they produce shorter turns; on the other hand, divergent tasks, which involve disagreements, necessitates elaboration and justification of views, thus they produce more complex language (Duff, 1986; Pica et al., 1993).

The claim put forward in this study is that there is a connection between task design and lexis. In other words, through an appropriate task design, certain types of lexis can be elicited from learners. Specifically, it is claimed that procedural and schematic vocabulary (Widdowson, 1983), both of which are central and necessary for the development and deployment of the learner’s interlanguage, can be elicited by means of well-tailored tasks employed under certain experimental conditions.

In the present study, it is argued that different task types lead to a different selection of lexis, which results in the learning of different kinds of lexis. It is claimed that through task design discourse type can be regulated. A particular discourse type can call for a choice from a particular range of lexis. The selection and use of these particular lexical items in discourse may afford learners opportunities for lexical stretching and aid them in acquiring lexis. To illustrate, descriptive tasks used in the study were designed to generate mainly procedural vocabulary, whereas the narrative tasks were customised to elicit mainly schematic vocabulary.

3.7.2 Regulating planning time

Planning time, as discussed earlier, has been found to be a manipulable task feature. There have been a number of studies motivated by the work of, notably, Ellis (1987), Crookes (1989), Skehan (1996), in which participants were afforded the opportunity to plan before transacting a task, which resulted in clear positive effects on the
language produced. The length of pre-task planning time most studies investigated is ten minutes (e.g. Crookes, 1989; Foster and Skehan, 1996; Foster and Skehan, 1999; Ortega, 1999). However, differing lengths of time have also been investigated, i.e. 1, 5 and 10 minutes (Mehnert, 1998). Ortega (1995) found through a pilot study that on her narrative tasks eight minutes was sufficient.

A more important issue that arises is the operationalization of the pre-planning phase. So far there have been several variations in the operationalisation of pre-planning, e.g. with planning vs. no planning (Crookes, 1998; Ortega, 1995, 1999); no planning vs. undetailed planning vs. detailed planning (Foster and Skehan, 1996); with planning vs. no planning and detailed vs. undetailed planning (Foster, 2000). This present study operationalises two planning conditions, namely, with planning and no planning conditions. The main concern of the study is with the effects of planning time and task type (i.e. discourse type) on learners’ vocabulary use on two specifically designed tasks.

3.7.3 Regulating topic (familiarity)

Topic is another important element in task design. If the learner is familiar with the topic, s/he is likely to pay more attention to and have more control over the language s/he tries to produce. Thus, tasks on a familiar theme are easier for learners in the sense that they can afford to attend more to the quality of their own language as well as to their partner’s (in a pair-work setting) or peers’ (in a group-work setting). It has been reported that familiar tasks reduce information-processing load, thus allowing extra attention for accuracy and fluency (Skehan, 1998:116). This task feature ought to be regulated in conformity with learners’ competence to achieve a reasonable degree of difficulty – not too difficult or too easy. One way of regulating familiarity is through planning time. Planning time interacts with familiarity. In the case of an unfamiliar topic, learners can be given more time for planning; or, in the reverse situation, where learners face a familiar task, they are allowed less time. As seen, planning time plays a mediating role in steering the topic-familiarity balance.
3.7.4 Regulating context-gap (shared knowledge)

Context-gap (shared knowledge), too, is to be taken into account in designing tasks for process teaching. The presence of a context-gap requires of learners to use the language at their disposal in attempting to bridge it. Thus, a context-gap motivates the need to communicate. Batstone (1994) argues that too much reliance on the supporting shared knowledge will lead to the proceduralisation of a rather incomplete working system, consisting of chiefly lexis and partially grammar. In this respect, a proper regulation of context-gap is needed in order to create a condition for learners to draw on 'all' the resources available to them, and to 'push' them beyond their existing internal system (Skehan, 1994).

3.7.5 Regulating time available for task completion

As the completion of the task is the main focus in process teaching, the amount of time learners may need on task is another important decision to be made in task design. This decision is dependent on other decisions regarding, for instance, task type, planning time, topic and familiarity, shared knowledge as well as other individual learner characteristics such as level of proficiency. Limiting the time available to perform a task may create a sense of competition and thus may encourage risk-taking with language use. On the other hand, it may increase the focus on meaning and on strategic operations to successfully do the task in time, thus it leads the learner to 'sidestep' form, in Ellis' (1999) terms. This sidestepping of form would be missed opportunities for facilitating intake, as Batstone (1999:31-32) notes:

... there are very similar difficulties for intake, since unless classroom tasks are designed with care, the learner will find it easy to accomplish the task (and hence, in a sense, get hold of the meaning) while by-passing [my emphasis] the target grammar altogether.
3.7.6 Post-task activities

Post-task activity may take the form of whole-class performance, having completed the task set, or reflection on how the learner went about carrying out the task. The task proper is probably performed under more pressure since it takes place in front of the class; however, the learner has gained confidence from the completion of the task, which can help relax such a pressure and thus contribute to a better quality of language produced. Willis (1996) argues that post-task activities as well as pre-task activities can induce learners to alter their focus of attention and develop task performance. Similarly, Skehan and Foster (1997) hypothesised that foreknowledge of a post-task activity (in the form of public performance) would have a selective influence on accuracy as it will trigger greater attention to speech and closer monitoring. They found that their hypothesis was supported, but not very strongly. They conclude that the limited support for their claim can be due to the fact that the effect is weak and therefore larger sample sizes are required to demonstrate it (Skehan and Foster (1997) used 40 students) or it may be specific to certain tasks. Bygate (1999:43), on the other hand, argues that post-tasks may lead learners ‘to integrate accuracy and fluency on tasks’ (Bygate, 1999:43).

Nonetheless, this area is relatively under-researched. Skehan (1998:147) states that the implementation of post-tasks ‘has to be based on a mixture of research findings, generalisations based on practical experience, and speculation’ as data-based studies are scarce.

3.7.7 Task repetition

Task repetition has been reported to influence the quality of learners’ output (Bygate, 1996, 2001). When learners perform the same task second time around, they seem to push their output to its limits, producing more complex language. In addition to an increase in complexity (i.e. an increase in subordinate clauses by 75%), Bygate (1996) found that the exact repetition of a task resulted in some improvement in fluency and
accuracy. In another study where two learners at different levels of English proficiency were compared, Lynch and Maclean (2000) report that both benefited from recycling communicative content. Specifically, they found complex task repetition led to improvement in ‘accuracy in the short-term (over the 20 minutes of the carousel)’ (Lynch and Maclean, 2000:245). In spite of the evidence that immediate task repetition changed and improved the subjects’ spoken language, Lynch and Maclean (2001) do not make claims about the general effects of task repetition, particularly longer-term learning, and note that their claims are limited to the positive changes they found in the language produced by the learners on the specific task used. They conclude that this limitation is due to the ‘highly specific teaching context’ where the study was conducted and to the ‘particular task’ implemented (Lynch and Maclean, 2001:159). In line with the positive changes reported above, Gass et al. (1999:573) found some evidence that task repetition led learners to improve their ‘overall proficiency, selected morphosyntax, and lexical sophistication’.

Similar to the arguments for post-tasks, task repetition provides familiarity with the task allowing for ‘time and awareness to shift attention from message content to the selection and monitoring of appropriate language,’ whereby ‘learners may be helped to integrate the competing demands of fluency, accuracy and complexity’ (Bygate, 1999:41). Consequently, task repetition, like other contextual factors discussed, is a design feature that holds out promise for interlanguage stretching.

3.8 The facilitative role of planning in stimulating a focus on form

One way of inducing in learners focus on form is through design features such as task conditions and planning. Skehan (1998:68) reports that ‘manipulation of task conditions affects planning time, which in turn, influences the balance between lexical and syntactic performance’. By determining intervention points (i.e. ways in which task features and conditions can be manipulated) in the design of tasks, learners’ attention can be directed towards particular aspects of language, whose acquisition
may be promoted. Pre-task planning, then, is a pedagogic manipulation which affords the learner the opportunity to focus on linguistic means or more complex ideas prior to the task. This will reduce the cognitive load of the task, which can lead to more complex, fluent, or accurate language. In addition, planning enables learners to gain more control over their language (Batstone, 1999). They are less dependent on the interlocutor, thus they have more space in the sense that they plan their own language. However, Batstone (1999:34) argues:

... we cannot legislate for a focus on form, we cannot make [emphasis in original] it happen. It would be naïve to say that planning in any way compels learners to use more complex language, or that task repetition in itself generates richer output. Many factors intervene between intention and effect ...

Batstone (1999:34) further argues that these factors might include instances 'where the learners themselves are aware of the pedagogical purpose of planning, where they have already had experience of it, and where they can draw on this experience in order better to manage their own language production 'on-line'.

The availability of time for learners to plan before attempting a task is a pedagogical manipulation which is assumed to afford learners the opportunity of focusing on whichever formal or systematic aspect of language is required to perform a particular task. As far as focus-on-form instruction is concerned, the interesting assumption is that planning can help to reduce the cognitive load of a task and free up the attentional resources, thus making it possible for the learner to shift his or her conscious attention to formal aspects of language needed to do a task.

Different from most types of interventions guided by the principle of focus on form, in pre-task planning the learner has the choice of attending to whichever aspect of the language code to whatever degree. In other words, pre-task planning is learner-initiated and learner-regulated in that s/he 'is relatively free to assess task demand and to weigh available linguistic resources in a self-regulated manner' (Ortega, 1999:110). This type of focus may lead to opportunities for making connections, for noticing the
gap (Schmidt and Frota, 1986), for noticing holes in one’s competence (Swain, 1998) and for restructuring and development. As explained earlier, this is where the benefit of pre-task planning for L2 lexical acquisition lies. In other words, pre-task planning is considered to play a facilitative role in L2 lexical acquisition.

The construct of planning will be taken up in the following section and discussed in greater detail, particularly in relation to lexical learning.

3.9 The facilitative role of planning in interlanguage (IL) development

Over the last decade, a small body of SLA research has investigated the concept of planning, defined as time available to plan prior to task performance (e.g. Ellis, 1987; Crookes, 1989; Foster and Skehan, 1996; Skehan, 1996; Skehan and Foster, 1999; Ortega, 1995, 1999; Mehnert, 1998). The theoretical motivations underlying such studies have been that the availability of pre-task planning time has a facilitative role in second language learning. Although arguments put forward have varied, they have always called up ‘notions of attention, controlled access, and internalization of new forms’, and they have concentrated on the linguistic outcomes of planning, i.e. on the complexity, accuracy, and fluency of planned output (Ortega, 1999:110).

Research on planning and interlanguage development have been motivated by several theoretical rationales. Initially, Ellis (1987) came up with the proposal that in conditions affording the L2 learner an opportunity for planning forms which are not yet fully automatised are more likely to be accessed and used by the L2 learner. He argued on that assumption that opportunities for planned output should promote the internalisation of such new forms. This proposal followed from Tarone’s (1983, 1985) capability continuum model and Ellis’s (1985) own variationist model.

Later, Crookes (1989) put forward a proposal in an attempt to redefine the research area. The rationale behind this proposal was a cognitive information-processing one, in which planning (and also monitoring; see Crookes, 1988b) was reconceptualised as
a condition that could be manipulated in the context of task-based performance. He claimed that planned output pushes interlanguage to its limits and thus engages L2 acquisition processes. Crookes (1988a, 1989), rather than focusing on accuracy, focused on complexity, which is defined as more varied and developed IL forms.

More recently, in Skehan's (1994, 1996, 1998) proposed framework for task-based instruction, planning is deemed one of the externally manipulable task conditions through which cognitive load imposed by task can be regulated. According to Skehan (1998), an opportunity to plan can lessen communicative stress and free up the learner's attentional resources, which s/he can channel into focusing on form. Making use of planning in this fashion may prevent the learner from focusing merely on meaning and help him or her to sustain a degree of focus on form as well. In planned production, then, a balance can be struck between the competing goals of accuracy, fluency and complexity, and also the output can be enhanced (Skehan, 1988).

A number of hypotheses regarding planning and the quality of the linguistic product have been advanced. Some of them have to do with performance, while others relate to acquisition. Performance-related ones, such as Wigglesworth's (1997) and Wendel's (1997), predict that planned production allows the learner to operate on the upper limits of his or her competence, thus it offers a more complete picture of the learner proficiency. However, there has not been sufficient evidence in favour of or against such a claim. Nonetheless, planned production by an L2 speaker seems to make a better impression on expert listeners or raters than unplanned production (Williams, 1992). However, for the actual effects of planning to be measured planning needs to be directed to specific aspects of discourse (e.g. discourse markers used in academic lectures; Williams, 1992).

As for acquisition-based claims, which have attempted to show the connection between planning and IL development, these are of greater significance to second language acquisition. So far, within the SLA domain, three sets of hypotheses have been put to the test. Firstly, early studies of planning put forward that planned output would be of greater accuracy since more attentional resources are available for use for
monitoring during planned performance (Ellis, 1987). But several of the later studies tested the null hypothesis for accuracy (Ortega, 1995; Ting, 1996; Wigglesworth, 1997). Secondly, following Crookes (1989), all studies have hypothesised that planned output will lead to higher levels of lexical and syntactic complexity as declarative knowledge of rules and lexis that are at the upper limits of the interlanguage grammar can be accessed without time pressure while planning and are subsequently available for use. Finally, the more recent studies have also hypothesised that planned output will be more fluent than unplanned output because the on-line demands of co-planning and micro-planning are alleviated. Earlier evidence can be found in Fathman’s (1980), Lennon’s (1984) and Wiese’s (1984).

In sum, availability of planning has proved to be a manipulable condition that can improve the quality of linguistic output. However, one question that remains largely unanswered is the extent to which planning time facilitates L2 lexical acquisition. Particularly, the effect of planning time on more dynamic, interactive tasks with regard to lexical type and use is unexplored. Besides, previous studies have generally used the phrase ‘interlanguage development’ to refer to grammatical forms. Moreover, the lexical measures employed have represented crude ‘counts’, indeed far from a comprehensive conceptualisation of L2 vocabulary development, which, as far as L2 lexical acquisition is concerned, have not been as telling. The present study looks into the facilitative role of planning in L2 lexical use.
CHAPTER FOUR

THE RESEARCH STUDY

4.0 Introduction

Previous chapters have discussed issues concerned with lexis in reference to the information processing view of language learning. One of the main concerns was for the underrated role of lexis in second language research and methodology. In the discussion of lexis as a neglected aspect of language, we focused on the fact that lexis has widely been seen in semantic terms, rather than pragmatic. In other words, the main interest has been in the semantic features of lexis as product rather than in the pragmatic features as process. It is the argument of this thesis that the process view of lexis is better suited to address processes involved in learning L2 lexis.

According to the information-processing view in which the present thesis is located, attention is limited and when there are competing goals for attention the speaker faces the problem of making choices about how it will be allocated. One goal competing for attention is language. The speaker may focus on different aspects of language (e.g. complexity, accuracy and fluency) to varying degrees. For instance, there has been evidence from L2 research into the effects of planning time suggesting that planned speech appears to be more complex than unplanned speech since planning time enables the speaker to focus more attention on complexity of language (e.g. Crookes, 1989; Foster and Skehan, 1996; Skehan and Foster, 1997; Ortega, 1995, 1999).

Another competing goal is the task demands (i.e. easy or difficult). Task complexity can be due to task type (i.e. subject matter) or discourse type, i.e. monologic (non-interactive) vs. dialogic (interactive). VanPatten’s (1990) study shows that complex content can shift attention from form to meaning as it demands more attention to
understand it. This, as a consequence, can affect negatively the complexity, accuracy and fluency of the L2 learner's language.

Robinson (1995) argues that task complexity should be investigated in terms of task parameters, task conditions and task types. Skehan (1994, 1996, 1998) proposed a model of sequencing and grading pedagogic tasks based on code complexity, communicative stress and cognitive complexity. It has also been argued that the complexity of a task can be externally manipulated.

Ortega (1999) points to two major problems with task complexity. First, the assumption that task complexity is associated with linguistic complexity contradicts research into planning. If that is true, then planning time should be expected to result in less complex language since it reduces the cognitive load of the task. However, it increases complexity as it causes the task to be less cognitively demanding. The second problem is to do with task features (irrespective of whether they are inherent or external to the task) that contribute to task complexity. Ortega (1999:135) argues that 'it is unclear whether hypothesised complexity differences between a narrative task and a decision-making task (Foster and Skehan, 1996; Skehan and Foster, 1997) stem from task type or from the fact that the former is often monologic and the latter often interactive'. A possible solution would be to implement the same task, e.g. narrative, with manipulation of discourse type. For example, a narrative where the narrator tells a story from a series of pictures can be compared to a narrative in which the learner describes a set of pictures. Measuring task complexity in the described manner, however, is not within the scope of the present study. Consequently, more research is needed to resolve the problems concerning task complexity.

The research study will explore both task type (i.e. narrative vs. descriptive) and discourse type (i.e. monologic vs. dialogic), retaining a focus on discourse type, as noted earlier, as deemed more telling than the task type distinction. The relevance of discourse type is discussed in some depth in Chapter Six.
Foster (2000: 106) argues that recent research into learner language variation influenced by the (un)availability of attentional resources 'has restricted itself to the effect of planning time on the linguistic output [my emphasis] of non-native speakers in a task-based context (Ellis, 1987; Crookes, 1989; Ortega, 1995)'. It should be noted here that 'linguistic output' involved almost exclusively grammar (Foster and Skehan, 1996; Skehan and Foster, 1997; Ortega, 1999). The interest has been in syntactic complexity of the output. Nor has this research attempted to systematically investigate variation in learner performance resulting from an interaction between the allocation of attentional resources and the contextual and individual factors.

Different from previous studies, the current study looks into the relationship between task conditions, discourse type and lexis (as well as grammar), with respect to contextual and individual factors.

In the light of the methodological issues raised, the study represents an effort at advancing the research on L2 lexical learning beyond the perspective of linguistic product by utilising the constructs of task features. It sets out to establish whether planning opportunity or discourse type results in an increased focus on lexis and in an increased level of lexical stretching in the context of task-based meaning-driven communication.

The following section outlines the hypotheses and describes the method used.

4.1 Hypotheses

The following hypotheses are concerned with four main language areas: lexical complexity (Hypotheses 1-6), lexical strategy use (Hypothesis 7), lexical accuracy (Hypothesis 8), grammatical complexity (Hypothesis 9), grammatical accuracy (Hypothesis 10), and fluency (Hypothesis 11).
HYPOTHESIS 1: Type-token ratio will be greater in planned than unplanned conditions, as well as in narratives than descriptives.

HYPOTHESIS 2: Lexical-to-grammatical ratio will be higher in planned than unplanned conditions, as well as in narratives than descriptives.

HYPOTHESIS 3: Lexical word range will be wider in planned than unplanned conditions, as well as in narratives than descriptives.

HYPOTHESIS 4: Grammatical word range will be wider in planned than unplanned conditions, as well as in descriptives than narratives.

HYPOTHESIS 5: Lexical density will be higher in planned than unplanned conditions, as well as in narratives than descriptives.

HYPOTHESIS 6: Monosyllabic, two-syllable and polysyllabic word ranges will be wider in planned than unplanned conditions, as well as in narratives than descriptives.

HYPOTHESIS 7: Lexical strategy use (measured by L1-based and L2-based lexical strategy use, and lexical avoidance strategy use) will be greater in unplanned than planned conditions. Regarding task type, the use of L1-based lexical strategies as well as lexical avoidance strategies will be greater in narratives than descriptives, but there will be a wider use of L2-based lexical strategies in descriptives than narratives.

HYPOTHESIS 8: Lexical accuracy (measured by a lower percentage of error-free clauses) will be greater in planned than unplanned conditions, as well as in narratives than descriptives.
HYPOTHESIS 9: Grammatical complexity (as measured by clauses divided by c-units; and by words per c-unit) will be greater in planned than unplanned conditions, as well as in narratives than descriptives.

HYPOTHESIS 10: Grammatical accuracy will be greater in planned than unplanned conditions, as well as in narratives than descriptives.

HYPOTHESIS 11: Fluency (measured by fewer dysfluency markers; and higher pruned speech rate) will be greater in planned than unplanned conditions, as well as in descriptives than narratives.

4.2 Participants

Fifty-one dyads (a total of 102 subjects) from intermediate-level English classes from the Middle East Technical University (METU), Ankara, volunteered to take part in this experimental study. All participants were placed at METU (which is a highly reputable English-medium state university and which requires high standards of achievement) according to the results of the University Entrance Examination they had taken – a national centralised examination administered annually. All participants were attending intensive English classes as preparation for their undergraduate studies in a variety of fields (e.g. social sciences and engineering). By the regulation of the university, they were required to reach a satisfactory level of proficiency in English, which is a prerequisite, to qualify for transfer to their departments where they had originally registered to do their bachelor degrees.

All 102 participants were native speakers of Turkish, with similar socio-economic background (i.e. the majority came from working-class families). The gender distribution of participants was balanced, with 51 females and 51 males. Participant age ranged from 17 to 19, with an average of 18. The participants’ level of motivation was considered high as they would be entitled to continue the undergraduate studies
they had chosen providing that they reached an adequate level of proficiency in English.

4.3 Tasks

Two sets of tasks were used in the experimental study outlined: Descriptive (see Appendices 4.1a, 4.1b, 4.2a, 4.2b) and Narrative (see Appendices 4.3a, 4.3b, 4.4a, 4.4b). Below, these tasks are defined and categorised according to their characteristics:

4.3.1 Descriptive task

On the descriptive task defined by Pica et al. (1989) interactants reproduce an unseen sequence of pictures by exchanging their own uniquely held portion of the sequence. As the information is evenly distributed, interactants have equal control over information. Each participant has two pieces of information: 5 out of 10 picture squares and a portion of the master showing the other’s picture squares in sequence. Participants take it in turns to describe the features and sequence of their partner’s picture squares on their portion of the master and sequencing their own 5 squares as they are described to them (Pica et al., 1989:67).

The descriptive task used in the present study is dialogic, where each interactant is assigned a particular role – ‘picture describer’ or ‘picture sorter’. Each participant is given a set of 5 pictures, which are ordered differently. One of the sets is composed of 5 jumbled pictures with minor differences between them. This set of jumbled pictures is given to the ‘picture sorter’. The other set of 5 pictures is the master copy showing the correct order of the jumbled pictures. The master copy is held by the ‘picture describer’. The interactants are not allowed to see each other’s picture sequences. The describer is required to provide as accurate a description as possible so that the sorter can order the jumbled pictures according to the sequence in which they are described.
At the same time, the sorter can interact with the describer, asking and answering questions and providing further descriptions as well as feedback. Compared to the definition of Pica et al. (1989), on the descriptive task employed in the study information is not equally distributed; thus, the participants might have differing degrees of control over information. Put another way, the task demands on each participant is not symmetrical, but rather asymmetrical.

Pica et al.'s (1989) ‘description task’ is referred to as two-way and convergent (same goal/one outcome) in terms of goal orientation, which requires the learners to interact with each other having the role of both information requester and supplier. Therefore, it has the characteristics of a jigsaw task as outlined by Pica, Kanagy and Falodun (1993: 14-15) as follows:

1. Each interactant holds a different portion of information and supplies and requests this information as needed to complete the task;
2. Each interactant is required to request and supply information;
3. Interactants have same or convergent goals;
4. Only one acceptable outcome is possible.

The rationale behind this is that these types of tasks have been found effective as far as interactive negotiation between the participants is concerned. In terms of interactive negotiation, tasks requiring information exchange guarantee participation of each member in the group since the information needed to complete the task has been distributed equally (Lynch, 1996:116). As a result, negotiation of meanings is more likely to take place as members of the group need to understand each other’s contribution in order to carry out the task successfully (ibid.); in addition, negotiation of content has been found to be promoted ‘significantly’ as a result of learners’ carrying out the task in a two-way fashion in a small group (Rulon and McCreary, 1986:195). This, however, is not necessarily the case in open-ended discussion activities, where information exchange is optional and each learner does not have to contribute, and may even choose to keep silent.

The descriptive task used in the current study is not exactly a ‘two-way’ task in the accepted sense of the term, though it is ‘convergent’ (i.e. both subjects in a dyad are
oriented to a single outcome). Although both roles – picture describer and picture sorter – can be viewed as ‘information requester and supplier’, the picture sorter’s participation can theoretically be minimal provided that the picture describer describes the pictures fully, without the need for questions or confirmation checks by the picture sorter. This possibility of the picture describer dominating the interaction stems from the fact that the roles are not symmetrical. Nevertheless, because there are fine differences between pictures as well as objects unfamiliar to the subjects, one-way performance is rather unlikely, so interaction between participants to a great extent is to be expected.

A word of caution is in order here. Duff (1993), in her two-year longitudinal study used different tasks, namely, discussion, picture description and Cambodian folk story, to collect oral English discourse from a Cambodian immigrant in Canada, which she subsequently analysed for the effects of the elicitation tasks employed on the subject’s interlanguage performance. She found some overlap between what she called the ‘individual pictures’ and ‘sequences of related pictures’. The former was assumed to ‘yield description’, and the latter ‘narration (i.e. temporally sequenced propositions)’; however, it was self-evident from the analysis of data that ‘the distinction between the two was often blurred’ since ‘sometimes instead of presenting a series of pictures as a cohesive story,’ the subject ‘described the individual events in each picture’ or vice versa (p.64). In this study, however, this overlap was minimised, if not eradicated altogether, by using ‘to-be-sequenced pictures’ in the descriptive task, rather than ‘an individual picture’, and ‘sequenced pictures’ representing a story in the narrative task. The expectation was that the descriptive task would predominantly elicit description since participants are required to be as precise as possible about describing the features of every picture in the given set, rather than telling a story represented by the pictures, so that their partner could sequence the pictures correctly. In other words, accurate description is the key to the successful accomplishment of the goal set to the participants at the outset.

From the viewpoint of vocabulary use, it was expected that the convergent task would not elicit as much lexically dense oral production as the narrative. I predicted that this
would be due to the fact that procedural vocabulary would be used predominantly since the completion of the task calls for the description of a series of pictures. Describing pictures of objects in front of the eyes of participants is expected to lead to a wider use of words of high indexicality, that is, procedural vocabulary. As has been ascertained by Widdowson (1983:93), procedural words are ‘especially useful for negotiating the conveyance of more specific concepts, for defining terms which relate to particular frames of reference,’ and ‘for establishing the terms which characterise different schemata and which are used to identify ‘registers’.’ Carter and McCarthy (1988:50) referring to Widdowson (1983) state that general or procedural vocabulary is ‘a strategic resource’ that ‘helps the learner to get at the specific, technical vocabulary’ and that ‘it is the vocabulary of definition, of paraphrase.’

As distinguished by Widdowson (1983:92), procedural vocabulary, or core vocabulary, is made up of lexical items ‘of high aggregate frequency that also occur in a wide range of texts’; they are ‘not schematically bound’; and they ‘have high indexical potential or valency.’ Widdowson (1983:93) then states the following as a general rule that ‘the greater the lexical content of a word, the more narrow its indexical range: lexicality is in inverse proportion to indexicality.’

4.3.2 Narrative task

Another task type used in the present research study is a narrative, which can be characterised as monologic in terms of the kind of discourse it generates. The narrative can be seen as ‘divergent’ with regard to goal orientation since the participants are not required to converge towards a ‘shared goal’, rather they have ‘opposite or independent goals’ (Duff, 1986:150). On divergent tasks interaction is not necessary in order for participants to perform the task since participants have access to all information necessary for the completion of the task (Pica, Kanagy and Falodun, 1993). Indeed, the narrative used in the study is based on the speaker’s narration of a story organised in picture strips. The listener has a similar but random set of pictures, several of which are not related to the storyline. The listener’s task is
to independently distinguish between related and unrelated pictures (by putting a tick or a cross next to each picture) as the speaker narrates the story. However, the performance of the listener is not analysed. The presence of the listener is intended to authenticate the task. The listener cannot ask or answer questions or interrupt the speaker in any way. Nor can the speaker interact with the listener.

On the narrative, it was predicted that learners would produce oral narrative discourse of relatively greater lexical density as far as content vocabulary was concerned since the task requires the learner to tell the story represented by a picture strip. Content vocabulary is what Widdowson (1983:94) refers to as schematic vocabulary, ‘which defines and makes distinctive particular frames of reference in different areas of use.’ According to the results of Ure’s (1971:445) study on ‘lexical density,’ written texts are lexically denser than spoken ones: ‘the spoken texts, all except two have a lexical density of under 40%,’ whereas ‘the written ones, all except two, have a density of 40% and over.’ As seen, the ‘mode’ of discourse – speaking or writing – plays a determining role in lexical density, the written being ‘heavier’ (in McCarthy’s (1990) terms) than the spoken. In Ure’s (1971:446) words, ‘lexical density was largely a matter of the choice of spoken or written medium.’ However, some spoken modes such as ‘oral narrative’, ‘a formal lecture’ or ‘monologues’ can yield lexically quite dense spoken discourse (McCarthy, 1990:72). Ure’s (1971:448) research has demonstrated that the main causes of low lexical density were ‘language-in-action’ (where action in progress accompanies language production) and ‘feedback’ to the speaker, which appeared to be ‘an even more powerful factor in determining lexical density than the spoken/written choice.’ Ure (1971) concludes that an important characteristic of high density spoken texts was that they had no feedback; narrative has a higher density than language-in-action, which has the lowest lexical density; and monologues, since they have no feedback, are consistently of high lexical density. The narrative, then, has the potential inherent in its nature for eliciting oral discourse of relatively greater density.

In narratives, the ability to make displaced reference involves some ‘cognitive operations’, ‘conversational abilities’ and ‘linguistic resources’, which are not
necessary when talking about objects, events that can be seen while the conversation is taking place. This ability develops much later in L1 acquisition, which is also the case in L2 development. In Robinson’s (1995:102-103) terms, cognitive operations refer to the ‘ability to recall and represent past events’; conversational abilities are concerned with ‘the procedural ability to manage a conversation’; and linguistic resources are associated with ‘familiarity with a variety of code resources, particularly tense and aspectual systems’ whereby past events are positioned ‘at mutually agreed points in time.’ This complex ability is developed interactionally in the L1 and its development follows these steps: (a) contexts in which the object is present, (b) contexts in which the object is unique, (c) contexts in which the object is present but non-unique, (d) contexts in which the object requires further search (Robinson, 1995:103).

In terms of structural complexity, the situational context provides the basis for syntacticization. It is by means of talk in the present, for instance, that the grammatical relations and semantic roles together with lexical items and syntactic constructions used in such circumstances are coded (Robinson, 1995:103). This syntacticization process, which is considered to be as important in L1 as it is in L2, involves a shift from the ‘context-supported’ language system to a more coded version; in other words, from the ‘pragmatic mode’ to the ‘syntactic mode’ (Givon, 1979, 1985, 1989 cited in Robinson, 1995:104). Where the context support is not present, the language user has to ‘ensure that all the necessary presuppositions are coded within the message’ (Robinson, 1995:104). Consequently, it requires the learner to expend more effort when referring to past events.

Moreover, the two types of tasks, namely, narrative and descriptive, would have different lexical load and memory demands. These result from the nature of the narratives, being less context-supported (narrator has to retrieve information and integrate it with other information in the semantic memory), and the descriptive, being more context-supported (Describer has to describe and co-ordinate a series of episodes in interaction) (Robinson, 1995). Robinson (1995:107) concludes that ‘retrieval from declarative memory (episodic and semantic) probably requires more effort in the case
of There-and-Then narratives than in the case of Here-and-Now narratives’ (There­
and-Then has been referred to as ‘past’ and Here-and-Now as ‘present’ earlier). In
the past narrative participants are required to expend more effort remembering the
details of the narrative, whereas this effort can be put into producing more fluent
discourse in the present narrative. According to Paradis (1994 in Robinson,
1995:107), lexical words link closely to representations in declarative, semantic
memory, and grammatical words to representations in procedural memory.
Supposing this is true, it can be expected, then, that this will impact the memory load
of lexical retrieval in the narrative and descriptive, and therefore the narrative will
elicit greater ratios of lexical words (content words) to grammatical words (procedural

4.4 Operationalisation of planning time

Planning was operationalised in terms of time at two levels: no planning, and with
planning. Written instructions for task implementation (adapted from Ortega,1995)
are in Appendix 4.5.

In the no planning condition, the participants were given no time to plan prior to the
task, except that they read the instructions carefully and made sure they understood
how to do the task.

In the planning condition, participants were given 10 minutes to plan their discourse.
The ten minutes’ planning time was established through a pilot study conducted with
a total of 16 dyads prior to the experimental study. Ten minutes appeared to be an
optimum length of time as eight minutes was the average used in the sample.

Participants were asked to make written notes in English, but only in brief note form.
They were instructed not to write down in detail everything they would say. They
were also reminded that the notes would be removed as soon as the planning time was
over, and that their oral production would be made without them. These written notes
were collected as evidence of learners' engagement in planning. Learners worked independently during this period.

4.5 Design

The effects of task features were investigated by means of a between-group comparison, with two independent variables (i.e. planning and task type). Planning was operationalised at two levels (i.e. with and without pre-task planning) and tasks in two types (i.e. descriptive and narrative). This type of design has been called a 2x2 design (Foster and Skehan, 1999). The table below shows the experimental design.

Table 4.1: Design of experimental groups

<table>
<thead>
<tr>
<th></th>
<th>Descriptive</th>
<th>Narrative</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>-Planning</td>
<td>24 dyads</td>
<td>27 dyads</td>
<td>51 dyads</td>
</tr>
<tr>
<td>+Planning</td>
<td>27 dyads</td>
<td>24 dyads</td>
<td>51 dyads</td>
</tr>
<tr>
<td>Total</td>
<td>51 dyads</td>
<td>51 dyads</td>
<td></td>
</tr>
</tbody>
</table>

The design is a between-subject design (i.e. subjects are not their own controls). The 51 dyads were randomly assigned to two of 4 experimental groups: -Descriptive (description without planning time), +Descriptive (description with planning time), -Narrative (narration without planning time), and +Narrative (narration with planning time). For example, if subject 'A' and subject 'B' in a given dyad first do the -Descriptive task where subject 'A' is assigned the role of describer while subject 'B' takes on the role of sorter, next they switch to the +Narrative task where they take on different roles, i.e. subject 'A' as listener and subject 'B' as speaker. In this way, planning conditions (plus and minus 10 minutes of pre-task planning time), the

4 -Planning refers to 'no planning' condition.
5 +Planning refers to 'with planning' condition.
assignment of the two task types (*Descriptive* (i.e. 'Kitchen' and 'Study'); *Narrative* (i.e. 'Skiing' and 'Home')) and task roles (i.e. describer vs. picture sorter; speaker vs. listener) were counterbalanced. Thus, although the same subject is used twice (though the listener's performance is not analysed) in this particular manner, the tasks, task conditions as well as task roles are swapped the second time round, which balances out practice effects.

On the descriptive task, the dyad produces one set of data on the dependent variables and are analysed jointly whereas on the narrative only the speaker's data are recorded and analysed because the listener does not produce any spoken data.

In addition, gender was also controlled for. A balanced number of dyads was used in the three gender groups (i.e. Female-Female, Female-Male, Male-Male). The distribution of dyads according to gender groups is shown in the table below:

**Table 4.2: Distribution of dyads by gender**

<table>
<thead>
<tr>
<th></th>
<th><strong>Descriptive</strong></th>
<th></th>
<th><strong>Narrative</strong></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>FF</strong></td>
<td><strong>FM</strong></td>
<td><strong>MM</strong></td>
<td><strong>Total</strong></td>
</tr>
<tr>
<td><strong>-Planning</strong></td>
<td>8</td>
<td>8</td>
<td>8</td>
<td>24</td>
</tr>
<tr>
<td><strong>+Planning</strong></td>
<td>9</td>
<td>8</td>
<td>10</td>
<td>27</td>
</tr>
<tr>
<td></td>
<td>51 dyads</td>
<td>51 dyads</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Though the design controlled for the gender variable, the effects of gender on the participants' performance were not investigated due to limitations of time and space.

---

6 'FF' stands for a Female-Female dyad.
7 'FM' stands for a Female-Male dyad.
8 'MM' stands for a Male-Male dyad.
4.6 Procedures

The data was collected by the researcher in individual sessions with each dyad in a friendly atmosphere. Participants were told that the activity (i.e. experiment) was part of a doctoral study on lexis but were not given any further information until all participants in the sample completed their performances and the subsequent protocol sessions. They were also told that the activity was not a test so they were invited to be as comfortable as they could.

Participants’ oral performances as well as the protocol sessions held on the completion of the task were audio-taped. Each participant in the dyad was seated at a table facing his/her partner. The tape recorder (small but powerful) was placed in the middle of the table. The participants were not specifically told to try to speak in the direction of the tape-recorder. The researcher went through the instructions for each participant orally while they had them in written form too (see Appendix 4.5). The instructions were in English but at a level that participants could follow. Nevertheless, participants were told that they could ask any questions in English as well as in Turkish to make sure they were clear about the instructions. After the participants were ready to start, the researcher began recording and sat at the back of the room (a fairly large classroom) looking away from the subjects most of the time and pretending to read something but still overhearing the dialogue or monologue unobtrusively.

Learners worked in pairs (dyads). The rationale behind this choice was that pair or small group work ‘maximizes each learner’s opportunity to speak [i.e. in the case of the descriptive only] and that practising in a small group reduces the psychological burden of public performance’ (Lynch, 1996:110). Research so far has demonstrated that in comparison to teacher-led discussion small-group and pair work provide more opportunities for each learner to engage in negotiation (Duff, 1986:148). Rulon and McCreary (1986:195), by drawing upon research to date, state that when students work in a group situation to perform a contextualised, two-way task ‘significantly more negotiation of content takes place than when the teacher leads the discussion.’ In
addition, classroom research findings have shown that group work is more likely to
lead to negotiation of meaning than interaction with the teacher (Doughty and Pica,
1986), and learners express a wider range of language functions in group work

As far as the narrative is concerned, the idea behind the narrator having a partner is to
authenticate the task and, as referred to above, to help reduce the psychological load
of performing in front of a teacher.

4.7 The semi-structured interview

Conducted on the completion of the task, the retrospective interview (see Appendix
4.6) was designed to investigate participants' focus on lexis and their perceptions of
the effects of the availability and unavailability of planning time on their performance
in general, and on lexis in particular. The interview was also piloted and subsequently
revised with respect to subjects' comments. All the protocol sessions were audio-
taped.

The semi-structured interview consisted of a written set of questions that the
researcher followed as a guide. However, the researcher tried not to lead them to any
certain answers or comments. Besides, the recommendations suggested by Poulisse,
Bongaerts and Kellerman (1987) were also followed to increase the reliability of the
retrospective interviews: (i) conducting the interviews immediately after the task is
completed; (ii) using prompts that are contextual (i.e. from participant notes, pictures
or their recordings of oral performance); and (iii) the researcher making every effort
to avoid leading questions and prompts pointing to inferences and generalisations.

The semi-structured interview was implemented in L2 (English), rather than L1
(Turkish). One of the reasons is that the interview was piloted and the subjects who
participated in the pilot study did not report on any particular difficulty in
comprehending the questions or answering them. However, questions bearing
ambiguity were clarified. This led to the assumption that the subjects' level of proficiency was high enough to cope with the interview in L2. This assumption seemed to have been confirmed since subjects in the experimental study did not raise any concerns about communicating in L2. Although they were also told that they could switch to L1 if they wished when they felt the need to do so, no subject used the L1 in the interview discourse. It seems that the interview was seen by subjects as a follow-up or the continuation of a compact activity. Moreover, subjects seemed to have enjoyed speaking in English in the interview because some of them thanked the researcher saying “it was useful”. It is also interesting to note that because there was no or relatively much less pressure in the interview, in some instances more complex language was used. Consequently, the fact that the subjects used the L2 in the interview is not thought to have had a significant effect on the reliability of results.

4.8 Measures and reliability of codings

The audio-taped data was transcribed and analysed (for transcripts of the experimental data see Appendices 4.7, 4.8, 4.9) using four main sets of measures: lexical, grammatical and fluency measures as well as measures of strategy use (see Appendix 4.10). Over one third of the data was coded by the researcher (see Appendix 4.11) and a native-speaker instructor of English, who had been trained for that purpose (see Appendix 4.12). Reliability scores of codings are reported as applicable below (also see Appendix 4.13).

4.8.1 Lexical measures

Lexical measures can be categorised into three: lexical complexity, lexical accuracy, lexical strategy use (see Appendix 4.14). The lexical complexity measures chosen were type-token ratio, lexical-to-grammatical ratio, lexical word range, grammatical word range, lexical density and syllabic range (monosyllabic, two-syllable, polysyllabic).
Type-token ratio, as a measure of lexical range, was calculated by dividing the number of different words (i.e. types) by the total number of words (i.e. tokens). The same formula has been used by Ortega (1999), Ure (1971), and others.

It should be noted here that the type-token ratio correlates inversely with the size of corpus. As the text gets longer, the type-token ratio decreases. This is mainly due to the fact that words tend to get repeated or recycled more as the text gets longer, causing a drop in the type-token ratio.

Lexical-to-grammatical ratio was calculated by dividing the number of lexical words by the number of grammatical words. All closed-class functional words, that is, prepositions, conjunctions, articles, demonstratives, numerals, and the negation particle ('no'), were counted as grammatical (see Appendix 4.15 for further categories counted as grammatical words) and content words, i.e. all nouns, verbs, adjectives, and adverbs, as lexical (L. Ortega, personal communication, July 7, 1997). There were a number of words that did not fit either of these categories. These words were grouped under the category of ‘Other’ (see Appendix 4.16) and were excluded from the counts. More detailed specifications on grammatical and lexical word counts can be found in Appendix 4.17.

Lexical word range was calculated following the formula of types of lexical words divided by the number of total lexical words.

Grammatical word range was calculated by dividing the types of grammatical words by the total number of grammatical words.

Lexical density was defined as the percentage of content words in the oral performance and calculated by dividing the number of lexical words by the number of tokens and multiplying the result by one hundred.

Syllabic range was defined as the range of syllables in the output of the participants and used as a measure of phonological complexity. All words were divided into their
component syllables. A coder (a non-native instructor of English) was trained to divide the words into syllables. On the same one third of the data coded by the coder and the researcher, the intercoder reliability was 98%. A high rate of reliability was attained as a result of using the same reference (Cambridge International Dictionary of English, 1995) to look up most of the words for their component syllables, perhaps except those that were obvious such as 'but', 'and', 'she'. After all words were separated into their syllables, those with two and more syllables were put into a file called 'Polysyllable' (Appendix 4.18). The computer programme compared each word against the content of that file to determine the number of syllables it contained. If the word was not found in the file, then it was considered a monosyllabic word.

**Lexical accuracy** is measured by the percentage of lexical choice errors and calculated following the formula of the number of lexical choice errors multiplied by one hundred and divided by the total number of clauses. Lexical choice errors were defined as ‘errors in lexical choice affecting words, phrases, or collocations’ (Mehnert, 1998:91). Repeated lexical choice errors were counted only once. For greater detail on ill-formed lexis, see Appendix 4.14. Intercoder reliability for lexical choice errors was established at 95%.

**Lexical strategy use** was investigated under three categories: L1-based, L2-based and avoidance strategies. L1-based lexical strategies consisted of language switch, foreignizing, literal translation, and appeal for assistance. L2-based lexical strategies involved strategies such as generalisation, approximation, circumlocution, paraphrase and word coinage. Finally, lexical avoidance strategies consisted of lexis avoidance and abandonment. These three groups of strategies are defined and exemplified in Appendix 4.14. Intercoder reliability scores for L1-based, L2-based and lexical avoidance strategies were 96%, 98% and 97%, respectively.
4.8.2 Grammatical measures

Grammatical measures used in the study include grammatical (syntactic) complexity and accuracy.

**Grammatical complexity** was measured by clauses per C-unit (communication unit) and words per C-unit. These measures are based on clauses and the basic speech unit of C-unit that Foster and Skehan (1996:310) define as follows:

Clauses are either a simple independent finite clause or a dependent finite or nonfinite clause.

A C-unit is defined as each independent utterance providing referential or pragmatic meaning. Thus, a C-unit may be made up of one simple independent finite clause or else an independent finite clause plus one or more dependent finite or nonfinite clauses.

Foster and Skehan (1996) and Foster (1998) argue that the C-unit as a complexity measure is more sensitive to spoken interaction than the T-unit, which is defined as 'one main clause plus whatever subordinate clauses happen to be attached to or embedded within it' (Hunt, 1966:735). Pica et al. (1989) reject the T-unit on the basis that it does not include meaningful utterances which are not necessarily complete. Unlike the T-unit, the C-unit allows for ellipsis. Elliptical utterances (i.e. a word/phrase such as an answer to a question) are regarded as C-units (Loban, 1966:5-6 cited in Foster et al., 2000). Frequent formulaic utterances that do not contain any finite verb such as *hello, goodbye, till, tomorrow* and *sorry* (Mehnert, 1998) and interjections like *yes, yeah, no, okay*, are identified as C-units.

Though the unit of analysis used in the study is referred to as C-unit, a few other features of a more comprehensive unit of analysis -- AS-unit -- were incorporated. AS-unit, which is an extension of the more widely used T-unit and C-unit, is defined by Foster et al. (2000:365) as:

An utterance consisting of either *an independent simple clause, or sub-clausal unit*, together with any *subordinate clause(s)* associated with either.
An independent simple clause will be minimally a clause including a finite verb.

The features of AS-unit used in the present study include subordination and sub-clausal units, but not the intonation and pause phenomena to determine clauses. The main reason why the C-unit was preferred to the AS-unit was that a global measure of subordination would be adequate for the purposes of the present study. Moreover, the C-unit has been used more widely (Crookes, 1989; Foster and Skehan, 1996; Wigglesworth, 1997), so the results of the current study would compare well to those of earlier studies. The use of pause and intonation phenomena (in a principled way) to deal with awkward cases (Foster et al., 2000) (in determining AS-units) required that the intercoder be given special training in handling such phenomena. Thus, the use of pause phenomena did not appear to be practical for the purposes of this study. Consequently, for the purposes of the present study, a unit of analysis which is based on subordination and which basically involves elliptical utterances (rather than a fine-grained measure) was deemed sufficient. For greater detail on these features see Appendix 4.14. However, there were cases where individual decisions had to be made. A list of examples of such utterances is shown in Appendix 4.14.

Although complexity and accuracy refer to form, they differ significantly in the degree of emphasis. According to Foster & Skehan (1996), complexity emphasises the organisation of the verbal utterance used, and concentrates on more elaborate language that may be used and on a great variety of syntactic patterning. As learners develop more complex subsystems of language, they are likely to engage in restructuring, as well as risk-taking, because in actual performances they are pushed to operate on the outer limits of their interlanguage (Foster & Skehan, 1996). To this end, the reason why the complexity measure was used in the study was to determine the likely interaction between grammar and lexis. Syntactic complexity and lexical complexity measures were compared for the effect of planning and task type. The reasoning behind this choice was that lexis cannot be investigated reliably in isolation, but in relation to grammar.
The second grammatical measure – words per C-unit – was chosen to make possible a comparison between the two measures and thus increase the reliability of results by using double measures. Similar measures have been used by earlier research, e.g. ‘words per utterance’ by Ortega (1999); ‘words per T-unit’ by Crookes (1989).

A reliability score was calculated for the complexity measure which was arrived at by dividing the total number of clauses by the number of C-units. Intercoder reliability for this complexity measure was established at 97%.

As far as data analyses are concerned, because the dialogic discourse on descriptive tasks in the study is categorised as highly interactional certain data were excluded in a principled way for more coherent analyses. Foster et al. (2000:370) argue that interactional data generate ‘a high proportion of minimal units (e.g. one-word minor utterances and echoic responses) whose inclusion in an analysis could distort the perception of the nature of the performance’. Analysis at this level of application where ‘minimal units’ are excluded has been suggested by Foster et al. (2000) and labelled ‘Level Two’ analysis to be used for highly interactional data. Following Foster et al. (2000), the criteria for the principled exclusion of such data are set out below:

- Exclude (one-word) minor utterances, e.g. Yes, No, Okay, Uhuh (as well as other gap fillers such as ‘er’, ‘hm’, ‘uh’, ‘oh’), Right, and Yeah, Alright plus combinations of such utterances functioning as wholes, e.g. ‘Yes, alright’.
- Exclude echo responses which are verbatim:

More specifically, the present study considers utterances ‘verbatim’ when they are repeated without any change (i.e. no elaboration or extension) in a C-unit.

Below is an extract from the transcripts (see Appendix 4.9) which illustrates both of the criteria above:

125
E: <>And there’s a box. ||
P: [<>] Box, uhuh. [][]
E: <>A (1.2) pink (1.9) box. ||
P: [<>-Uuh.][] (2.0) [<>] Okay. [][]

The utterances to be excluded from the analysis are bracketed. Further criteria include asides in L1, C-units completely in L1 and non-target utterances as echoic (see Appendix 4.10). The same criteria apply to the analyses of the data for accuracy as well as complexity.

**Grammatical accuracy**, on the other hand, is concerned with the use of error-free language. It is defined as the percentage of error-free clauses. It may not be an indication of complex language since it may concentrate on simple and well-controlled language to achieve more target-like language use. In contrast, ‘complexity may capture a greater willingness to experiment and to take risks’, that is, ‘it connects with change and the opportunities for development and growth in the interlanguage system’ as opposed to accuracy, which is concerned with control at a particular level of interlanguage (Foster & Skehan, 1996:304). Yet, an accuracy measure that maximises intersubject variance may enable us to measure learners’ focus on form in relation to complexity under no planning and with planning conditions. Independent coding of the data for error-free clauses yielded an intercoder reliability of 91%.

**4.8.3 Fluency measures**

Two fluency measures were chosen: pruned speech rate (i.e. syllables per second), which was measured using a stopwatch, and dysfluency markers. Fluent language would demonstrate a higher rate of pruned speech, but a lower use of dysfluency markers (i.e. repetitions, self-corrections, etc.). Intracoder reliability on over a third of the data for pruned speech rate was established at 90% agreement after a four-week interval.
Fluency is an indication of the degree of learners' focus on meaning and of their capacity to cope with the pressures of on-line communication (Schmidt, 1990; Skehan, 1992, 1996). The advantages of the fluency measure are twofold. It can prioritise lexicalization (Ellis, 1987) over grammaticization, i.e. learners may avoid rule-based, constructed language for the sake of smooth communication and use more idiom-based language (Sinclair, 1991). In addition, it demonstrates the extent to which planning has been effective.

Having described the research study, I will in the next chapter report the quantitative results and present a discussion of the findings.
CHAPTER FIVE

STATISTICAL RESULTS AND DISCUSSION

5.0 Introduction

This chapter presents the results of the quantitative analysis of the data with a discussion in reference to the research hypotheses.

Computations on the transcribed and coded data were performed for a set of counts by means of a specially designed computer program. The program was implemented in C++ using Microsoft Visual Studio 6.0. Data was read from different files in each program unit. This data was coded according to the terms that needed to be measured. Simply, words that were obtained from the files were examined by using specifications such as excluding some words, counting number and types of tokens, syllable types of words, and so on. With the numeric results gathered from this examination some calculations were made according to the given formulas such as dysfluency markers, lexical word range, type-token ratio, and so forth.

The program is believed to have minimised (if not eradicated) human error that could otherwise occur in the process of counting symbols by hand and doing many fine computations on a wide range of variables for a large piece of data. It produced three sets of counts and computations and printed them in three separate files: Results1, Results2, and Results3 (for extracts of the computer output see Appendices 5.1, 5.2 and 5.3, respectively).

Statistical analyses of the quantitative data were performed using SPSSPC software. The data was analysed using full factorial two-way ANOVAS for each dependent variable with factors (i.e. planning time and task type) so as to determine the effect of planning, task type as well as the interaction effect.
A multivariate analysis of variance (MANOVA) would normally be expected for the study of variance on multiple measures; however, the MANOVA is used to investigate differences across multiple dependent variables simultaneously, based on a set of independent variables. The multivariate test applies to the whole set of measures ‘jointly’ and is used as ‘a method of calculating a single probability level for all measures taken jointly’ (Bock, 1975:20-21). It is suited to ‘detect the presence of certain effects and to determine their direction’ across a set of measures, rather than individual measures (Bock, 1975:22). The MANOVA is then more appropriate when the focus is on different aspects of the same measure, i.e. multiple indicators of the same ability, e.g. different tests of mathematics. However, the interest of the present study is not in alternative measures for the same underlying factor, but in each different variable, i.e. the individual outcome of each variable (e.g. the polysyllabic word range, L2-based strategy use, etc.). The MANOVA then could mask the differences when a set of measures, e.g. monosyllabic, bisyllabic and polysyllabic word ranges, are taken jointly. As a result, two-way ANOVAs were run on each dependent variable.

5.1 Results for Hypotheses 1-6

As hypothesised (Hypotheses 1-6), pre-task planning time would be associated with greater lexical complexity as evident in higher type-token and lexical-to-grammatical ratios, wider lexical and grammatical word ranges, greater lexical density, and wider ranges of monosyllabic, two-syllable and polysyllabic words. Also, according to Hypotheses 1-6, descriptives would be connected with procedural vocabulary while narratives would be associated with schematic vocabulary.

The results concerning lexical complexity are presented in two parts: the results for Hypotheses (1-5), followed by the results for Hypothesis 6.

The results for the first part of lexical complexity measures are presented in Tables 5.1a-e below:

129
Table 5.1a: Effects of planning and task type on lexical complexity measures:

Type-token ratio

<table>
<thead>
<tr>
<th></th>
<th>Descriptive</th>
<th>Narrative</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean</td>
<td>S.D.</td>
<td>N</td>
</tr>
<tr>
<td>-Planning&lt;sup&gt;9&lt;/sup&gt;</td>
<td>.325</td>
<td>.071</td>
<td>24</td>
</tr>
<tr>
<td>+Planning&lt;sup&gt;10&lt;/sup&gt;</td>
<td>.339</td>
<td>.097</td>
<td>27</td>
</tr>
<tr>
<td>Total</td>
<td>.333</td>
<td>.085</td>
<td>51</td>
</tr>
</tbody>
</table>

(Planning F = .000, p = .989; Task type F = 72.78, p = .000; Interaction F = .822, p = .367)

Table 5.1b: Effects of planning and task type on lexical complexity measures:

lexical-to-grammatical word ratio

<table>
<thead>
<tr>
<th></th>
<th>Descriptive</th>
<th>Narrative</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean</td>
<td>S.D.</td>
<td>N</td>
</tr>
<tr>
<td>-Planning</td>
<td>.658</td>
<td>.113</td>
<td>24</td>
</tr>
<tr>
<td>+Planning</td>
<td>.699</td>
<td>.136</td>
<td>27</td>
</tr>
<tr>
<td>Total</td>
<td>.680</td>
<td>.126</td>
<td>51</td>
</tr>
</tbody>
</table>

(Planning F = 6.82, p = .010; Task type F = 24.71, p = .000; Interaction F = .540, p = .464)

<sup>9</sup> 'Planning' refers to 'no planning time' condition.
<sup>10</sup> '+Planning' refers to 'with planning time' condition.
Table S.1c: Effects of planning and task type on lexical complexity measures:
lexical word range

<table>
<thead>
<tr>
<th></th>
<th>Descriptive</th>
<th>Narrative</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean</td>
<td>S.D.</td>
<td>N</td>
</tr>
<tr>
<td>-Planning</td>
<td>.467</td>
<td>.098</td>
<td>24</td>
</tr>
<tr>
<td>+Planning</td>
<td>.447</td>
<td>.113</td>
<td>27</td>
</tr>
<tr>
<td>Total</td>
<td>.456</td>
<td>.106</td>
<td>51</td>
</tr>
</tbody>
</table>
(Planning F = .593, p = .443; Task type F = 161.39, p = .000; Interaction F = .123, p = .727)

Table S.1d: Effects of planning and task type on lexical complexity measures:
grammatical word range

<table>
<thead>
<tr>
<th></th>
<th>Descriptive</th>
<th>Narrative</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean</td>
<td>S.D.</td>
<td>N</td>
</tr>
<tr>
<td>-Planning</td>
<td>.284</td>
<td>.087</td>
<td>24</td>
</tr>
<tr>
<td>+Planning</td>
<td>.305</td>
<td>.098</td>
<td>27</td>
</tr>
<tr>
<td>Total</td>
<td>.295</td>
<td>.092</td>
<td>51</td>
</tr>
</tbody>
</table>
(Planning F = .112, p = .739; Task type F = 7.18, p = .009; Interaction F = 2.22, p = .139)

Table S.1e: Effects of planning and task type on lexical complexity measures:
lexical density

<table>
<thead>
<tr>
<th></th>
<th>Descriptive</th>
<th>Narrative</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean</td>
<td>S.D.</td>
<td>N</td>
</tr>
<tr>
<td>-Planning</td>
<td>37.56</td>
<td>5.40</td>
<td>24</td>
</tr>
<tr>
<td>+Planning</td>
<td>39.60</td>
<td>4.77</td>
<td>27</td>
</tr>
<tr>
<td>Total</td>
<td>38.64</td>
<td>5.13</td>
<td>51</td>
</tr>
</tbody>
</table>
(Planning F = 6.44, p = .013; Task type F = 25.30, p = .000; Interaction F = .003, p = .954)
Type-token ratio is defined as the range or variety of lexis. The results show that there is no significant main effect for planning (F = .000, p > .05), but there is a significant effect for task type (F = 72.78, p < .01). There are no significant interaction effects. With planning time, type-token ratios tend to increase in descriptives (from .325 to .339) whereas they decrease in narratives (from .470 to .456), neither of which reaches significance. With regard to task effect, narratives elicit a significantly greater variety of lexis than descriptives (with a mean total of .463 compared to .333). Thus, Hypothesis 1 receives partial confirmation.

Lexical-to-grammatical ratio is defined as the ratio of lexical words to grammatical words. The results demonstrate that the lexical-to-grammatical ratio is significantly higher when speakers are given planning time (F = 6.82, p < .05), and when they perform a narrative (F = 24.71, p < .01), the task effect being stronger. No interaction effects are found. For this measure, therefore, there is strong confirmation for Hypothesis 2.

Lexical word range refers to the range of schematic (content) vocabulary. There is no significant effect for planning (F = .593, p > .05); however, there is a significant main effect for task type (F = 161.39, p < .01). There are no significant interaction effects. Availability of planning time does not seem to induce a significantly wider range of schematic vocabulary, but task type does. Narratives generate a significantly wider range of schematic vocabulary than descriptives. As a result, there is partial confirmation for Hypothesis 3.

Grammatical word range is concerned with the range of procedural vocabulary (grammar words). The results indicate that there is no significant effect for planning (F = .112, p > .05), but there is a significant effect for task type (F = 7.18, p < .05). There are no significant interaction effects. Grammatical word range mean scores are significantly higher in narratives than those in descriptives, the difference in the no planning condition being bigger (.284 compared to .359). There is, therefore, no confirmation for Hypothesis 4.
Lexical density is defined as the percentage of lexical words. The figures reveal that there are significant main effects both for planning ($F = 6.44, p < .05$) and task type ($F = 25.30, p < .01$). There are no significant interaction effects. The effect of task type reaches higher levels of significance. Planning time seems to increase lexical density regardless of task type; in addition, narratives produce significantly lexically denser language than descriptives (with mean scores of 41.65 compared to 37.56 under no planning, and 43.78 compared to 39.60 under planning condition, respectively). Consequently, Hypothesis 5 receives strong confirmation both for planning and task type.

In summary, the general trend for lexical complexity measures is for planning to be linked to a higher lexical-to-grammatical ratio and lexical density (both reaching statistical significance), but not to variety (range of lexis) of words in general, or to lexical or grammatical word ranges in particular. The effect for task type, however, appears to be consistently strongest, reaching significance for all measures.

Now I present the second part of lexical complexity results that are concerned with three further measures: monosyllabic word range, two-syllable word range, and polysyllabic word range. Syllabic range is associated with phonological complexity. The greater number of syllables a word has, the more phonologically complex it is. The figures are shown in Tables 5.2a-c:

<table>
<thead>
<tr>
<th>Monosyllabic word range</th>
<th>Descriptive</th>
<th>Narrative</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>S.D.</td>
<td>N</td>
<td>Mean</td>
</tr>
<tr>
<td>-Planning</td>
<td>.345</td>
<td>.078</td>
<td>24</td>
</tr>
<tr>
<td>+Planning</td>
<td>.338</td>
<td>.102</td>
<td>27</td>
</tr>
<tr>
<td>Total</td>
<td>.342</td>
<td>.091</td>
<td>51</td>
</tr>
</tbody>
</table>

(Planning $F = 1.01, p = .317$; Task type $F = 45.38, p = .000$; Interaction $F = .362, p = .549$)
Table 5.2b: Effects of planning and task type on lexical complexity (syllable ranges): two-syllable word range

<table>
<thead>
<tr>
<th>Two-syllable word range</th>
<th>Descriptive</th>
<th>Narrative</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean S.D. N</td>
<td>Mean S.D. N</td>
<td>Mean S.D. N</td>
</tr>
<tr>
<td>-Planning</td>
<td>.485 .125 24</td>
<td>.800 .091 27</td>
<td>.652 .191 51</td>
</tr>
<tr>
<td>+Planning</td>
<td>.443 .125 27</td>
<td>.762 .097 24</td>
<td>.593 .196 51</td>
</tr>
<tr>
<td>Total</td>
<td>.463 .125 51</td>
<td>.782 .095 51</td>
<td>.623 .195 102</td>
</tr>
</tbody>
</table>

(Planning F = 3.36, p = .070; Task type F = 209.17, p = .000; Interaction F = .010, p = .922)

Table 5.2c: Effects of planning and task type on lexical complexity (syllable ranges): polysyllabic word range

<table>
<thead>
<tr>
<th>Polysyllabic word range</th>
<th>Descriptive</th>
<th>Narrative</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean S.D. N</td>
<td>Mean S.D. N</td>
<td>Mean S.D. N</td>
</tr>
<tr>
<td>-Planning</td>
<td>.699 .255 24</td>
<td>.849 .171 27</td>
<td>.778 .225 51</td>
</tr>
<tr>
<td>+Planning</td>
<td>.659 .302 27</td>
<td>.745 .154 24</td>
<td>.700 .246 51</td>
</tr>
<tr>
<td>Total</td>
<td>.678 .279 51</td>
<td>.800 .170 51</td>
<td>.739 .238 102</td>
</tr>
</tbody>
</table>

(Planning F = 2.49, p = .118; Task type F = 6.68, p = .011; Interaction F = .501, p = .481)

Monosyllabic word range is defined as the range of one-syllable words. There is no significant effect for planning (F = 1.01, p > .05), but there is a significant effect for task type (F = 45.38, p < .01), with no significant interaction effects. The general trend for planning is that planned tasks (descriptive or narrative) generate a narrower range of monosyllabic words than unplanned ones. However, this difference does not reach significance. Although no significant difference exists between the two planning conditions, narratives seem to produce a significantly wider range of monosyllabic words. Thus, Hypothesis 6 for monosyllabic word range receives partial confirmation.
Two-syllable word range refers to words containing two syllables. The results indicate a pattern for planned tasks to lead to narrower ranges of two-syllable words, but none of the scores reaches significance \((F = 3.36, p > .05)\). There is, however, a significant effect for task type \((F = 209.17, p < .01)\). Speakers seem to use a significantly wider range of two-syllable words on narratives than descriptives. Hypothesis 6 for two-syllable word range receives partial confirmation.

Polysyllabic word range is defined as the range of words containing three or more syllables. The figures reveal a general trend for planning to result in a narrower range of polysyllabic words, which is in the opposite direction to that predicted by Hypothesis 6. The mean scores for unplanned and planned descriptives (.699 compared to .659, respectively) and for unplanned and planned narratives (.849 compared to .745, respectively) are indicative of this trend. However, the results are far from significant \((F = 2.49, p > .05)\). There was, on the other hand, a significant effect for the task type \((F = 6.68, p < .05)\). Narrators seem to use a significantly wider range of polysyllabic words, as predicted by Hypothesis 6. Thus, Hypothesis 6 for polysyllabic word range is partially confirmed.

To sum up, it is notable that the trend for complexity measured by syllabic word range (i.e. phonological complexity) is for planning to consistently result in narrower ranges of monosyllabic, two-syllable and polysyllabic words. However, these results do not reach significance. The tendency for task type appears consistent as well. The results indicate that narratives are consistently and significantly associated with wider ranges of monosyllabic, two-syllable and polysyllabic words.

5.2 Results for Hypothesis 7

The following section reports the results for three measures of lexical strategy use in percentages: L1-based and L2-based lexical strategy use, and lexical avoidance strategy use. The results are shown in Tables 5.3a-c below, respectively:

135
Table 5.3a: Effects of planning and task type on lexical strategy use: L1-based lexical strategy use

<table>
<thead>
<tr>
<th></th>
<th>Descriptive</th>
<th>Narrative</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean</td>
<td>S.D.</td>
<td>N</td>
</tr>
<tr>
<td>-Planning</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Percentage of total L1-based lexical strategy use</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>7.78</td>
<td>5.38</td>
<td>24</td>
</tr>
<tr>
<td>+Planning</td>
<td>4.42</td>
<td>4.05</td>
<td>27</td>
</tr>
<tr>
<td>Total</td>
<td>6.00</td>
<td>4.97</td>
<td>51</td>
</tr>
</tbody>
</table>

(Planning F = 13.25, p = .000; Task type F = .800, p = .373; Interaction F = .093, p = .761)

Table 5.3b: Effects of planning and task type on lexical strategy use: L2-based lexical strategy use

<table>
<thead>
<tr>
<th></th>
<th>Descriptive</th>
<th>Narrative</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean</td>
<td>S.D.</td>
<td>N</td>
</tr>
<tr>
<td>-Planning</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Percentage of total L2-based lexical strategy use</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>18.94</td>
<td>14.68</td>
<td>24</td>
</tr>
<tr>
<td>+Planning</td>
<td>15.76</td>
<td>14.10</td>
<td>27</td>
</tr>
<tr>
<td>Total</td>
<td>17.25</td>
<td>14.32</td>
<td>51</td>
</tr>
</tbody>
</table>

(Planning F = .219, p = .641; Task type F = 9.46, p = .003; Interaction F = .962, p = .329)

Table 5.3c: Effects of planning and task type on lexical strategy use: lexical avoidance strategy use

<table>
<thead>
<tr>
<th></th>
<th>Descriptive</th>
<th>Narrative</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean</td>
<td>S.D.</td>
<td>N</td>
</tr>
<tr>
<td>-Planning</td>
<td>.859</td>
<td>1.88</td>
<td>24</td>
</tr>
<tr>
<td>+Planning</td>
<td>.176</td>
<td>.641</td>
<td>27</td>
</tr>
<tr>
<td>Total</td>
<td>.497</td>
<td>1.40</td>
<td>51</td>
</tr>
</tbody>
</table>

(Planning F = 2.01, p = .151; Task type F = 5.43, p = .022; Interaction F = 3.94, p = .050)
L1-based lexical strategy use is defined as the use of strategies like language switch, foreignising and literal translation. It was hypothesised that planning time and descriptives would be linked to a lower percentage of L1-based strategy use. The figures reveal that there is a significant effect for planning time (F = 13.25, p < .05), but no significant effect for task type (F = .800, p > .05). There is no interaction of the two factors. Regarding L1-based strategy, Hypothesis 7 is therefore supported for planning time, but not for narratives.

Hypothesis 7 also predicted that planning time would result in lesser use of L2-based strategies, and that descriptives would demonstrate a wider use of it. The results show that there is no significant effect for planning (F = .219, p > .05), but there is a significant effect for task type (F = 9.46, p < .05). Although the results indicate that planning time reduces L2-based lexical strategy use on descriptives (with mean scores of 18.94 for unplanned, and 15.76 for planned descriptives), no significance is achieved. However, the reverse happens in narratives. That is, when planning time is available, the trend is for L2-based lexical strategy to increase. For the task type effect, participants doing descriptive tasks make significantly more use of L2-based strategies. There is therefore partial confirmation for Hypothesis 7.

It was hypothesised (Hypothesis 7) that speakers given planning time would apply a lower percentage of lexical avoidance strategy and that narratives would generate greater lexical avoidance strategy. The results indicate that there is no significant effect for planning (F = 2.01, p > .05), but there is a significant effect for task type (F = 5.43, p < .05). However, there seem to be interaction effects that just reach significance, i.e. the significance level is on the borderline (F = 3.94, p = .05). The general trend for planning is to reduce lexical avoidance strategy in descriptives, but to cause it to increase in narratives. For task type, the effect is significant and in favour of the descriptive, that is, descriptives induce more use of lexical avoidance than narratives. The results demonstrate that planning helps learners in using fewer lexical avoidance strategies only when they are doing a descriptive task. Hypothesis 7 concerning lexical avoidance strategy, therefore, is not confirmed.
To sum up, the results of lexical strategy use are mixed. Planning seems to significantly reduce L1-based lexical strategy use, but not L2-based strategy use or lexical avoidance strategy use. On the other hand, the effect for task type reaches significance for L2-based lexical strategy and lexical avoidance strategy use, but not for L1-based lexical strategy use. With respect to task type, it is the descriptives (not narratives) that generate significantly greater use of L2-based lexical strategy use. For lexical avoidance strategy use, though descriptives yield significantly greater use of it in comparison to narratives.

5.3 Results for Hypothesis 8

This part presents the results for lexical accuracy, measured by the percentage of lexical choice errors. The figures are shown in Table 5.4 below:

Table 5.4: Effects of planning and task type on lexical accuracy

<table>
<thead>
<tr>
<th></th>
<th>Descriptive</th>
<th>Narrative</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean</td>
<td>S.D.</td>
<td>N</td>
</tr>
<tr>
<td>-Planning</td>
<td>25.13</td>
<td>9.61</td>
<td>24</td>
</tr>
<tr>
<td>+Planning</td>
<td>12.94</td>
<td>10.81</td>
<td>27</td>
</tr>
<tr>
<td>Total</td>
<td>18.68</td>
<td>11.87</td>
<td>51</td>
</tr>
</tbody>
</table>

(Planning F = 17.60, p = .000; Task type F = 2.99, p = .087; Interaction F = 2.34, p = .129)

The results indicate that planning time results in a lower percentage of lexical choice errors, achieving a level of significance in which p < .01 (F = 17.60). The mean scores for planned tasks (regardless of type) are significantly lower than those for unplanned tasks (12.94 compared to 25.13 on descriptives, and 19.88 compared to 25.56, respectively). The total mean scores for no planning and with planning conditions are 25.36 and 16.21, respectively. There is, however, no significant effect for task type (F = 2.99, p > .05). There are no interaction effects (F = 2.34, p > .05). Thus, for the lexical accuracy measure, these results provide strong confirmation for one
component of Hypothesis 8 concerned with planning, but no confirmation for the other, which is concerned with task type.

5.4 Results for Hypothesis 9

In this section, I report the results for grammatical complexity. Two measures were used: clauses per C-unit, and words per C-unit. The results for both grammatical measures are reported in Tables 5.5a and 5.5b below, respectively:

Table 5.5a: Effects of planning and task type on grammatical complexity: clauses per C-unit

<table>
<thead>
<tr>
<th>Grammatical complexity [Clauses per C-unit]</th>
<th>Descriptive</th>
<th>Narrative</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean S.D. N</td>
<td>Mean S.D. N</td>
<td>Mean S.D. N</td>
<td></td>
</tr>
<tr>
<td>Planning</td>
<td>Total</td>
<td></td>
<td></td>
</tr>
<tr>
<td>-Planning</td>
<td>1.18 .199 24</td>
<td>1.42 .216 27</td>
<td>1.31 .240 51</td>
</tr>
<tr>
<td>+Planning</td>
<td>1.21 .190 27</td>
<td>1.55 .261 24</td>
<td>1.37 .283 51</td>
</tr>
<tr>
<td>Total</td>
<td>1.19 .193 51</td>
<td>1.48 .245 51</td>
<td>1.34 .263 102</td>
</tr>
</tbody>
</table>

(Planning F = 3.48, p = .065; Task type F = 46.19, p = .000; Interaction F = 1.41, p = .237)

Table 5.5b: Effects of planning and task type on grammatical complexity: words per C-unit

<table>
<thead>
<tr>
<th>Grammatical complexity [Words per C-unit]</th>
<th>Descriptive</th>
<th>Narrative</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean S.D. N</td>
<td>Mean S.D. N</td>
<td>Mean S.D. N</td>
<td></td>
</tr>
<tr>
<td>Planning</td>
<td>Total</td>
<td></td>
<td></td>
</tr>
<tr>
<td>-Planning</td>
<td>8.36 2.39 24</td>
<td>8.67 1.41 27</td>
<td>8.53 1.92 51</td>
</tr>
<tr>
<td>+Planning</td>
<td>9.05 1.69 27</td>
<td>9.62 2.10 24</td>
<td>9.32 1.90 51</td>
</tr>
<tr>
<td>Total</td>
<td>8.73 2.06 51</td>
<td>9.12 1.81 51</td>
<td>8.92 1.94 102</td>
</tr>
</tbody>
</table>

(Planning F = 4.66, p = .033; Task type F = 1.35, p = .249; Interaction F = .115, p = .735)
Grammatical complexity, measured by clauses per C-unit was hypothesised to be greater as a result of planning time, and in narratives than descriptives. Although not too far from significance, there is no statistically significant effect for planning time (F = 3.48, p > .05). For task type, however, there is a highly significant effect (F = 46.19, p < .01). That is, narratives produce more complex language than descriptives. There are no interaction effects (F = 1.41, p > .05). Hypothesis 9 is therefore supported for the measure of subordination in the independent variable of task type (narratives being more complex than descriptives), but not in the independent variable of planning time.

For another measure of grammatical complexity – words per C-unit – the results show an opposite trend to that of the subordination measure. That is, there is a significant main effect for planning (F = 4.66, p < .05), but no significant effect for task type (F = 1.35, p > .05). There are no interaction effects (F = .115, p > .05). As predicted by Hypothesis 9, the results demonstrate that planning time significantly increases grammatical complexity in terms of words per C-unit; however, contrary to that hypothesised, the task type effect appears non-significant, that is, narratives do not induce significantly greater grammatical complexity than descriptives. There is, therefore, partial confirmation for Hypothesis 9.

To recap, in grammatical complexity measured by clauses per C-unit, planning time does not produce a significant increase whereas task type does. Narratives generate language of significantly greater complexity than descriptives. As for words per C-unit, the reverse is the case. Planning does result in significantly more complex language, but task type does not. There are no interaction effects for either of the complexity measures.

5.5 Results for Hypothesis 10

Hypothesis 10 predicted greater grammatical accuracy for planning (rather than no planning) and for narratives (rather than descriptives). Grammatical accuracy is
measured by the percentage of error-free clauses. The results are given below in Table 5.6:

Table 5.6: Effects of planning and task type on grammatical accuracy: error-free clauses

<table>
<thead>
<tr>
<th></th>
<th>Percentage of error-free clauses</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Descriptive</td>
<td>Narrative</td>
</tr>
<tr>
<td></td>
<td>Mean</td>
<td>S.D.</td>
</tr>
<tr>
<td>-Planning</td>
<td>57.23</td>
<td>10.95</td>
</tr>
<tr>
<td>+Planning</td>
<td>61.19</td>
<td>9.84</td>
</tr>
<tr>
<td>Total</td>
<td>59.33</td>
<td>10.46</td>
</tr>
</tbody>
</table>

(Planning F = 6.45, p = .013; Task type F = 1.13, p = .290; Interaction F = .717, p = .399)

The results indicate that there is a significant effect for planning (F = 6.45, p < .05), but no significant effect for task type (F = 1.13, p > .05). There are no interaction effects (F = .717, p > .05). As predicted by Hypothesis 10, planning time leads to more accurate language in both task types; however, in the opposite direction to that the same hypothesis predicted, narratives do not lend themselves to statistically more accurate language than descriptives. There is therefore strong confirmation for the planning component of Hypothesis 10, but no confirmation for the task type component.

5.6 Results for Hypothesis 11

This part is concerned with the fluency of language participants produced. Two measures were used: a total of dysfluency markers and non-target words divided by total words, and pruned speech rate (i.e. syllables per second). The results are shown in Tables 5.7a and 5.7b below:
Table 5.7a: Effects of planning and task type on fluency: dysfluency rate

<table>
<thead>
<tr>
<th>Fluency (A) [(dysfluency markers)+(non-target words)/total words)]</th>
<th>Descriptive</th>
<th>Narrative</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean</td>
<td>S.D.</td>
<td>N</td>
</tr>
<tr>
<td>-Planning</td>
<td>.043</td>
<td>.023</td>
<td>24</td>
</tr>
<tr>
<td>+Planning</td>
<td>.030</td>
<td>.016</td>
<td>27</td>
</tr>
<tr>
<td>Total</td>
<td>.036</td>
<td>.021</td>
<td>51</td>
</tr>
</tbody>
</table>

(Planning F = 4.71, p = .032; Task type F = 21.40, p = .000; Interaction F = .373, p = .543)

Table 5.7b: Effects of planning and task type on fluency: pruned speech rate

<table>
<thead>
<tr>
<th>Fluency (B) [Pruned speech rate (syllables per second)]</th>
<th>Descriptive</th>
<th>Narrative</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean</td>
<td>S.D.</td>
<td>N</td>
</tr>
<tr>
<td>-Planning</td>
<td>1.92</td>
<td>.344</td>
<td>24</td>
</tr>
<tr>
<td>+Planning</td>
<td>2.20</td>
<td>.330</td>
<td>27</td>
</tr>
<tr>
<td>Total</td>
<td>2.07</td>
<td>.362</td>
<td>51</td>
</tr>
</tbody>
</table>

(Planning F = 15.57, p = .000; Task type F = 13.22, p = .000; Interaction F = .058, p = .810)

Hypothesis 11 predicted that planning time and narratives would result in greater fluency as evidenced by fewer dysfluency markers (i.e. repetitions, self-corrections, false starts) and non-target words. The results demonstrate that there is a significant effect both for planning (F = 4.71, p < .05) and task type (F = 21.40, p < .01). There are no interaction effects (F = .373, p > .05). That is, given time to plan, the L2 user produces more fluent language, regardless of task. As far as the task type is concerned, descriptives generate language of greater fluency than narratives. Thus, for the measure of total dysfluency and non-target words, Hypothesis 11 receives strong confirmation for both planning time and task type.

Hypothesis 11 also stated that both planning time and task type would be associated with greater fluency as measured by pruned speech rate (syllables per second). According to the results, there is a strong effect for planning and task type, both of
which reach a significance level of $p < .01$. The F-values for planning and task type are 15.57 and 13.22, respectively. No significant interaction effects exist ($F = .058$, $p > .05$). Planning time has a positive effect on fluency regardless of task type. When the two task types are compared, as hypothesised, it is evident that descriptives result in more fluent language than narratives (with mean totals of 2.07 compared to 1.81). For pruned speech rate, therefore, the results provide strong support for Hypothesis 11.

To sum up, the results show that the effects of planning time and task type are strong and consistent. In other words, planning time is found to impact the fluency of language. As for task type, descriptives are better suited to generate fluent language than narratives. The effect for both planning and task type are highly significant for both measures of fluency used in the study.

5.7 Summary of results and discussion

It is useful to summarise the results of the statistical analyses to prepare for the following discussion. The results are presented in Table 5.8 below:
### Table 5.8: Summary of results

<table>
<thead>
<tr>
<th>Measures</th>
<th>Planning effect: significant?</th>
<th>Task type effect: significant?</th>
<th>Higher scoring task</th>
<th>Interaction effect: significant?</th>
<th>Hypothesis confirmation?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Descriptive</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Type-token ratio</td>
<td>NO</td>
<td>YES</td>
<td>×</td>
<td>√</td>
<td>NO</td>
</tr>
<tr>
<td>Lexical-to-grammatical ratio</td>
<td>YES</td>
<td>YES</td>
<td>×</td>
<td>√</td>
<td>YES</td>
</tr>
<tr>
<td>Lexical word range</td>
<td>NO</td>
<td>YES</td>
<td>×</td>
<td>√</td>
<td>NO</td>
</tr>
<tr>
<td>Grammatical word range</td>
<td>NO</td>
<td>YES</td>
<td>×</td>
<td>√</td>
<td>NO</td>
</tr>
<tr>
<td>Lexical density</td>
<td>YES</td>
<td>YES</td>
<td>×</td>
<td>√</td>
<td>YES</td>
</tr>
<tr>
<td>Monosyllabic word range</td>
<td>NO</td>
<td>YES</td>
<td>×</td>
<td>√</td>
<td>NO</td>
</tr>
<tr>
<td>Two-syllable word range</td>
<td>NO</td>
<td>YES</td>
<td>×</td>
<td>√</td>
<td>NO</td>
</tr>
<tr>
<td>Polysyllabic word range</td>
<td>NO</td>
<td>YES</td>
<td>×</td>
<td>√</td>
<td>NO</td>
</tr>
<tr>
<td>L1-based lexical strategies</td>
<td>YES</td>
<td>NO</td>
<td>—</td>
<td>—</td>
<td>NO</td>
</tr>
<tr>
<td>L2-based lexical strategies</td>
<td>NO</td>
<td>YES</td>
<td>✓</td>
<td>✗</td>
<td>NO</td>
</tr>
<tr>
<td>Lexical avoidance strategies</td>
<td>NO</td>
<td>YES</td>
<td>✓</td>
<td>✗</td>
<td>YES</td>
</tr>
<tr>
<td>Lexical accuracy</td>
<td>YES</td>
<td>NO</td>
<td>—</td>
<td>—</td>
<td>NO</td>
</tr>
<tr>
<td>Grammatical complexity (clauses per C-unit)</td>
<td>NO</td>
<td>YES</td>
<td>✓</td>
<td>✗</td>
<td>NO</td>
</tr>
<tr>
<td>Grammatical complexity (words per C-unit)</td>
<td>YES</td>
<td>NO</td>
<td>—</td>
<td>—</td>
<td>NO</td>
</tr>
<tr>
<td>Grammatical accuracy</td>
<td>YES</td>
<td>NO</td>
<td>—</td>
<td>—</td>
<td>NO</td>
</tr>
<tr>
<td>Fluency (dysfluency markers + non-target words)</td>
<td>YES</td>
<td>YES</td>
<td>×</td>
<td>✓</td>
<td>NO</td>
</tr>
<tr>
<td>Fluency (pruned speech rate, i.e. syllables per second)</td>
<td>YES</td>
<td>YES</td>
<td>✓</td>
<td>✗</td>
<td>NO</td>
</tr>
</tbody>
</table>
This study was designed to throw some light on how lexis is influenced (both qualitatively and quantitatively) by task features like planning time and task type. Planning time is reasoned to afford the language user extra attention, which has an impact on his/her oral performance. Task type is another factor that has an effect on language performance. The varying cognitive load of tasks can lead language users to make certain choices as to what aspect(s) of language to focus on and to what extent. The central focus of the thesis is on how the manipulation of such features affects learners' choices of allocating their attentional resources, and how these decisions impact lexis.

5.7.1 Lexical complexity

In this section, two aspects of lexical complexity will be discussed in the light of the results: lexical richness and syllabic range.

5.7.1.1 Lexical richness: schematic vocabulary

Regarding lexical complexity, planning time seems to significantly increase the lexical-to-grammatical ratio and lexical density, both of which are concerned with schematic vocabulary. It is also striking that the task effect on these two measures is highly significant. That is, learners produce more schematic vocabulary when they have time to plan whatever the task, and when they perform narratives rather than descriptives. This suggests that during planning learners consider what type of lexis to use. The type of lexis they decide to use is fundamentally schematic, which is further pushed by narratives rather than descriptives. It should be noted, however, that the lexical density figures have opposite implications for the relative density of lexical and grammatical tokens on the two types of task. Lower percentage of lexical density would mean language denser in grammatical tokens, but less dense in lexical words.
A likely explanation for the planning effect is that learners doing a planned descriptive task (i.e. through focus on the most salient differences between the pictures) think of what a number of key objects are called and try to stick to them on task with less use of L2-based strategies (e.g. circumlocution, paraphrase, etc.). This explanation is also supported by a non-significant effect of planning time on L2-based strategy use, which actually decreased from a mean score of 18.94 to 15.76. Additionally, the data from case studies (see Chapter Six) indicate that some learners tend to pursue their pre-planned lexis. Besides, the nature of the descriptive may lead to a reduction in lexical words by imposing certain constraints on the language user. The descriptive is dialogic, where the speaker needs to cater for his/her interlocutor. Changes or adaptations to plans (pre-task as well as on-line planning) constrain the interactant from elaborating to a great extent. Interpersonal factors in interactions also place constraints on interactants. For example, the notion of ‘face’ is a conversational concern that impacts language use. It is associated with ‘notions of being embarrassed or humiliated, or ‘losing face’” and defined as ‘something that is emotionally invested, and that can be lost, maintained, or enhanced, and must be constantly attended to in interaction’ (Brown and Levinson, 1987:61). In dialogic speech, the interactants have to attend to the language and task requirements as well as to an appropriate level of politeness which involves concern for losing or gaining and maintaining face (i.e. face-threatening acts) and taking and holding the floor. Thus, elaboration in linguistic content is rather challenging given the tensions of functioning in an L2 to meet certain task requirements and having to be heedful of interpersonal factors simultaneously.

As for narratives, the main reason why they generate greater schematic vocabulary is that they are cognitively demanding. Foster (2000) concludes that non-native speakers perceived the narrative task as ‘most taxing’ (compared to the personal information exchange and decision-making tasks). The reasoning is that narrators need to understand the relationship between a series of pictures in order to incorporate them into a storyline. This requires an organisation of some ideas, events or actions of varying complexity as well as the vocabulary to express them. It is then reasonable to assume that such a focus on content leads to greatest schematic vocabulary on narratives. Furthermore, the learner’s individual approach to task performance has a
role to play. It is clear in the two case studies reported in the thesis (discussed in Chapter Six) that some learners view the task in terms of content and lexis. For instance, Case2 reports that he finds it difficult to connect two of the pictures:

... I couldn’t understand the fifth picture and I couldn’t find the, how can I say-I couldn’t combine the fourth one with the fifth one, so I tried (it) on this.

Similarly, Case1’s statement below indicates his concentration on what the pictures represent and how to incorporate this information into the storyline:

... I looked at pictures and tried to find special, how can I say, objects. For example, I said 'she was climbing the mountain on a sunny day' because she was climbing and there was a sun shining behind the mountains and heavy snow also. I mean I just think the words, the key words for the pictures.

To summarise, planning time promotes lexical richness (measured through greater schematic vocabulary) regardless of task. Considering task type, narratives seem to activate and subsequently generate such vocabulary to a highly significant degree.

5.7.1.2 Lexical richness: variety (range) of words

Lexical richness can be considered in terms of the variety (i.e. range) of words. A general measure of lexical variety used in the study is type-token ratio, which is broken down into two specific variety measures: lexical (schematic) and grammatical word range. For these three measures, there is a consistent non-significant effect for planning. In other words, planning seems to have no significant effect on the variety of words, or specifically on lexical or grammatical word range. It can be concluded that when learners have planning time they mostly focus on schematic (content) vocabulary that they think they need to use to complete the task successfully; however, they do not necessarily worry about using a wide range of words (either lexical or grammatical). This also ties in with the conclusion drawn in Chapter Six that individuals may vary in their approaches to lexical risk-taking, and that some
planners may appear to be reluctant to take risks. Clearly, attempting a greater variety of lexis involves greater risk-taking.

Particularly, the range of grammatical words/procedural vocabulary was associated with procedural vocabulary and it was hypothesised that the descriptive would generate a wider range of it. Contrary to what was hypothesised, it was the narrative, rather than the descriptive, that yielded a wider range of procedural vocabulary. It seems that on the descriptive task more procedural words are recycled while a wider range of them is generated on the narrative. This evidence suggests that the narrative, i.e. monologic discourse, conjures up a greater variety of grammatical words since the narrator has more freedom in choosing how to transact a task with richer and more complex content, resulting in diversity in the language produced. In addition, there is the need for the narrator to be as precise as possible about the events in the storyline. This particular task demand may require the incorporation of variably descriptive elements (but avoiding describing individual sequences in isolation) into the story.

It is useful though to remember that the type-token ratio did produce significant results in Ortega’s (1995) and Crookes’ (1989) studies, but not in Ortega’s (1999) study. Also Wendel (1997) reports that word families were not significantly different in a story-retelling task. On the other hand, Wigglesworth (1997) shows that there is a higher type-token ratio (used as a fluency measure) in a task with planning, but not in the rest of the experimental tasks. Ortega (1999) states that the degree of lexical richness in planned output is inconsistent and suggests two reasons accounting for this inconsistency. The first reason is the sensitiveness of type-token ratio to text length, as shown by previous research (Hess, Sefton, and Landry, 1986; Richards, 1987 cited in Ortega, 1999). The reason why the length of the text affects the type-token ratio is that, as the text gets longer, the number of types do not normally rise at the same rate as the number of tokens (Schmitt, 2000). This results in low type-token ratios. To combat this potential problem, the present study uses a relatively large sample (51 dyads) compared to similar previous research. However, all transcripts of oral performance, some of varying length but still comparable, are treated in the same manner. No special treatment was given to transcripts on the basis of their length.
Ortega (1999), on the other hand, performs two calculations of type-token ratio (i.e. on the total length of the narratives as well as on a standardised number of tokens per narrative where the shortest narrative is taken as a cut-off point), but finds no notable differences. The second reason Ortega (1999:133) gives is as follows:

... lexical retrieval difficulties and the weighing of competing plans may artificially inflate the number of lexical types in unplanned production because these processes are manifested in lexical and propositional dysfluency (word repetitions, on-record word search, self-corrections, false starts, etc.), whereas under conditions of planning these processes are presumably done off-record during pretask planning and do not transpire during planned production.

Moreover, explaining lexical richness in terms of lexical range alone may not necessarily account for the individual’s idiosyncratic mental lexicon. To this effect, retrospective interviews can provide some insights about the processes learners engage in whilst making choices about a range of lexis.

5.7.1.3 Syllabic range: monosyllabic, bisyllabic, polysyllabic

Syllabic range was hypothesised to be an indicator of lexical complexity. No research into ‘pre-task planning’ has used such a measure of lexical complexity. Studies in word-building have drawn a parallel between the number of affixes in a word and its complexity (Marslen-Wilson et al., 1994). For example, the words un+able and un+ambigu+ous+ness are complex words, the former being less complex but more frequent while the latter being more complex but less frequent (Nation, 2001:320-321). Complexity referred to above is concerned with morphological or structural complexity. In the present study, however, I decided to restrict my attention to phonological complexity, and therefore counted syllables, rather than morphemes. Phonological complexity is associated with word length, but not necessarily with the number of morphemes.
Several studies have investigated the relationship between word length and vocabulary learning. While Rodgers (1969) found that word length was not a significant variable in an experiment, Stock (1976) reported that English-speaking learners of Hebrew found monosyllabic words easier to memorise than bisyllabic ones; however, they found three-syllable words easier to remember than monosyllabic words. Phillips (1981) also found word length to be a significant variable in English speakers' learning of French words, but it appeared to be in inverse proportion to proficiency, i.e. it decreased as the proficiency level increased. Coles (1982) found that word length had a strong influence on the success rates of non-native speakers of English in recognising written forms of English words. Laufer (1997) casts doubt over the possibility of linking word length with learning difficulty. As seen, the evidence that previous research has suggested is mixed. Singleton (1999:141) suggests two methodological problems to account for the diverse evidence of word length:

1. word length can be variously calculated – in phonemes, graphemes, syllables or morphemes – and
2. it is difficult to disentangle length from other variables – notably morphological complexity.

The interaction among grammar, the lexicon and phonology, on which the theoretical approach to phonology – *Lexical Phonology* – is based, views phonological processes ‘as operating together with word-formation rules in a cyclic fashion in such a way as to specify the lexical items in a language. Affixes are seen as being divided into different subsets (called *levels* or *strata*), to which different word-formation rules apply, these word-formation rules correlating with different phonological rules’ (Singleton, 2000:89).

The procedure followed (see Chapter Four for full details) involved the division of words into their component syllables and a subsequent computational analysis (i.e. number and range of syllables) as another operation of the computer program used in the study.

There are highly significant results with impressive consistency. Planning does not have a significant effect. None of the three measures of syllabic range (monosyllabic,
two-syllable, polysyllabic word range) reaches significance. More interestingly, planning time induces learners to use an even narrower range of such words across all measures. If, for example, we assume that polysyllabic words are the most phonologically complex of all, then it is understandable that the learner will choose to use such lexis within a safe range during planning. The fact that these results correspond to those of lexical variety implies that the trend for planning is to encourage a reduction in lexical complexity. This trend is shown to be stronger in learners who are non-risk-takers (see Chapter Six). A word of caution is in order here. The learner perception of lexical complexity in terms of syllabic range may not be the same as hypothesised. For example, a five-syllable word may be fairly simple to one learner whereas it may be perceived as rather complex by another.

It is also interesting to see that the task effect on all three syllabic range measures is significant. Narratives yield a significantly wider range of monosyllabic, two-syllable and polysyllabic words than descriptives. The consistency of the results, similar to the effect for planning, encourages further speculation. If, again, we assume a linear relationship between syllabic range and phonological complexity, we can claim that narratives are more suited to increase phonological complexity. It may be that this is motivated by the need to use phonologically complex words to perform a task that imposes higher cognitive demands – the monologic narrative.

As a result, though syllabic range as an indicator of phonological complexity has proven to be promising, there is a need for replication for it to be established as a reliable measure of lexical complexity.

5.7.2 Lexical strategy use

Three measures of lexical strategy use are used in the study: L1-based and L2-based lexical strategy, and lexical avoidance strategy use. Task features impact these strategies differently.
It is notable that planning decreases L1-based lexical strategy significantly. When given time to plan, learners turn less often to L1-based strategies. A possible explanation for this is that they see an L1-based strategy as the last resort. The availability of planning time enables learners to steer away from L1-based strategies and explore alternative ways. When there is no planning time, however, learners tend to use L1-based strategies to save some of their attentional resources so that they have enough available to help them cope with the demands of the task. In other words, L1-based strategies are imposed by the cognitive demands of the task requiring some extra attention. Thus, L1-based strategy use may indicate economy in consuming the attention available, resulting from a task demand to satisfy.

The alternative ways of saying things usually translate themselves into L2-based lexical strategies. Learners stay in L2 by using a lexical strategy to overcome a communication problem. Though not significant, the trend for L2-based lexical strategy use is to decrease with planning on descriptives, but increase on narratives. It is likely that when learners have planning time before descriptives they concentrate on certain familiar words and, if necessary, pre-formulate an L2-based strategy to use in describing the pictures. This could be explained by the learners’ anticipating potential lexical problems and planning to use an L2-based strategy to overcome them. When there is no planning time before a descriptive task, the learner has to make such decisions spontaneously, which results in a higher percentage of L2-based lexical strategy use. This means that the learner remains in L2 and keeps experimenting with alternative ways in which his/her descriptions are clearer. In the ‘stay in L2’ approach the learner essentially engages with language in discourse – both meaning and form – suggesting more opportunities for lexical risk-taking and stretching. Thus, planning time may reduce such opportunities.

As for the effect of task type, the narratives produce significantly more L2-based strategies. To account for this, I suggest that the success of the monologic narrative task is based solely on the narrator telling the story well. That is, no help can be expected of the interlocutor. The absence of interaction in narratives can then be
positive. As a result, greater task demands and cognitively heavy content of the narrative are associated with greater L2-based strategy use.

On the last measure of lexical strategy use – lexical avoidance strategies – planning time does not have a significant effect but task type does. However, because of significant interaction effects it is difficult to ascribe the result to the effect of planning or task type.

In sum, the results of lexical strategy analyses suggest that the planned monologue is more effective than the planned dialogue in terms of engagement with language and lexical stretching. The fact that no interaction is involved in the monologue can be seen as a facilitative factor in promoting the learner experimenting with language.

5.7.3 Lexical correctness vs. lexical variety

The opportunity for planning had a significant effect on lexical correctness, indicating that learners make significantly fewer lexical choice errors when given pre-task planning time. However, lexical correctness seems to be in competition for attention with lexical variety. It can be said that more attentional resources are channelled into getting the lexis right rather than producing a variety of it. This suggests that learners may prioritise one aspect of lexis over another: a trade-off within lexis. To my knowledge, a trade-off within lexis has not been revealed elsewhere (e.g. Skehan, 1998; Foster and Skehan, 1996; Skehan and Foster, 1997).

Such interdependence within lexis probably stems from a concentration on content words (as evident in a significantly high ratio of lexical-to-grammatical words and lexical density score) and their appropriate use in context. An awareness of such a goal also became clear in the protocols with participants (as well as in the case studies in Chapter Six). The task type, however, does not produce significant effects. The reasoning that narratives would induce learners to produce language of a lower percentage of lexical choice errors as a result of more attention to meet the task
demands is not confirmed. By contrast, it is in descriptives that we find fewer errors, not in narratives. A possible reason to account for this unexpected result could be that learners may have benefited from opportunities for negotiation for meaning, which in turn resulted in a reduction in the use of risk-taking lexis.

The present research has documented a trade-off within lexis, indicating a crucial interaction between two lexical aspects: correctness and variety. I return to this interdependence within lexis in Chapter Six, where I investigate it at an individual level.

5.7.4 Grammatical accuracy

Grammatical accuracy shows a similar trend to that of lexical accuracy. Like lexical accuracy, grammatical accuracy increases significantly with planning time regardless of task type. Similarly, task type does not have a significant impact on grammatical accuracy and the task type effect on grammatical accuracy corresponds to that on lexical accuracy: descriptives are more accurate than narratives (though results do not attain the .05 level of significance). It should be noted here that the grammatical accuracy is a global measure which includes the specific measure of lexical accuracy (i.e. lexical choice errors). As the results are parallel to those of lexical accuracy, a similar explanation to that suggested for lexical accuracy is offered here as well. That is, the interactive nature of the descriptives helped learners to reduce the cognitive demands of the task and direct the extra attention afforded into using accurate grammar.

The results for planning correspond to those reported in Foster and Skehan (1996), Skehan and Foster (1997) and Mehnert (1998) in that they are associated with more accurate performance, but differ from them in that the task difference is non-significant. On the other hand, Foster and Skehan’s (1996) study, for example, where there were three tasks (i.e. Personal, Narrative and Decision) and three planning conditions (i.e. no planning, undetailed planning and detailed planning), Personal and
Narrative tasks yielded more accurate performance in undetailed planning condition. Moreover, detailed planning resulted in greater accuracy for Personal and Decision tasks compared to no planning condition; however, no planning led to performance of greater accuracy than detailed planning in the Narrative. By contrast, the accuracy results for the narratives used in the present study were poorer without planning, and remained slightly lower than those of the descriptives in the planning condition.

Other studies have reported contradictory results in relation to the effect of planning on accuracy. For example, Crookes (1989) and Williams (1992) found that there was no significant difference between planned and unplanned output in terms of accuracy. Similarly, Ortega (1999) reports a non-significant difference between the accuracy level of planned and unplanned oral performance.

5.7.5 Grammatical complexity

There are contrasting results regarding the two grammatical complexity measures: subordination (clauses per C-unit) and words per C-unit. Though both benefit from planning time, the results for the former do not reach significance. In contrast to the pattern of planning effect, task type has a significant effect on the former, but not on the latter. As subordination has been shown to be a better indicator of language complexity, the lack of significance for planning effect is in need of explanation. It is possible that learners' focusing on both lexical and grammatical accuracy results in a drop in complexity. As the effort to be grammatically and lexically correct takes up more attentional resources, the output appears grammatically less complex. The results indicate a complex interdependence between lexical and grammatical aspects of language. That is, a combined focus on lexical and grammatical accuracy leads to a drop in grammatical complexity. This finding contrasts with that of Foster (2000), reporting that when accuracy (grammatical) and complexity (grammatical) compete for attention it is complexity that is prioritised.
The other grammatical complexity measure – words per C-unit – is simpler. It, however, produces consistent results with Ortega (1999) and Crookes (1989), who use the measure of words per utterance: planning time results in a greater number of words per C-unit.

5.7.6 Fluency

For both fluency measures the results are clear. Planning time has strong effects on fluency measured through a decrease in dysfluency and an increase in pruned speech rate. These results for planning are consistent with previous research, but not for task type (Foster, 2000; Ortega, 1999; Skehan and Foster, 1997). Planning time helps to ease the cognitive load of the task, resulting in significantly more fluent language. The results also show that task type has a significant effect on both measures of fluency. However, descriptives display more fluent language as evident in lower dysfluency and in higher pruned speech rate than narratives, suggesting that cognitively demanding tasks do not necessarily lead to greater fluency. The reverse operation may be at work: less taxing tasks free up some attentional resources that are allocated to the production of fluent language. The reason why narratives appear less fluent than descriptives may be due to speakers directing more attention to grammatical complexity and accuracy, which is evident in consistently and significantly high scores in these measures in narratives.

5.7.7 Sensitivity and representativeness of data

The general picture that has emerged from these results is more complex compared to the outcome of previous research. The present study claims that it is relatively better equipped to address this complexity since it fulfils several criteria which some relevant research has either done to a lesser extent or has overlooked.
First, the present research used a wider range of lexical as well as grammatical and fluency measures. As lexical measures, some recent research has commonly used the type-token ratio (Crookes, 1989; Ortega, 1999) while the rest ignored it (Foster and Skehan, 1999, 1996; Skehan and Foster, 1997), one exception being the most recent study of Foster (2000), who provided an analysis of lexical chunks. With respect to grammatical and fluency measures, no study has used double measures for each. To illustrate, for grammatical complexity, subordination has usually been used (e.g. Foster and Skehan’s solo and collaborative work). Crookes (1989), on the other hand, uses additional complexity measures such as ‘words per utterance’, ‘words per error-free T-unit’ as well as ‘subordinate clauses per T-unit and per utterance’, but does not use a fluency measure. The present research uses two measures for each of these language areas: syntactic complexity (i.e. subordination and words per C-unit), accuracy (i.e. error-free clauses and lexical choice errors), and fluency (i.e. dysfluency markers + non-target words, and pruned speech rate).

Second, the present study used a larger sample than recently undertaken planning studies – 51 dyads – the two closest ones being Ortega’s (1999) and Foster and Skehan’s (1996) studies, in which 32 and 31 dyads were used, respectively. Other influential studies (see Ortega, 1999 for a full summary) have used smaller sample sizes, e.g. Crookes (1989) with 40 subjects (20 + 20 assigned to -/+ planning conditions with two tasks); Skehan and Foster (1997) with 40 subjects (10 in each condition: -/+ planning and -/+ post-task); and Mehnert (1998) with 31 subjects divided between four groups by -/+ planning and two tasks (instruction and exposition).

Yet another indispensable factor is that of reliability of codings. Whereas such reliability has not been reported in several pertinent studies (e.g. Ellis, 1987; Foster and Skehan, 1996; Skehan and Foster, 1997), the present study records intercoder (also referred to as interrater) and intracoder reliability scores on the measures used.

---

11 -/+ planning’ corresponds to ‘without/with planning’ conditions.
12 Polio (1997) provides an extended discussion of the issue of reliability of codings.
Consequently, in this study, the data is more representative of the reality and its analysis is more sensitive to a wider range of factors in discourse, which enables more confident generalisations about the interactions within the intricate picture at hand.

5.7.8 Significant effects of task features on performance features

Now we will zoom in for a closer look at the general picture in the light of the significant effects of task features resulted from the analyses. The following figure shows the language areas impacted by task features:
Figure 5.1: Significant effects of task features on L2 performance features

**LEXIS**
- *Lexical correctness*
- *L1-based lexical strategy use*
- PLANNING

**GRAMMAR & FLUENCY**
- *Grammatical accuracy*
- *Complexity: words per C-unit*

**NARRATIVE**
- *Schematic vocabulary (lexical-to-grammatical ratio; lexical density)*
- PLANNING & TASK
- *Grammatical complexity*
- *Fluency*

**DESCRIPTIVE**
- *Denser procedural vocabulary, but in more limited range*
- *L2-based lexical strategy use*
- *Lexical avoidance strategy use*
- TASK TYPE
- *Fluency*

**NARRATIVE**
- *Variety of lexis: wider ranges of both grammatical (procedural) and lexical (schematic) words*
- *Syllabic ranges (monosyllabic, bisyllabic and polysyllabic word ranges)*
This complex picture shows at least two significant trends: one for task type to be associated with lexis, and another for planning to be linked with grammar and fluency. Evident from the significance levels, the task type seems to have a much stronger effect on lexical measures than planning time. On the other hand, grammatical and fluency measures appear to benefit significantly more from planning time.

As seen in the figure above, lexical features such as *procedural vocabulary*, *L2-based lexical strategy use*, *lexical avoidance strategy use*, *variety of lexis* (including lexical and grammatical word ranges), and *syllabic ranges* (i.e. monosyllabic, two-syllable and polysyllabic word ranges) are significantly impacted by task type only. Another lexical feature – *schematic vocabulary* – which includes lexical-to-grammatical ratio and lexical density, is strongly influenced by task type as well as planning time. The last two measures – lexical correctness (accuracy) and L1-based lexical strategy use – are significantly affected by planning time alone.

As to the grammatical and fluency measures, there are no such features influenced significantly and solely by task type. Grammatical complexity and fluency are affected by both task type and planning time, though planning results in a weaker significance level on subordination. Finally, grammatical accuracy, similar to lexical accuracy, is strongly influenced by planning time only.

Now I focus on several major connections between the kind of task and the particular lexical features and performance goals (i.e. grammatical complexity, accuracy, and fluency) it has a significant impact upon.

First, as hypothesised, the narrative is strongly associated with schematic (content) vocabulary, whereas the descriptive is connected to procedural vocabulary. This suggests that through task type manipulation different kinds of lexis can be induced. Each of these types of vocabulary serves a particular purpose. While schematic vocabulary is concerned with content, i.e. ideas, events, actions, etc., procedural vocabulary is instrumental in getting at the content. Conveying complex meanings is a
process that involves the use of schematic vocabulary facilitated by procedural vocabulary. Schematic vocabulary is manifested in greater lexical-to-grammatical ratio, lexical density, and lower L2-based lexical strategy use, whereas procedural vocabulary is apparent in lower scores on these lexical measures but higher on L2-based lexical strategy use.

Second, L2-based lexical strategies are fostered by the descriptive rather than the narrative task. These strategies play an important role in discourse as they help the language user to stay engaged with the L2 by exploring alternative ways of saying things, e.g. circumlocution, paraphrase, etc. Lexical avoidance strategy use is also associated with the descriptive task, indicating that a lexical item is avoided or abandoned if other resources fall short. Thus, viewed in relation to greater L2-based strategy use at the same time, lexical avoidance strategy use is not entirely negative because it is the natural part of involvement with language.

Third, the narrative is more powerful than the descriptive task in that it increases lexical variety and lexical complexity (measured through syllabic range). That is, narratives generate not only a greater variety of words as well as a wider range of lexical and grammatical words, but they also elicit words of increasing complexity (i.e. wider ranges of words from monosyllabic to polysyllabic).

Finally, task type impacts different language goals as well. For example, descriptives produce more fluent language whereas narratives increase grammatical complexity (planning is also in favour of these two performance goals). Descriptives appear to yield language of greater fluency measured as lower dysfluenecy and higher pruned speech rate. The complexity measure of subordination (i.e. clauses per C-unit), however, is increased significantly as a result of the narrative.

In sum, task type appears to be more closely related to lexis than planning. Our focused attention to the link between task type and lexis established the crucial role of discourse type, which is addressed below.
5.7.9 Discourse type and lexis

As discourse type – monologic vs. dialogic – has proved influential in lexical use, it is useful to outline its characteristics and the outcome. The following figure illustrates a comparison of the two discourse types:

Figure 5.2: Monologic vs. dialogic discourse and lexis

<table>
<thead>
<tr>
<th>Monologic discourse</th>
<th>Dialogic discourse</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Non-interactive</td>
<td>• Interactive</td>
</tr>
<tr>
<td>• Less consciousness of interpersonal factors (e.g. less awareness of face and social appropriacy) (despite presence of listener) ➔ more risk-taking</td>
<td>• More consciousness of interpersonal factors (e.g. more awareness of face and social appropriacy) ➔ less risk-taking</td>
</tr>
<tr>
<td>• Plans more likely to be pursued</td>
<td>• Plans more likely to be interrupted, and so be modified or abandoned</td>
</tr>
<tr>
<td>• Cognitively more demanding</td>
<td>• Cognitively less taxing</td>
</tr>
<tr>
<td>• Lexically heavier, richer (wider ranges of procedural and schematic vocabulary) and phonologically more complex</td>
<td>• Lexically less dense, less rich and phonologically less complex</td>
</tr>
</tbody>
</table>

Monologic discourse is non-interactive while dialogic discourse is interactive. That is, in the monologue there is no interaction despite the presence of a listener. In the dialogue, however, the interactants ask and answer questions, exchange information and negotiate for meaning. The fact that the speaker (i.e. narrator) does not interact with an interlocutor reduces the load of having to observe interpersonal factors such
as maintaining face and being socially appropriate. These factors are typical of dialogic discourse. The interactants are therefore more conscious of such considerations. Consequently, learners involved in dialogic speech can be less prepared to take risks with lexis than those involved in monologic speech.

Another difference between the two discourse types is that the monologue is an autonomous performance with no interruption whereas the dialogue is collaborative with interruptions. This difference can influence the participant’s plans. The speaker in the monologue is more likely to follow his/her plans about lexis as he/she proceeds at his/her own speed without getting interrupted, i.e. there is no external distraction to his/her attention. The interactants in dialogic discourse, however, are more likely to change or drop their plans since they are frequently interrupted, i.e. their attention is often distracted and they need to keep re-focusing it. While doing so, task demands are likely to take pre-eminence, leaving less attention available for language.

The two discourse types also differ in terms of cognitive load. The monologue is cognitively more demanding than the dialogue. The reason for this difference in cognitive load is that the monologue (i.e. story-telling task) involves the organisation and expression of more complex information than the dialogue. Thus, the resulting outcome of the monologue is lexically heavier (i.e. denser), richer and phonologically more complex than that of the dialogue.

5.7.10 Summing up

The results have shown that the general picture is more complex than recent research has suggested. Within this complexity, the results have revealed several interesting points concerning the effects of task features on lexis and grammar as well as fluency. They can be tentatively outlined as follows:

- Lexis is influenced more by task type than planning time, whereas grammar and fluency are affected more by planning than task type.
• Discourse type is more relevant than task type in accounting for the use of lexis.

• Discourse type has a strong effect on the type of vocabulary deployed (i.e. monologic → schematic; dialogic → procedural).

• There is a trade-off within lexis: between lexical correctness and variety.

• Phonological complexity and lexical richness are largely determined by discourse type while lexical accuracy is more reliant on planning.

• Lexical heaviness increases as a result of monologic discourse type as well as planning.

• L1-based strategy use is associated with planning whereas L2-based strategy use is related to dialogic discourse type.

• Lexical and grammatical accuracy are improved significantly more by planning rather than task type. In terms of lexical or grammatical accuracy, there is no significant task difference.

• Grammatical complexity (though subordination having weaker significance), grammatical accuracy and fluency improve with planning.

• Grammatical accuracy benefits more from planning while grammatical complexity and fluency are influenced by both task type and planning to a varying degree.

• Narratives produce more complex but less fluent performance while descriptives induce less complex but more fluent output.

Last but not least, the present study shows that generalisations reached by previous research need to be taken with caution as they may not necessarily represent the reality. The problem of lack of representativeness is due partly to methodological considerations (as discussed in this chapter), but more significantly to the disregard for the individual differences as a moderating variable in the analysis. Thus, what we need, but research has so far largely ignored, is an in-depth analysis at individual level with particular reference to lexis. The following chapter (Chapter Six) attempts to do just that.
CHAPTER SIX

THE LEARNER PERSPECTIVE

6.0 Introduction

In this chapter, I will turn to the protocols, whose aims and procedures were outlined in Chapter Four (Research Design). I will start by critiquing what I take to be prevailing methods – basically statistical – of measuring spoken discourse in ‘planning’ studies. I will query the reliability of crude measures based on overall means regardless of the individual perception. I will then analyse the protocol data of two cases that participated in the study in reference to the analysis of their oral performances. In doing so, I will draw parallels between the quantitative and the qualitative findings in an attempt to demonstrate the relevancy of the learner perspective for a better understanding of the complexities of discourse. I will specifically concentrate on the interactions between task features, learner’s perception, lexis and grammar. Finally, I will conclude with a synthesis that summarises some important insights the learner perspective offers to L2 pedagogy, with particular reference to task features and lexis.

6.1 Problems with statistics: averaging out the learner

The statistical analysis undertaken in this study has shown varying effects of task features such as planning time and task type on lexical and grammatical performances of the sample. Certain generalisations based on the statistical findings have been made. Although it is necessary to use statistics to be able to look (quantitatively) for general patterns across large groups performing under different conditions, I would argue that such an analysis essentially averages out the learner to make comparisons
possible. Thus, methods predicated solely on quantitative statistical data can conceal, rather than reveal, some important insights concerning L2 language performance.

Along these lines, Firth and Wagner (1997) criticise SLA research for its dominant focus on the cognitive perspective, almost to the exclusion of the social and contextual aspects of language; however, they do not seem to suggest any particular ways in which SLA research can account for such factors. They mainly argue and call for a 'reconceptualisation' of SLA research, which accommodates social and contextual factors with more sensitivity towards the language user.

In regard to studies that take the cognitive perspective, the learner ('participant' in Firth and Wagner's (1997) terms) is seen as operating more or less like a computer that processes information. To take the analogy further, unless the computer is an all-purpose limitless-capacity device, which unfortunately is not out yet, it would slow down (sometimes considerably), if not crash, when given a formidable task with many complex sub-processes, or two or more demanding tasks to perform at the same time. This deceleration in performance or annoying cataclysm would usually be blamed on the inadequate or lack of capacity (RAM – Random Access Memory) of the computer (other variables like a power-cut or a mechanical breakdown being constant). It could be said that the speed at which the computer operates is limited to its capacity, which is relative, of course, to the task demands at hand.

Like the computer, the learner's mind is believed to have a limited-capacity processor. To draw a parallel to the above example, the language user is likely to become less fluent in speech production if s/he is challenged by a complex, attention-taking task or two (or more) taxing tasks. Similar to the computer, in an L2 oral performance context, the learner may need to attend to message and form simultaneously, either of which is bound to give way eventually in the case of a shift in focus of attention (Foster, 2000). Alternatively, the learner may choose to keep up with the two tasks – attending both to message and form – at the expense of a decline in fluency. The 'slowing down' of the learner in speech, similar to that of the computer, can be
explained as a result of the learner’s lack of competence (parallel to ‘lack of capacity’ in the computer analogy).

Such explanations are commonplace in the SLA literature, that is, the L2 learner is described as ‘a defective communicator, limited by an underdeveloped communicative competence’ (Firth and Wagner, 1997:285). Since we are dealing with amazingly complex and intelligent bio-social creatures – human beings – whose behaviour (verbal language, in our case) is intricately related to the world around them, probably the computer-learner analogy has already become flawed. Nevertheless, a more convincing case can surely be made for the interpretation that a drop in fluency can be due to some contextual factors like task difficulty, task (un)familiarity, (un)availability of planning time, and so on. Moreover, the observed dysfluency can well be a consequence of the individual’s orientations to using lexis and conveying meaning, which can impact decisions on risk-taking or risk-avoidance.

It is the purpose of this chapter to look into protocols in an attempt to explain the interrelationships of lexis and grammar impacted by individual variation in risk-taking.

As behaviour (and specifically, language behaviour) is affected at multiple levels, it can be argued that SLA research that is based fundamentally on the cognitive perspective may benefit from the potentially rich data that research into the social dimension of language use can generate. As far as ‘planning’ studies in L2 are concerned, a particularly useful line of enquiry would be one which looks into the effects of individual differences on the use of planning time.

In the two cases studied (and depicted in this chapter), the quantitative statistics informed us, for example, about the general effects of planning as overall means of the group; however, they failed to help us to explicate neither how the planning time was utilised (if it was), nor what the foci of the learner were on at the planning stage. It may be that planning time is not necessarily (equally) beneficial to all individuals given time to plan. This kind of data is that which mere quantitative analysis may conceal. To date, studies investigating the effects of planning in a task-based approach
have not been concerned with individual differences, particularly reflected upon their perceptions of notions like task performance and planning time. The learner perception is perhaps less psychologically salient, and this may, in part, explain its disregard in ‘planning’ studies. I submit that looking into such data qualitatively is not an easy task and parameters to use in analysing oral performance in reference to quantitative data are not yet available; however, engaging in such enterprise has a potential of serving as a tool for better understanding the process of using planning time contextually (as perceived by the learner) and its contingent outcome in the performance data. More specifically, it could not only produce evidence of how learners prepare for the pressures of task at the planning stage, but also of how non-planners survive the task in absence of planning time as well as what their focus of attention was on before and during the task. It also seems worthwhile to look into individual variation in planning approaches across different task types (i.e. discourse types).

It is illuminating to look at the individual performances of two of my 102 subjects who performed very differently. I am interested to see the polar opposites, i.e. the performances of outliers. It should be noted that the outliers chosen are not the result of errors in recording or transcribing, or due to the subjects’ failure to understand instructions. The decision to investigate individual performances is in response to the criticism that statistics can mask the individual perspective (Foster, 1998). Because of the limitation of space, however, the focus is limited to performance on only one task for the two cases, thus there is a lack of basis for making claims regarding the effects of task features. Nevertheless, the analysis can inform us of individual approaches to using lexis and grammar and risk-taking, which statistics may fail to capture.

The following section looks into the two cases – Case1 and Case2 – who performed the same task (i.e. the narrative ‘Skiing Holiday’) under the same planning condition (i.e. with planning time), but rather differently.
6.2 Analysis of Case1

Case1, a male subject named Ismail\textsuperscript{13}, performed a narrative task (called 'Skiing Holiday') with planning time (i.e. +Nar\textsuperscript{14}). The following is a discussion of the general orientation of Case1 to lexis and meaning, his attitude towards risk-taking or risk-avoidance and its consequences, and interdependencies, particularly trade-offs concerning aspects of fluency, accuracy and complexity, as well as lexis, and on-line inter-reliance between lexis, grammar and fluency. Evidence from the semi-structured interview (see Appendix 6.1a for full transcript) will be drawn on as appropriate.

6.2.1 General orientation of Case1 to lexis and meaning

Generally speaking, Case1 viewed his task performance more in terms of lexis than grammar or content. His perceptions of these three areas, however, pose complex interrelationships in his constructing and conveying meaning.

In response to a question concerning the general factors affecting his performance, the learner singled out lexis as an element that influenced his performance adversely. He comments as follows:

\begin{quote}
I can't think of any. But I don't know the meaning of some words that I need to use. I think that affected me. Also ... [Such as] Hmm, the thing you use to stand on foot when your leg is broken [=crutch].
\end{quote}

As well as lexical choice, the learner sees grammar as problematic, but feels confident about the organisation of the content of the story although he finds the task, i.e. narrative, challenging:

\textsuperscript{13} Participants' first names are used with their consent.
\textsuperscript{14} '+Nar' or '+Narrative' refers to the narrative task performed with planning time.
Telling a story in English is not easy for me, I kept on saying ‘his’ for ‘Sally’ and I don’t understand why? Also I used some wrong prepositions. But I have described the situation well.

In terms of content, the learner thinks that he successfully incorporated into the sequence of events the clues necessary for the listener to follow the story. However, in reply to another prompt by the researcher, he indicated a point in the narrative where he thought he could have achieved better coherence:

Also, I said, ‘someone came and hit her from the back and talked and decided to go to the evening party’. I forgot to say a sentence between those two, like ‘they enjoyed each other and then they decided to go to the evening party’.

In brief, Casel found the task demands high as he described it as ‘not easy’, yet he set out to meet those demands, and he felt he had generally done so. Thus, in constructing the story, lexis and meaning seemed to have received more attention than grammar as is also evident in a lower percentage of lexical choice errors and in close mean scores of fluency and complexity to those of +Narration group. I will now turn to the quantitative results for such evidence.

The figure below illustrates a comparison of Casel (also referred to as ‘Ismail (+Nar)’), who performed a narrative task with planning time, to the overall means for Narrative with and without planning time, i.e., +Narrative and –Narrative\(^{15}\), on the bases of several measures.

\(^{15}\) ‘-Nar’ or ‘-Narrative’ refers to the narrative task performed without planning time.
On the fluency measure, Case 1 used slightly less fluent language than that of the overall mean of the ‘+Narrative’ group; however, the language he used was not any less fluent than that of the overall mean for the ‘-Narrative’ group. Basically, even with planning time he was not fluent compared to his peers. In a parallel fashion, the learner did not mention fluency as a concern regarding his oral performance. The implication is that he focused primarily on lexis, and secondarily on grammar, depending on free resources available.

This parallel suggests that he was more concerned about producing accurate language along with a better choice of lexis than producing fluent language. Unlike previous research (e.g. Foster and Skehan, 1996), for this particular case, planning time did not lead to fluent language (relative to the whole group) since his attention was seemingly
directed towards the organisation and production of lexical and grammatical aspects of the language as well as the content.

This conclusion is supported by his scores for accuracy and a decrease in the measure of lexical choice errors (relative to the group), whereas his scores for complexity are almost identical to the group mean. As shown in the figure above, the individual learner under scrutiny produced more accurate language than the +Narrative group, and scored even better compared to the −Narrative group. Similarly, the learner made fewer lexical choice errors in comparison to the +Narrative group. Compared to the −Narrative group, the difference is bigger in favour of the individual case. However, complexity, which is concerned purely with grammar (i.e. clauses per C-unit) was not higher, but rather lower than that of the +Narrative group. The difference between the complexity score for the individual case and for the −Narrative group is negligible.

Case1’s use of planning time also implicates his orientation to lexis. For instance, in a reply to the question whether he used the planning time and how, the learner explains that it was lexis that he was concerned about in the pre-task planning stage, and that he concentrated on ‘key words’:

Yes, not all the time but I think I used it enough because I looked at pictures and tried to find special, how can I say, objects. For example, I said ‘she was climbing the mountain on a sunny day’ because she was climbing and there was a sun shining behind the mountains and heavy snow also. I mean I just think the words, the key words for the pictures.

In response to another related question on whether the pre-task planning was useful or not, the learner reports that it was helpful. Interestingly, here again it is lexis, not grammar, that the learner concentrates on in relation to planning time:

Yes, it helped because if it was an unplanned task then I would get more excited [=nervous] and I would have to do two things together. One, to think about the key words, and the second to remember them in English. Yes, I think I’d say ‘snow’ here if it was an unplanned task but because it was planned I said ‘heavy snow’.
6.2.2 Risk-taking (or its avoidance)

The argument I put forward in this section is based on the assumption that individual learners may have different approaches to risk-taking, which can impact their language use. I take risk-taking to refer to an individual approach to language use where the language user attempts an utterance that s/he perceives to be difficult or challenging, accepting the possibility of appearing linguistically or contextually inappropriate. Support for Casel's risk-taking approach will be sought from the qualitative (protocols and hand-written notes) and quantitative analyses of data. The notion of risk-taking (or its avoidance) will be discussed in reference to lexis and planning time, and pauses (as hesitation phenomenon).

6.2.2.1 Risk-taking with respect to lexis and planning time

Casel can be described as a non-risk-taker in his approach to using lexis. It will be argued in this section that his individual approach may have reduced his chances of pushing his lexical resources. This reductive view of lexis is seen to be triggered by the provision of planning time. Evidence will be provided from the protocol held with the learner, quantitative results and the learner's hand-written planning notes.

First, I concentrate on some evidence in support of the learner's risk-avoiding approach. The learner expresses some kind of frustration arising from his misusing of lexis. The following quotation clearly indicates that the learner is not comfortable about making lexical mistakes. He explains:

I thought I'm taking English lessons for like seven years and I had to know what to use exactly and where to use them, but then I couldn't remember those phrases and those were the phrases that I have seen before. For example, 'realise' vs. 'recognise', and when I couldn't remember them I felt bad ... Yes, while I was listening to the things I spoke, I felt bad when I mentioned a wrong word or something like that.
Though not as clearly put as lexical errors, it is also evident in the learner’s quotation below that he suffered discomfort about the grammatical aspect of the language he used, particularly ‘tenses’:

Such as ‘his’ or ‘x’ and some time mistakes of the words.

As seen, the learner sounds reluctant to attempt difficult words (as perceived by the learner), and would rather ‘play it safe’, so to speak. Basically, the reason he suggests is that the use of difficult words involves more risk-taking, and thus are more likely to appear inappropriate or inaccurate. The following two quotations are indicative of the learner’s precautionary attitude towards risk-taking:

I have tried not to use any words that are difficult for me because I can’t be sure if I use them correctly or not, so I used, I tried to use simple words and all the words that I definitely know their meaning and how can I use them in sentences.

No, I tried not to use any words if I saw any possibilities to make a mistake. ... [I took] almost no risks.

Case1 seemed to be conservative in terms of accuracy. The provision of planning time for this particular case may have given the learner the chance to weigh up the potential risk of lexis, whereby the risky ones were eliminated or saved as the last resort, and safer or ‘simpler’ (in the learner’s terms) ones are chosen.

One example that may be taken to be a risk-taking word, though, is ‘decide’, which he thought was inappropriate:

... I said ‘she decided she loved her’. I meant to say ‘she recognised that she loved her’ because you don’t decide whether you love somebody or not; you just realise it.

He further elaborated that he could not come up with the word ‘realise’, thus he produced ‘decide’ with the expectation “... to give the meaning of ‘realise’.”
Case 1’s noticeable tendency towards risk-avoiding further appears in the protocol. In answer to the question whether he avoided using certain lexis since he thought they were risky to use, the learner provided the following example:

Yes, the holiday that you go after marriage is called ‘honeymoon’ I think but I wasn’t sure of that so I just said ‘holiday’.

Here is another instance where the learner reports that he avoided certain lexis since he was afraid of making a mistake or causing misunderstanding:

I would say a phrase, it’s not a word … I said ‘the clouds appeared’. I wanted to say ‘the sky went darker’ or something like that but I thought that can be wrong because I wasn’t sure if ‘the sky went darker’ or ‘became darker’ and I used ‘the clouds appeared’.

I now turn to two further areas of investigation for some evidence of the learner’s risk-avoidance: lexical complexity (lexical richness and syllabic range), and lexical strategy use.

First, Case 1’s lexical-risk-avoiding tendency re-established itself as is evident in the quantitative analysis of the data for lexical richness on the bases of a number of lexical measures: type-token ratio, lexical word range, grammatical word range, lexical-to-grammatical ratio, and lexical density. Case 1’s performance was compared to the overall means for +Narrative and –Narrative groups. The results are illustrated in the figure below:

175
The type-token ratio for Case1 was slightly lower than the means for the +Narrative and –Narrative groups, the difference being greater in reference to the –Narrative group. As this measure is concerned with the variety of lexis, it can be concluded that Case1 did not use as wide a variety of lexis as used in the +Narrative group. More interestingly, the ratio for Case1, despite the provision of planning time, was even lower than that of the –Narrative. The fact that the planning time was not associated with a comparatively wider range of lexis can be attributed to the learner’s concentration on making the right choices about lexical use, rather than on using a wider range of vocabulary. This finding is in line with the learner’s reluctance to use words involving risk-taking. That is, the learner would not experiment with a variety of words but rather stick to a smaller, but relatively ‘safer’, number of types.
On the lexical-to-grammatical ratio, the score for Case1 was lower than that for +Narrative group, but almost equal to that for -Narrative group. This indicates that Case1 might not have benefited as much from planning as those in +Narrative mean group did. Concerning this particular case, the result is contrary to the expectation that planned narratives would produce a higher ratio, that is, a larger amount of schematic vocabulary than procedural vocabulary.

As for lexical density, it follows a similar trend that corresponds to the above result, i.e. planning not associated with a relatively greater number of lexical words. Interestingly, lexical word range for Case1 was slightly narrower than that of the +Narrative group as well as that of the -Narrative group, where the difference was relatively greater. Again, this result was opposite to the hypothesis that anticipated a wider range of lexical words for the planned narratives.

To summarise, Case1, who performed a planned narrative, used fewer types of words, not as large an amount of schematic vocabulary (i.e. lexical density) as expected, and even a narrower range of lexical words. It can be concluded that it is Case1's preference for risk-avoidance motivated by the availability of planning time that prepared the ground for a reduction in lexical richness (i.e. variety, density, range). A further implication is that there is a trade-off between lexical richness and lexical choice, which is discussed later in this chapter.

Another aspect of lexical complexity that casts some light on risk-taking (or its avoidance) is syllabic range. Phonological complexity is also hypothesised to increase as the number of syllables in a word increases. This measure is taken to serve just as one of the indicators of lexical complexity, in addition to those used to measure lexical richness. It should also be noted that the concept of lexical complexity is too complex to restrict to only measures as such. This is the very reason why an investigation of the learner perception is undertaken.
The following figure presents a comparison between Case1’s syllabic ranges and that of +Narrative and -Narrative groups:

Figure 6.3: Case1 (+Nar) compared to Overall Means for +Nar & -Nar: syllabic range

Case1 appeared to use slightly fewer monosyllabic word types than the +Narrative group. This difference is even greater in reference to the –Narrative group. The result is in line with the hypothesis that planning is associated with an increase in lexical complexity (i.e. phonological complexity). On the two-syllable word range, however, there were no differences compared to +Narrative, but the range was narrower in reference to -Narrative group means. The most striking finding, however, is that the polysyllabic word range for Case1 is much narrower than that of +Narrative and –Narrative groups. This finding implies that the learner might have operated within the ‘safer’ limits of lexical use, attempting phonologically more complex lexis far less often. Considering the fact that the learner had planning time, the result is intriguing.
That is, despite the provision of planning time, the learner focused primarily on correctness, rather than richness or complexity of lexis. Again, this finding ties in with the learner’s risk-avoiding approach. That is, planning time seems to have prompted more risk-avoidance than risk-taking.

The second area of investigation that proved revealing in relation to Case1’s risk-taking/avoidance approach is concerned with lexical strategy use. The quantitative results representing L1-based, L2-based and lexical avoidance strategies are shown in the figure below:

**Figure 6.4: Case1 (+Nar) compared to Overall Means for +Nar & -Nar: lexical strategy use**

As expected, there was relatively less use of an L1-based strategy in comparison to -Narrative overall mean, but not different from the +Narrative overall mean. As far as
L2-based strategy use is concerned, Case1 made less use of L2-based strategy in reference to –Narrative group. Compared to +Narrative group, Case1 scored even lower. In other words, Case1 made less use of L2-based strategies in comparison to the mean for +Narrative on that specific measure. This suggests that Case1 used planning time more effectively in planning and using lexis. Thus, he did not need to apply L2-based strategies as often as the mean group of +Narrative. Additionally, the following instances of lexical replacement as an L2-based strategy are recorded in the protocol:

'holiday' for 'honeymoon';
'decided' for 'realised';
'she fell and broke her leg' for 'she fell bad'.

Regarding lexical avoidance strategy, there were no instances recorded (i.e. 0.00%). Having reported that, the learner’s retrospection revealed one or two examples of avoidance of risky words, which the quantitative analysis failed to capture. These examples have been presented in the discussion of the learner’s risk-avoidance.

In summary, the learner made less use of L1 and L2-based lexical strategy, and made no use (according to quantitative analysis results) or little use (according to qualitative analysis results) of lexical avoidance strategy. The overall implication here is that Case1, who has been described as a non-risk-taker based on the evidence provided so far, may have benefited considerably from planning time in terms of making plans about lexis and implementing them. The recurring issue here is that of Case1’s approach to risk-taking. He appeared conservatively committed to his pre-planned words, and generally avoided using risk-taking ones.

6.2.2.2 Risk-taking with respect to pauses

It is in order here to look at Case1’s hand-written planning notes (taken during planning time) in comparison to his actual oral performance and with respect to his
risk-taking/avoidance approach (and his commitment to the pre-planned lexis) evidenced by pauses.

Before examining the evidence in the planning notes, I will briefly provide some background to how pauses have been used. Referred to as temporal variables (Grosjean, 1980; Wiese, 1980) in L2 production, pauses are viewed as a component of fluency. Concerning planning in spontaneous speech production in L1 studies, ‘pausal phenomena have been interpreted as hesitation markers evidencing macroplanning and microplanning processes’ (Goldman-Eisler, 1964 cited in Ortega, 1995:5). In the L2 literature, some correspondences between hesitation markers and planning have been suggested (Dechert and Raupach (1980); Dechert, Mohle and Raupach, 1984).

Another study which concentrated on repetitions and corrections (hesitation phenomena) in speech, but not particularly on pauses, for example, concluded that they were caused by lexical on-line planning (Fathman, 1980). Riggenbach’s (1991) study of L2 fluency in dialogic and monologic speech, which is of relevance to the present study in terms of discourse types, reports that hesitation phenomena are significant in identifying the level of fluency, but more importantly, that learners posed idiosyncratic fluency profiles. More recent studies that share similar scope with the present research into the effects of pre-planning on lexis in oral performance have used pauses as a component of fluency; however, they were viewed only in quantitative terms, that is, in number of pauses (Foster, 2000; Foster and Skehan, 1999; Skehan and Foster, 1997; Foster and Skehan, 1996). Unlike previous research, the present study is concerned with the qualitative (as well as quantitative) nature of pauses, particularly with their potential function as signs of risk-taking (or its avoidance).

Now we begin to analyse and interpret Case1’s notes. He did not produce many notes during the planning time although he was quite elaborate in the protocol session. Thus, having few notes does not necessarily mean that planning time was of little use because writing down things is an individual style (visual learners, for instance, would prefer to see words written down). Much of the planning in this case must have been
carried out in the mind abstractly. Table 6.1 below shows the matches and mismatches between Case1’s notes and his actual oral performance:

**Hand-written notes of Case1:**

[Handwritten notes image]

---

182
Table 6.1: Correspondence of pre-planning notes to oral performance: Case 1

<table>
<thead>
<tr>
<th>Used exactly as planned</th>
<th>(Slightly) modified</th>
<th>Unused</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-Sally decided to go on a mountain holiday. ... She was</td>
<td>No records on Case1’s scratch paper</td>
<td>1-And she took the things she will need like skis and left the home.</td>
</tr>
<tr>
<td>2-was taken off</td>
<td>No records on Case1’s scratch paper</td>
<td>2-enjoyed each other</td>
</tr>
<tr>
<td>3-she loved her</td>
<td>No records on Case1’s scratch paper</td>
<td>No further records</td>
</tr>
<tr>
<td></td>
<td>No records on Case1’s scratch paper</td>
<td>No further records</td>
</tr>
<tr>
<td></td>
<td>No records on Case1’s scratch paper</td>
<td>No further records</td>
</tr>
<tr>
<td>Risky words</td>
<td>Taken off; recognised (that she loved her [him])</td>
<td></td>
</tr>
<tr>
<td>Avoided words</td>
<td>No records on Case1’s scratch paper (see Interview)</td>
<td></td>
</tr>
<tr>
<td>Replaced words</td>
<td>No records on Case1’s scratch paper (see Interview)</td>
<td></td>
</tr>
</tbody>
</table>

Dyad 1/ Roles: Hale (list) ⇐ Ismail (speak)

Gender: F-M

Task: +Narrative [Skiing]

I: Sally was-Sally decided to go on a mountain holiday and –er *(2.8) at first everything was okay. She was climbing the mountain with his car on a sunny day, and (1.7) but the things started to happen-some bad things started to happen. At first, suddenly the clouds appeared and a heavy snow began and she was trying to drive the car but it was getting harder and harder and then she decided to stop near a hotel –er (2.0) and parked his car somewhere near it and then she decided to ski but terrible things –er (3.4) were happening; and she fell off and broken-broke her leg while she was skiing and after and he went to see the doctor and (2.5) the doctor advised her not to ski anymore and gave him-gave her something to help her stay on foot or stand, but suddenly –er while she was returning to hotel, she saw or she understood she parked her car at a wrong place and her car &we(3.3)-was being taken off and while she was standing there, someone came and hit her from the back; –er (1.6) it was a boy and-he was a boy and he was also skiing. At first, she was very angry but then –er (1.5) they talked and decided to go to the evening party together. –Er, (1.4) they danced there and had a great time, and Sally decided that he-she loved him and after –er (2.6) several months, they spent that time together, and they decided to get married and after they get married-they they got married, they decided to spend their –er (1.5) holiday at Hawaii (3.5) and that’s all, (0.8) and they (2.4) was going and to Hawaii on a sunny day, I hope that or terrible things like that happened before, won’t happen again.

Articulation time: 220 seconds

[*](2.8) indicates pause in seconds]
Case1 attempted a full sentence (i.e. ‘Sally decided to go on a mountain holiday’) in his notes, which served as the beginning of the narrative while he did not use the utterance that followed at all (i.e. ‘And she took the things she will need like skis and left the home’). The reason why he made such a choice is not clear; however, the fact that he decided to drop the latter utterance (or a reformulation of it) implies either a change in his plans that took place on task, or a problem with remembering. The pause of 2.8 seconds that followed seems more likely to be in support of the latter:

... (2.8) at first everything was okay. She was climbing the mountain with his car ...

Another utterance Case1 did not use (i.e. ‘enjoyed each other,’ which did not appear in the planning notes) was explained by him in the protocol as a result of forgetting (see Appendix 6.1b). These examples indicate his commitment to pre-planned lexis. He obviously made an effort to remember the pre-planned words and use them. The posed trend here is in accordance with his risk-taking approach.

Risk-taking (or its avoidance) seems to be implicated by pauses. Of the words Case1 noted during the critical listening to his oral performance, two were perceived as risky(*):

- was taken off
- enjoyed each other
- she loved her
- *recognised (Case1 used ‘decided’ instead)

The ‘pause’ is an indication of an attempt to use a difficult or risky word. The utterance ‘was taken off’ is marked by a relatively long pause of 3.3 seconds:

... (3.3)-was being taken off and while she was standing there, someone ...

In summary, the analysis of Case1’s hand-written notes have two implications. First, although Case1 did not produce lengthy notes on his scratch paper during planning time, he reflected on how he used planning time at some depth in the protocol session.
That goes to show that planning is a rather mental process whose realisations on paper appear differently (if it does at all) since it is essentially individual. Some learners attempt detailed notes while others do not. Yet, it would be worthwhile to look into any notes provided by the learner in relation to his/her oral performance. Second, the occurrence of pauses can be indicative of risk-taking/avoidance. Generally, the longer the pause, the more salient. It may mark risk-taking on-line or as a result of a failing effort to search for or remember the pre-planned lexis to deploy. The latter, however, implies potential risk-avoidance as well when a pre-planned word is realised.

The pause, however, seemed to be a more salient indicator of risk-taking in the analysis of Case2’s notes, where it is extended and explicated through further examples.

6.2.2.3 Lexical stretching

Lexical stretching, a parallel to grammatical or interlanguage stretching, is marked by the extent to which the language user pushes his lexical resources to mobilise his/her lexicon to create opportunities for noticing, which triggers lexical change and development. It is hypothesised that lexical stretching correlates positively with risk-taking. In other words, lexical stretching is more likely to occur as the language user attempts more of the words s/he perceives as difficult and/or risk-taking, that is, words that usually constitute the unproceduralised (or yet to-be-proceduralised) part of the learner's lexicon. A range of factors has a significant role in lexical stretching:

- the language user’s perception of lexical difficulty
- the language user’s risk-taking/avoidance approach
- the (un)availability of planning time
- parallels between pauses in the language user’s oral performance and his/her retrospection
- the extent of lexical strategy use (i.e. L1-based, L2-based, avoidance strategies)
- the level of lexical complexity (i.e. lexical richness, syllabic range)
• the level of lexical accuracy (correctness) in relation to grammatical measures (accuracy, complexity) as well as fluency
• discourse type (or task type)

So, did lexical stretching take place in the performance of Case1? Although this is a difficult question to tackle, looking at various aspects of the learner's lexical performance can provide us with significant insights.

As far as grammatical measures are concerned, only the degree of accuracy, which includes lexical errors, seemed relatively higher. Case1’s relatively higher accuracy level can be ascribed to his attention channelled to lexis. With respect to complexity, there was comparatively no difference. This result, which is concerned with grammatical complexity, corresponds to Skehan’s (1998:5) view that associates complexity with ‘a willingness to take risks, to try out new forms even though they may not be completely correct’. Thus, one could interpret that Case1’s conservatism in risk-taking can, to some extent, account for this outcome. Parallel to complexity, there was no relative increase in fluency either. A possible explanation for this is that, again, lexis took up more of the attentional resources available, leaving less space for fluency to thrive, that is, allowing less room for the use of ‘memorised and integrated language elements’ (Skehan, 1998). A relatively clearer benefit, though, appeared to be a low percentage of lexical choice errors. It is likely that such a result was induced by Case1’s focus on lexis, coupled with the availability of planning time.

Given Case1’s focus on lexis, some aspects of lexis may have benefited more than others. On a set of lexical complexity measures (i.e. type-token ratio, lexical word range, grammatical word range, lexical-to-grammatical ratio, and lexical density), lexical correctness seems to have outweighed lexical richness. Moreover, in another measure of lexical complexity – the range of two-syllable and polysyllabic words – there was a relative decrease at the cost of lexical correctness.

Finally, the learner’s lexical strategy use shows that neither L1-based nor L2-based lexical strategies were utilised at a level where he tried out alternative ways of
achieving his communicative goals. Indeed, such attempts were rarer in reference to the mean for +Narrative group.

In light of the summary of the related findings, it could be concluded that, despite the availability of planning time, the learner’s approach to lexis was rather cautionary, non-risk-taking and non-experimental. It was one in which correctness was prioritised over richness and complexity of lexis, as well as grammatical complexity. Given these circumstances, the learner appeared less likely to operate ‘on the outer limits’ of his lexis, and thus he seemed to have reduced his chances of stretching his lexical repertoire.

6.2.3 Interdependencies

Generally speaking, ‘pre-task planning’ research has used three main performance features in analysing learner speech production: fluency, accuracy, and complexity. Interdependencies, which refer to the improvement in one aspect at the cost of an improvement in another or others, have been confined to the interaction between these three aspects of language performance. I argue, therefore, here that the interdependencies suggested are limited in scope, and that results should be approached tentatively. I offer two possible justifications for this argument.

First, the differential outcomes in these measures are explained through decisions concerning the allocation of attentional resources in relation to task demands (Skehan, 1998), with no account for what processes the language user engages in when making these decisions. Regarding the sequencing of tasks to achieve a balanced development of these performance features (fluency, accuracy, complexity), Skehan (1998:131) argues that tasks, which ‘are focused in their aims between fluency, accuracy, and complexity’ are selected, and that to maximise focus on form ‘... attentional conditions need to be engineered’ to make sure that attentional demands arising from the task are ‘of appropriate demand and level so as to ensure that simply transacting tasks does not consume all attentional resources’. It seems that the task’s assumed
power overrides other individual factors that may impact performance. Thus, another limitation (inherently there) to the ‘attentionally-manipulated task’ view is that it does not take into account individual differences. Furthermore, so far only Ortega (1999) has reported data from retrospective interviews held with subjects on the completion of tasks. She also criticises the Foster and Skehan (1996) study on the grounds that ‘... without documentation of learners’ mental state and processes during the planning time, it is impossible to ascertain whether the nature of the planning that took place was in actuality different in the two experimental conditions’ and claimed that ‘any claims about planning type should be taken cautiously’ (p. 113). Foster and Skehan’s study that Ortega refers to compares the effects of different operationalisations of planning, namely, ‘detailed planning’ (with suggestions as to how to plan the language and content), and ‘undetailed planning’ (without any suggestions on how to plan). Similar concerns have indeed been raised. For instance, Skehan (1998:118) writes:

... there is considerable scope for future research to find out more about the effects of such participant factors as age, gender, ethnic background, personality, and so on, on the nature of interaction in task and group work.

More specifically, Foster (1998) draws our attention to individual variation after finding the results to show no clear effect for task type or grouping in terms of negotiated interaction, though there were advantages of the dyad (rather than group) setting coupled with two-way (rather than one-way) tasks. An interesting observation reported is that some students chose not to talk at all, let alone engage in modified interaction. In that study, Foster performed an analysis on an individual basis, and presented and discussed the raw scores, avoiding the usual statistics. Here is Foster’s (1998:8) justification for the method:

Because complex statistical computations obscure what is happening at an individual level [my emphasis], and because the purpose of the investigation was not to test a hypothesis but to observe individual students’ classroom performance, the data has been left as simple totals and percentages.
One of the main conclusions Foster (1998:21) draws from the findings is that 'individual learners may behave very differently during group tasks and so group statistics are an unsatisfactory basis for research conclusions.' Indeed, individuals may choose to behave differently regardless of manipulations like task type, grouping, or injected focus (form/meaning). The contrasting approaches of Case1 (risk-avoider) and Case2 (risk-taker) are clear examples.

The second justification I offer for my argument concerns the focus of the measures used in pre-task planning studies. It should be noted that the measures used have been predominantly grammatical, and lexis has been seen as part of grammar. Lexis not being at the centre, Crookes (1989) measured lexical variety in terms of the type-token ratio; Ortega (1995) used several lexical measures; Ortega (1999) calculated only the type-token ratio; and most recently, Foster's (2000) study included an investigation of lexical chunks. Generally, the hypotheses used in pre-task planning studies are concerned with form, and what they imply by 'form' is, most of the time, syntax or grammar.

The present study, with its focus on lexis with respect to individual variation, claims that interdependencies (addressed as trade-offs by Skehan) are more complex than previous research has shown them to be.

6.2.3.1 Trade-offs

Trade-off effects have been reported between the competing goals of performance, such as fluency, accuracy, and complexity (Foster and Skehan, 1996; Skehan and Foster, 1997; Skehan, 1998). That is, one receives an increase at the expense of others. Planning time was found to increase fluency and complexity, but the results for accuracy were rather mixed, the less detailed planners producing the most accurate language (Foster and Skehan, 1996). The same study reports a trade-off between complexity and accuracy. It was suggested that an improvement in one was at the expense of the other. Of the three performance goals, fluency is seen as memory-
based and lexically-oriented; accuracy as correctness-oriented; and complexity as having a risk-taking orientation (Skehan, 1998). We have seen that Case 1 chose to focus on lexis and its correctness. If this is indeed the case, one can expect that he will use more of lexicalised language; as a result, he will have a relatively higher score for fluency. The findings, however, show that this assumption did not receive any support.

The findings suggested that there was a trade-off between lexical richness and lexical correctness. Even with planning time there was no difference in the learner’s output (relative to the group mean) in terms of variety, density or range of lexis. Together with lexical richness, polysyllabic word range was also reduced. Thus, the learner chose to attend more to correctness of lexis at the expense of its richness or complexity (lexical richness and polysyllabic word range). This again links to the learner’s attitude towards risk-taking evidenced by the retrospective interview.

In summary, I have argued that trade-off effects (in Skehan’s terms) delineated here seem to be more complex than they have been reported to be. I claim, in the light of the findings, that the trade-offs presented in this study are more subtle as they can be traced back to the learner’s retrospection, which informs us of his/her individual choices made and the processes engaged in.

6.2.3.2 On-line interdependencies

There is some striking evidence in the protocol analysis accounting for the interdependence between lexis and grammar. The following suggests some evidence as to how the learner allocates his attentional resources during on-line processing. Case 1 makes a set of decisions concerning the use of the best words possible; meanwhile, grammar receives relatively less attention. He seemed to prioritise lexis over grammar. In other words, when the learner experiences problems with lexis, grammar seems to give way, which results in what the learner describes as ‘panic for not doing the sentence ... in a short time or in the correct form’. Clearly, this suggests
that there is an on-line interdependence between lexis and grammar: the more attention lexis takes up, the less complex grammar will be. The following is a case in point:

... also think that when I can't remember a word it also affects my structure of the sentence I want to use because I spent my time thinking what can I say for this or what was that word I can't remember. It also affects the structure and I panic for not doing the sentence, how can I say, in a short time or in the correct form.

The learner's risk-avoidance approach (discussed above) offers further support of his focus on lexis and the outcome: planning did not seem to 'push' the learner to take risks.

It is also evident in Case1’s quotation above that forgetting a word leads to syntactic reformulation, and hence less fluency (compared to the overall mean for the +Narrative group). On-line interdependencies also appear to be intricately related to pre-planning and the individual choices of focus on lexis and grammar.

6.3 Analysis of Case2

Case2, also a male subject, called Baris, did the same narrative task (called ‘Skiing’) under the same condition, i.e. with planning time. In this part, I will discuss the issues raised under the same conceptual headings with respect to Case2, in comparison to Case1. I will attempt to draw on evidence from the semi-structured interview (see Appendix 6.2a for full transcript) and the quantitative analysis where suitable:

6.3.1 General orientation of Case2 to lexis and meaning

Baris (also referred to as Case2) generally viewed his performance in terms of content and lexis. He was not particularly pleased with his performance and he basically put it down to problems with lexis as is evident below:
R: And your performance?
B: Not very well. It's the first.
R: What was wrong?
B: In the story?
R: Uhuh.
B: I don't know. I couldn't use the exact, right, good words.
R: Good words.
B: Complete words.

Moreover, Case2 re-emphasised the fact that he had difficulty using lexis, which, he thought, was due to his limited stock of vocabulary. The following clearly illustrates the point:

R: ... And what other general factors affected your performance?
B: General ... [pause]
R: [question is repeated] What other general factors affected your performance?
B: My vocabulary capacity.
R: Negatively or positively?
B: I think a bit negatively.
R: Alright. Any other factors?
B: Any other ... [pause] No.

It would be useful now to look at the possible effects of Case2's orientation to lexis and meaning on such performance goals as fluency, accuracy, complexity, as well as lexical choice errors.

The following figure illustrates the quantitative findings for 'Baris (+Nar)' (also referred to as 'Case2') in comparison to the overall means for +Nar (Narrative with planning time) and -Nar (Narrative without planning time). Case2 performed a Narrative task with planning time.
According to the results, greater fluency was seen in the oral performance of Case 2 in comparison to the overall mean for the ‘-Narrative’ group; however, he produced slightly less fluent language than that of the ‘+Narrative’ group. This finding contrasts that of Case 1, as he did not score as high on the same measure.

One possible reason to account for this difference in fluency may be that planning time had a positive effect on fluency, though it may not have been to the entire satisfaction of the learner. The following presents some evidence:
The above extract suggests that lexical problems triggered fluency problems. This links directly to the causes of pauses that appear in Case2’s performance. Problems with lexis, which have to do basically with lexical choice, caused him to seek alternative ways of expressing certain meanings, resulting in pauses. These pauses, however, did not hinder the learner’s fluency. Another reason to account for relatively higher fluency score could be the learner’s orientation to content. He was concerned to deliver the story successfully.

In terms of complexity, there was relatively no difference, however. A possible explanation is that planning time was not associated with a comparatively greater complexity. The complexity score for Case2 is lower than that of the +Narrative group, yet not different from that of the −Narrative. Grammar, which the learner did not talk about as a problem area as he did about lexis, did not display observable changes. Yet another explanation could be that the learner’s orientation to content and lexis contributed to this consequence. Running parallel to the complexity results, accuracy may not have benefited from planning time either. For accuracy, I would offer the same explanation: the learner’s orientation to content and lexis. He was more concerned about transacting the task reasonably well, drawing on a variety of lexis. In terms of lexical choice errors, Case2 made relatively more errors than the ‘−Narrative’ and ‘+Narrative’ groups. The relatively higher percentage of lexical choice errors seemed to be due to the learner’s orientation to content and lexis, or his difficulty with lexis and his risk-taking approach to lexis. The latter will be discussed in some detail in the later section.
To recap, there were relatively more favourable changes in fluency, but not in complexity, accuracy, or lexical choice. Most importantly, the percentage of lexical choice errors was relatively higher. A possible explanation suggested was that the learner was content-and-lexis-oriented, not grammar-oriented. This orientation, though, did not necessarily lead to relatively greater lexical accuracy. It appeared that Case2 made a rather instrumental use of lexis in delivering the narration.

6.3.2 Risk-taking (or its avoidance)

As discussed in the same section for Case1, it is claimed that language users differ in their approaches to risk-taking. Specifically, I claim, in this section, that Case2 contrasts Case1 in his risk-taking approach. Support for this claim will be sought by investigating different sources of data: the protocols, pre-planning learner notes, and quantitative results.

6.3.2.1 Risk-taking with respect to lexis and planning time

As opposed to Ismail (Case1), Baris (Case2) appeared to be more willing to take risks with lexis. More precisely, Case2 can be described as a risk-taker, in contrast to Case1, who was a risk-avoider. In addition to attempting difficult words or phrases (as perceived by the learner) such as ‘She had an accident’, and ‘bump into’, he used some lexis despite the risk of making a mistake. Risk-taking is evident in the extract taken from the learner’s retrospection:

R: Uhuh, ‘bump into’... OK, did you use any words/phrases despite the risk of making a mistake?
B: Yes, I used ‘at first glance’. I don’t know, is it really right?
R: So, you were not sure but you still used it?
B: Yes.
R: OK, risky. Any other risks with words/phrases?
B: ‘Bump into’ was in that case another one.
R: So you were not sure about ‘bump into’ either?
B: Yes, I’m sure but I-I wasn’t sure if I could use it there.
R: OK, whether it would be appropriate or not. OK, did you...
The learner’s critical listening to his recorded performance revealed further evidence of lexical risk-taking:

R: Now I’ll have you listen to your story again. Please take notes this time under the topics we talked about [the subject is reminded of the general categories] [After listening] Now have you got more examples of risky words?
B: Yes.
R: Such as?
B: Just ‘pack the packages’. I don’t know is it right or wrong.
R: So you felt they could be wrong, these words.
B: Yes.
R: OK, so ‘pack packages’. Also ...
B: Mhm, no more.
R: No more? OK. ...

The questions geared to cross-examining Case2’s approach to risk-taking confirmed his earlier statements. For instance, in response to the question on whether the learner avoided using any words or phrases because of fear for failure, he said:

No. I don’t remember.

Also, when he was asked about avoided words after he critically listened to his performance, he did not suggest any examples and replied in line with his previous statement:

R: OK, and the words/phrases you have avoided using?
B: Avoided? I couldn’t (find any).
R: OK, no problem. ...

Moreover, the learner’s awareness of his approach strengthens the point. The learner sounded aware of the possibility of making a mistake or causing misunderstanding when using risky words; however, he did not particularly express anxiety or fear of making a mistake. In a way, he would attempt risky words and be prepared to face the consequences: typical of a risk-taker. His risk-taking attitude towards lexis is again evident in the following:
R: In what way did you feel bad about using such words? When you used 'glance' or 'bumped into', how did you feel?
B: I felt the listener won't wouldn't understand it.
R: OK, and you also thought, yes, they might be wrong or [pause]
B: Yes.
R: the listener might misunderstand it.
B: Yes.

Examples of lexical replacements also show that Case2 replaced lexis not in such a reductive way as Case1 did. Thus, his risk-taking tendency persists in cases where lexical replacements occur. The following from the learner’s retrospection are noteworthy:

R: OK, whether it would be appropriate or not. OK, did you use any alternative words or phrases instead of those you couldn’t think of? You couldn’t remember? You know, when there’s a word that you need to use but you can’t remember it and you use a replacement, an alternative word.
B: Yes, may be 'at first glance'.
R: 'At first glance', it’s another ... mhm, OK, others?
B: I would use ‘crash into’ instead of again ‘bump into’.
R: Uhuh.
B: I remember this ['this’ stressed].
R: So you couldn’t remember that ...
B: Yes.
R: so you used 'bumped into'.
B: Yes.

Here is another example of a word, which comes from his critical listening to his own performance, for which the learner thought he used an alternative:

R: ... What about words you replaced with other words because you couldn’t think of them?
B: Yes, I used 'good' instead of 'small' for hotel, and 'crash'-I used 'bump into' instead of 'crash into'.
R: Yes, any other examples?
B: I don’t have any.
Based on this evidence, it can be concluded that Case2 was a risk-taker, who adopted a productive approach to using lexis.

Having described Case2 as a productive risk-taker in terms of using lexis, I now turn to his risk-taking approach to lexis as impacted by planning time. At the beginning of the interview, in response to general factors affecting his performance, Case2 mentions ‘preparation time’ (meaning planning time) and makes the following statement:

It’s not short but I couldn’t do it x.

What he seemed to have implied was that he could not or did not use the planning time effectively. However, although he first described it as being ‘... not short ...’, he later said that he could have performed better if he had had more time:

R: If you had had more time, then ...[pause]
B: It would be better.

The learner’s response to whether the planning time was useful indicated that he used planning time to organise the content of the story and to plan lexis, the latter perceived to benefit relatively less. This, too, is in accordance with his ‘content-lexis’ orientation (discussed above). The extract below illustrates how the learner makes use of the planning time:

R: OK, what about the planning? Did you use the planning time?
B: Yes.
R: You had 10 minutes of planning time.
B: Yes.
R: Did it help?
B: Yes, it helped (really).
R: It did. How? Can you be more specific?
B: More specific ... mhm, specifically, I couldn’t understand the fifth picture and I couldn’t find the, how can I say-I couldn’t combine the fourth one with the fifth one, so I tried (it) on this.
R: So, you-you used your planning time to establish the relationship?
B: Yes.
R: Did it help in terms of words and phrases?
Although the learner initially reported that the planning time was primarily helpful in constructing the story (i.e. establishing the relationship between pictures) and that it helped relatively less with lexis, it later became evident in the analysis of the learner’s notes that he may have underestimated the benefits. The following quotations are supportive of the argument here:

R: OK. Did you use any of the words you noted?
B: Yes.
R: on your scratch paper?
B: Yes. [looking at his scratch paper with notes on]
R: Did you use them?
B: Yes.
R: Most of them? Half of them? Few of them?
B: Most of them.
R: Most of them! OK, so in a way it did help you with the words and phrases.
B: Yes.

Let us now further examine Case2’s risk-taking in reference to the interaction between lexis and planning time in three areas: lexical correctness, lexical complexity (lexical richness and syllabic range), and lexical strategy use, and on the bases of a number of measures.

To begin with, Case2’s risk-taking approach was most evidenced by a high percentage of lexical errors. He appeared quite productive and experimental with lexis.
Secondly, Case2’s risk-taking approach was reflected by an analysis of lexical complexity. The quantitative analysis of the performance of Case2 produced the following results shown in Figure 6.6:

**Figure 6.6: Case2 (+Nar) compared to Overall Means for +Nar & -Nar: lexical measures**

Relatively speaking, the type-token ratio of Case2 was higher than that of ‘+Narrative’ and ‘-Narrative’ groups. For Case2, the lexical word range as well as the grammatical word range were wider than those for both groups. Similarly, in reference to the two groups, Case2 produced language with a comparatively higher lexical-to-grammatical ratio and a slightly higher percentage of lexical density.

For Case2, planning time was associated with relatively higher scores in the above lexical measures. He used more types of words, a greater amount of schematic
vocabulary, and a wider range of lexical and grammatical words compared to the group mean. As opposed to Case1, planning time in Case2’s performance seemed to be associated with lexical richness (i.e. variety, density, range) rather than lexical correctness. Alternatively, the difference in lexical richness could be due the learner’s willingness to take risks with words. Planning time may have fostered lexical risk-taking, but counteracted lexical correctness.

It has now become clear that as Case2’s attentional resources were devoted to producing richer language, lexical choice errors cropped up relatively more frequently. This also helps to explain the relative increase in fluency. That is, Case2 often took risks with words and produced varied lexis, which lowered dysfluency.

His relatively limited attention to grammar should not be surprising since he did not express obvious concern about grammar when he was asked about general factors that affected his performance either at the beginning or at the end of the protocol session. He did, though, stress lexis in reply to the question each time. The learner appeared to have engaged primarily with lexis.

Another lexical complexity measure, syllabic range (i.e. the greater the number of syllables, the more phonologically complex the word), seemed to link to Case2’s risk-taking approach. The following figure illustrates the differences between Case2 and the two overall mean groups:
Case 2 used a relatively wider range of monosyllabic words across the two groups, +Narrative and -Narrative. The two-syllable word range appeared to be slightly wider than that of +Narrative group, but narrower than that of -Narrative group. The score for polysyllabic word range, on the other hand, was not different from that of -Narrative group, but comparatively higher than that of the +Narrative group. According to the results shown in the figure, the general trend seems to be one in which subjects attempt a wider range of lexis of increasing complexity under no planning condition. Case 2, however, produced a wider range of phonologically complex words on the planned narrative. What made him divert from the general trend was likely to be his willingness to take risks. Thus, risk-taking appeared to be a stronger factor in producing polysyllabic words (as a measure of phonological complexity) than planning time.
Thirdly, a close look at lexical strategy use resulted in some crucial evidence concerning risk-taking with regard to planning time and lexis. The findings are presented in Figure 6.8 below:

**Figure 6.8: Case2 (+Nar) compared to Overall Means for +Nar & -Nar: lexical strategy use**

As far as L1-based strategy use is concerned, Case2 made slightly more use of it in comparison to the +Narrative group; however, far less compared to the -Narrative group. Case2, however, used comparatively more L2-based strategies (e.g. lexical replacements discussed earlier in this section) than both groups did. This finding contrasted with that of Case1, who made less use of L2-based strategy in reference to the +Narrative group. Case1 appeared to plan lexis and generally stick to his plans (risk-avoiding), whereas Case2 also planned lexis but probably made changes along the way or experimented with alternative expressions (risk-taking). Finally, concerning lexical avoidance strategy, Case2 did not seem to have used any. In
parallel to the quantitative findings, his retrospection did not reveal any instances either.

6.3.2.2 Risk-taking with respect to pauses

In this section, following the relevant discussion for Case1, I present instances of pauses which are indicative of risk-taking. Compared to examples from Case1, the examples noted here more subtly mark risk-taking moves by Case2.

In this part, I trace Case2’s notes (see Appendix 6.2b) that he took during the planning stage back to his actual oral performance. I will attempt to show that the learner’s protocol notes may reflect his foci of attention and the processes he engages in while using the planning time available. In doing so, I will refer to the learner’s retrospection in the interview and his oral performance by pointing to matches and mismatches.

Table 6.2 below is intended to outline the degree of overlap between the notes and the transcript. It represents the notes Case2 took (except for the category headings like ‘risky words,’ etc. set down by the researcher for the convenience of the learner before he listened (more critically) to the recording of his oral performance the second time around) during his use of the planning time. Below are Case2’s hand-written pre-planning notes:
Hand-written notes of Case 2:

28/2/58

Barry

It was a small hotel.

He had a small briefcase.

She accidently fell into the lake.

A car took away.

They fell in love.

A honeymoon in Hawaii.

---------- Protocol ----------

- cited words: accident, pack, package, glass

- avoided:

- words replaced: good/bad, small, bump into/ran into
Table 6.2: Correspondence of pre-planning notes to oral performance: Case2

<table>
<thead>
<tr>
<th>Used exactly as planned</th>
<th>(Slightly) modified</th>
<th>Unused</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-Mary Jean—a hardworking secretary in Chicago; John—skiing teacher</td>
<td>1-find a small hotel → find a good hotel</td>
<td>1-happy</td>
</tr>
<tr>
<td>2-go skiing</td>
<td>2-have accident ... and wanted to ... → have accident ... and decided to ...</td>
<td>No further records</td>
</tr>
<tr>
<td>3-have accident while skiing, injured her left foot</td>
<td>3-crash into John → bump into John</td>
<td>No further records</td>
</tr>
<tr>
<td>4-car taken away</td>
<td>4-they fell in love → they both loved each other</td>
<td>No further records</td>
</tr>
<tr>
<td>5-running behind it</td>
<td>5-honeymoon in Hawaii → to Hawaii for honeymoon</td>
<td>No further records</td>
</tr>
<tr>
<td>Risky words</td>
<td>accident; pack; package; glance</td>
<td>No examples recorded by Case2</td>
</tr>
<tr>
<td>Avoided words</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Replaced words</td>
<td>small → good; crash into → bump into</td>
<td></td>
</tr>
</tbody>
</table>

**Dyad 5/Roles: Kaan (listener) ↔ Baris (speaker/narrator)**

**Gender:** M-M

**Task:** +Narrative [Skiing]

B: Mary Jean was a hardworking secretary in Chicago and just for a change he wanted to go to, go to skiing to a mountain. He travelled by car-by her own car —er *(2.2)* and *(3.4)* he found—she found a good hotel on the top of the mountain and —er *(1.7)* for the following days he practised—she practised skiing but unfortunately she had a bad accident and injured —er *(0.7)* her left foot and decided to go back to Chicago but while —er he—as he —er *(3.7)* packed her, how can we say, packages, he realised that her car—she realised that her car was *(2.8)* taken away; she wanted to go—run behind the car but unfortunately, maybe fortunately, she bumped into John, a skiing teacher on the hotel *(1.4)* and —er *(5.0)* by the first glance, *(1.2)* they both loved each other *(1.9)* and —er *(2.6)* had a marriage and gone to Hawaii for honeymoon. *(1.3)* That’s all.

Articulation time: 108.7 seconds

[**(2.2)* indicates pause in seconds]*

There were striking overlaps between the Case2’s notes and the transcript of his oral performance. To illustrate, there were nine entries in his original notes, each representing a sequence in the story as perceived by the learner. Eight pre-planned entries (each containing representations of one or two utterances) out of nine were realised in the narrative with no or minor modification, except for the second entry
where the meaning varied relatively more significantly, though shared certain semantic properties (i.e., *crash into* and *bump into*, both being phrasal verbs with the particle *into*, and relating to an ‘accidental’ or ‘unexpected’ incident).

Interestingly, pre-planned words that Case2 used in his oral performance were generally preceded by pauses (pauses greater than 1.0 second ranging from 1.2 to 3.4 seconds). The following are cases in point:

... (2.2) and (3.4) he found—she found a good hotel ...
... (0.7) her left foot and ...
... (2.8) taken away ...
... (1.2) they both loved each other ...
... (2.6) had a marriage and gone to Hawaii for honeymoon

These instances are an indication of searching for pre-planned lexis. They show that Case2 tried to stick to his plans, which caused him to be less fluent. In other words, he stopped to remember the words he pre-planned. It seemed that Case2 exerted an effort to economise on risky words by drawing on pre-planned lexis at the cost of a drop in fluency. In other words, planning time led to a reduction in risk-taking, which in turn lowered fluency. This also presents evidence of another trade-off between lexis and fluency, which I take up later in this section.

Following the tension between pre-planned lexis and the extent of risk-taking, another case can be made for the interpretation that planning could be inhibiting. Case2’s efforts to remember and use the pre-planned words in the narrative, evident in the pauses, as a temporal variable (Grosjean, 1980; Wiese, 1980), may have shrunk his opportunities of further lexical stretching. Primarily, Case2, who generally thought of planning time as positive and benefited from it in terms of lexical richness, went for the planned lexis. Where he experienced difficulty remembering those pre-planned words, he explored alternative ways of putting them. Case2 provided these as examples of replacement: *small* → *good*; *crash into* → *bump into*. A pause of (3.4) seconds took place before the former replacement as indicated by Case2: ‘... (3.4) he
found—she found a good hotel ...'. Moving further, the learner enters the more slippery outer zone where he attempts lexis on-line. To illustrate, three of the four words perceived as risk-taking by Case2 appeared to be unplanned (not found in Case2’s notes) or planned on-line. These words are: pack, packages, and glance. The word accident, however, was a pre-planned word (on Case2’s list of ‘risky’ words) viewed as risk-taking by the learner. Pauses here serve to mark risk-taking lexis. For instance, the two considerably longer pauses (i.e. the longest and the second longest pause) were followed by lexis that Case2 perceived as risky: pack packages preceded by (3.7); and glance preceded by (5.0).

Another possible explanation for the pauses used in the narrative could be ascribed to problems with content or task difficulty, the planning time served as a remedy as is evident in Case2’s statement below:

... I couldn’t understand the fifth picture and I couldn’t find the, how can I say—I couldn’t combine the fourth one with the fifth one, so I tried (it) on this.

To recap, the analysis of the overlaps between Case2’s notes and his oral performance has revealed three noteworthy findings to include in this section. First, as well as pre-planned lexis (discussed above), unplanned lexis or lexis planned on-line are preceded by pauses. The following are examples of the latter, where the longest and the second longest pauses occurred:

... (2.6) had a marriage and ...
... (1.4) and -er (5.0) by the first glance
... (3.7) packed her, how can we say, packages ...

Generally speaking, pauses seem to serve as lexical markers indicating lexical search for pre-planned or unplanned (or planned on-line) lexis, occurring in greater length in the latter. Second, there is a correspondence between pauses and the use of risk-taking lexis. Third, planning time may counteract risk-taking, and thus may curtail opportunities for further lexical stretching. That is, learners who are given time to
plan may appear to take fewer risks with lexis than they normally would otherwise; consequently, they may reduce their opportunities of stretching their lexical resources.

6.3.2.3 Lexical stretching

The above discussion has served as an introduction to lexical stretching. A working definition of 'lexical stretching' and some factors playing an important role have been suggested earlier in the section for Case1. Here I focus on evidence of lexical stretching relevant to Case2 in a comparative fashion.

As seen, Case2 was a risk-taker whereas Case1 was a risk-avoider. The former was experimental with lexis whereas the latter seemed to be rather conservative.

The ultimate question again is: did lexical stretching occur for Case2? Before attempting to answer this question, it would be helpful to look at the learner's profile and his performance in relation to the factors in lexical stretching outlined earlier. Put briefly, here is a summary of Case2's individual and performance-related profile:

- a risk-taker (attempted what he perceived to be difficult words without fear of making mistakes)
- focus on lexis in pre-task planning (most pre-planned + other risky words (marked by pauses) used)
- extensive use of L2-based strategy, with virtually no lexical avoidance strategy
- high level of lexical richness; low level of lexical correctness
- increase in fluency, but not in accuracy or complexity
- orientation to the content or the narrative as well as lexis

To elaborate further, Case2 probably enjoyed more opportunities for lexical stretching than Case1 did. He attempted more difficult (as perceived by the learner), relatively richer and phonologically more complex lexis. A comparatively higher percentage of L2-based strategy use indicated his effort to 'stay on the ball', that is, he was engaged
with language. There was, however, a price to pay: relatively less lexical correctness. He ended up with a higher (compared to +Narrative and -Narrative groups) percentage of lexical choice errors and with relatively no difference in accuracy (which includes lexical choice errors) or complexity. As a result, given Case2’s individual and performance characteristics, it could be concluded that he was more likely to stretch his lexical resources than Case1.

To sum up, from an individual perspective, focus on lexis in the planning time stage can have varying effects in terms of lexical stretching (as well as differing gains in performance goals). In other words, some learners stretch their lexicon, while others do not. It appears that lexical stretching is impacted considerably by individual factors. Finally, a word of caution is in order. Planning time may counteract risk-taking, and therefore may inhibit lexical stretching. That is, learners who are given time to plan may appear to take fewer risks with lexis than they normally would otherwise. As a result, they may reduce their chances of stretching their lexical resources.

6.3.3 Interdependencies

Interdependencies (known and referred to as ‘trade-off’ effects) between the three performance aspects of fluency, accuracy and complexity have been documented (Foster and Skehan, 1996; Skehan and Foster, 1997), the ‘competition between accuracy and complexity’ being ‘particularly evident’ (Skehan and Foster, 1997:207). However, the accuracy measure used was fundamentally a grammatical measure, which did not distinguish between lexical and grammatical errors. Moreover, the two studies quoted above report strong effects of planning on fluency (evident in fewer pauses); nonetheless, they do not look into the nature of pauses. Rather, they present a simplistic view of the significance of pauses in discourse. Skehan and Foster (1997:201), for instance, account for the possible causes of pausing as follows:
Planning hugely reduces the number and length of pauses needed to transact a task, presumably because it allows subjects time to consider what they are going to say before they have to say it [my emphasis]. Absence of planning time means that subjects must think simultaneously about what to say and how to say it, creating the necessity for numerous breaks in the discourse.

Here we find a rather general explanation for the function of pauses: ‘... to consider what they are going to say before they have to say it’. What would be more useful to know, though, is what learners consider when they ‘consider what they are going to say’ and how they actually say it. A scrutiny of this kind can inform (and so far has done to some extent) us about the intricate relation of pauses to lexical use.

Following from the relevant section for Case1, here I discuss two kinds of interdependencies: trade-offs and on-line interdependencies. In this discussion, I provide evidence for both kinds of interdependencies.

6.3.3.1 Trade-offs

I have argued for Case1 that trade-off effects suggested by pre-task planning research are narrowly perceived. I continue to argue that trade-offs found in Case2 are more complex and subtle. Moreover, they are more process-oriented than Skehan’s concepts of trade-offs.

First, in contrast to Case1, no clear trade-off effect between lexis and grammar was found in Case2’s performance. There was, though, less complexity compared to the +Narrative mean. We would expect to see such a trade-off because neither at the beginning nor at the end of the protocol session did the learner express concern about grammar when he was asked about general factors that affected his performance. He did, though, stress lexis in reply to the question each round. The learner appeared to
have engaged primarily with lexis. His focus on lexis would not, however, necessarily mean that he did not pay attention to grammar.

There is, nevertheless, some hint of the possible reason why the learner thought his language was not as accurate as he had expected. Having expressed some dissatisfaction with the length and quality of the planning time ('preparation time', in the learner's terms), Case2 stated that the language he produced could have been greater in amount and higher in degree of accuracy.

R: ... *What general factors affected your performance?*
B: General?
R: Factors.
B: Preparation time.
R: *OK, in what way did it affect your performance?*
B: If we have more time we can talk more and accurately.
R: *So, wasn't the time enough?*
B: It's not short but I couldn't do it x
R: *If you had had more time, then ...*[pause]*
B: It would be better.

It is, however, not very clear whether the learner referred to lexical or grammatical accuracy, or both. A closer look at the scores on measures like accuracy and complexity also showed that a trade-off between lexis and grammar is not adequately supported.

Second, a trade-off within lexis was discovered, however. As opposed to Case1, planning time in Case2's performance seemed to be associated with relatively greater lexical richness (i.e. variety, density, range) rather than lexical correctness. In other words, the trade-off between lexical richness and lexical correctness (as with Case1) holds true here as well; however, it operates in the reverse direction: the richer the lexis, the more lexical choice errors. Further evidence for this trade-off comes from the scores for polysyllabic word range (i.e. a phonological complexity measure). Unlike Case1 (whose polysyllabic range supports correctness over richness), Case2 produced a relatively higher percentage of polysyllabic words. So, lexical richness and polysyllabic word range taken together can be an indicator of lexical complexity.
The trade-off within lexis, then, can be put in an alternative way: the more complex lexical use is, the more inaccurate it will appear.

To recap, particularly trade-offs within lexis have not been identified before. Besides, they are sensitive to a range of factors: focus on lexis, risk-taking approach, planning time (facilitative vs. inhibiting), and orientation to content and lexis, rather than grammar. Thus, because of the complexities and subtleties they impose, such trade-offs cannot simply be explained as an effect of planning time.

6.3.3.2 On-line interdependencies

Interdependencies discussed here are viewed as on-line in the act of constructing meaning, and formulating and producing language. An on-line interdependence between lexis and fluency was evident in Case2’s data. Pauses were shown to serve as lexical markers indicating lexical search for pre-planned or unplanned (or planned on line) lexis, occurring in greater length in the latter. Both pre-planned (less risky) and spontaneously planned (more risky) lexis could be matched to pauses. This is supportive of the on-line interdependence between lexis and fluency. The more attention the learner pays to realising pre-planned or simultaneously planned lexis, the less fluent s/he will become.

6.4 Synthesis of case studies: Case1 & Case2

Although the cases performed the same task under the same condition (+Narration [Skiing]), they seem to differ in some respects. The ways in which the case studies contrast are outlined in the table below:
Table 6.3: Synthesising Case1 & Case2

<table>
<thead>
<tr>
<th>Case/Category</th>
<th>Ismail (Case1)</th>
<th>Baris (Case2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Task</td>
<td>Challenging</td>
<td>interesting</td>
</tr>
<tr>
<td>Performance</td>
<td>‘I have described the situation well’</td>
<td>‘Not very well’</td>
</tr>
<tr>
<td>Areas of difficulty</td>
<td>grammar, lexis, content</td>
<td>lexis</td>
</tr>
<tr>
<td>Risk-taking &amp; lexical stretching</td>
<td>risk-avoider (conservative); ‘play it safe’ strategy;</td>
<td>risk-taker (experimental); more willing to take risks: ‘at first glance’; ‘bumped into’; ‘pack the packages’</td>
</tr>
<tr>
<td>Replacement of lexis</td>
<td>Reductive approach: ‘she fell really very bad’ with ‘she fell and broke her leg’; ‘realise’ with ‘decide’</td>
<td>Productive approach: ‘at first glance’; ‘crash’ with ‘bump’</td>
</tr>
<tr>
<td>Avoidance of risky lexis</td>
<td>‘honeymoon’; ‘the sky went darker’</td>
<td>No instances reported</td>
</tr>
<tr>
<td>Problems with lexis</td>
<td>Concern about appropriateness of lexis in context</td>
<td>concern about appropriateness of lexis in context; difficulty using newly learnt or under-practised lexis</td>
</tr>
<tr>
<td>Attitudes towards misused lexis &amp; grammar</td>
<td>fear of failure</td>
<td>fear of causing misunderstanding</td>
</tr>
<tr>
<td>Trade-off between lexis &amp; grammar, and within lexis</td>
<td>more focus on lexis ➔ relatively less complex grammar</td>
<td>More focus on content and less on lexis ➔ no difference in grammar, but relatively richer grammar</td>
</tr>
<tr>
<td>Planning time &amp; lexis</td>
<td>helpful; focus on lexis</td>
<td>Helpful; more focus on constructing story, and less focus on lexis</td>
</tr>
</tbody>
</table>
Major areas of contrast:

1. Risk-taking and lexical stretching

As far as lexical use is concerned, Case1 appeared to be a ‘non-risk-taker’ whereas Case2 was a ‘risk-taker’. As opposed to Case1’s conservatism to using lexis, Case2 was more experimental with lexis and more willing to use risky words. Besides, Case1 replaced words in a rather reductive manner while Case2 executed lexical replacement productively. Both expressed fear of making lexical errors; however, Case2 still used lexis which he thought were potentially risk-taking. The risk-taking phenomenon is closely related to the notion of lexical stretching, a parallel I suggest to the concept of ‘grammatical/interlanguage stretching’. I would argue that crude measures of lexis and grammar may not provide the whole picture, and can even provide a misleading picture. In other words, overall means can conceal some important evidence rather than reveal it. To illustrate, the fact that the learner has scored higher on the complexity measure, for example, does not necessarily indicate that s/he stretched his/her interlanguage. The learner might have appeared to be complex by, for example, repeating certain structures pretty much at his/her disposal. Similarly, the fact that the learner used denser language or a wider range of lexis cannot always be attributed to the result of lexical stretching. The qualitative analysis revealed that the learner’s perception is worth pursuing. It can not only show how learners go about using planning time, but also how they allocate their attention to varying demands on task.

2. Trade-offs and on-line interdependencies

Two trade-offs were found: one between lexis and grammar, and another within lexis. First, Case1’s focus on lexis resulted in his using less complex grammar. Paying more attention to lexis than grammar caused the learner to produce language of relatively less syntactic complexity. Second, Case2 focused relatively less on lexis. There were comparatively no differences in terms of grammar; however, he came up with a richer selection of lexis at the cost of a higher percentage of lexical errors.
On-line interdependencies were also evident, one between lexis and grammar (from Case1) and one between lexis and fluency (from Case2).

3. Planning time and lexis

A comparison and contrast of the two cases shows that planning time used at varying degrees can lead to varying focus on lexis, which may result in different gains, if any, in variety, range, density, or lexical accuracy.

Foster (2000:6) makes it clear in the introduction part of her thesis what her study was and was not concerned with. The following summarises what her research does not account for:

... there is no consideration given in this thesis to the way second language acquisition may be influenced by age, gender, or individual differences in motivation, aptitude or learning style. Nor is there any concern with pragmatic, ethnographic or sociocultural issues.

Individual differences, for example, were not within the scope of the Foster (2000) study; however, it has not, rather sadly, been of concern for research pursued along the lines of information-processing view of cognitive learning either. In other words, research that has taken the information-processing perspective has not yet looked into the learner perception. The qualitative analysis of the learner perspective in this study has revealed that this line of inquiry is worth pursuing within the framework of information-processing view since it promises to reveal crucial evidence as to how planning time is actually utilised, particularly how attention is allocated for the competing goals of fluency, lexical and grammatical accuracy and complexity.

In summary, in this section, by critiquing the ascendancy of quantitative analyses and the resulting research findings based merely on crude quantitative measures, I have sought to argue for the incorporation of the learner perspective within the task-based framework where the two sets of findings are compared for more reliable and confident assumptions. It is evident that disregarding the learner perspective can deprive SLA of crucial data that can accrue from it. Above all, it is this kind of data
that will aid applied linguists subscribing to the cognitive view of language learning in understanding the impact of contextual and social factors on cognitive processes undertaken by learners.
7.0 Introduction

The final chapter concentrates mainly on the implications of the results of the present research study. It will attempt to show how these results relate to previous research and how they contribute to the existing body of research into planning. Specifically, it will discuss the implications of the findings for pedagogy as well as for research methodology and finally consider directions for future research into planning and L2 performance.

7.1 Conclusions with further implications

The conclusions based on the findings of the current study have some profound implications for testing, L2 pedagogy and for future research.

7.1.1 Implications for language testing

The analysis of the data of the present research study has indicated that non-native language users juggle form and meaning. Foster (2000:180) has also found that for all language users (both native speakers and non-native speakers) ‘there is a discernible tension between language form and language meaning.’ For native speakers, the source of this tension appears to be the task, which requires them to formulate complex and appropriate utterances on unfamiliar subjects. Non-native speakers, on the other hand, have to handle greater pressure since, in addition to having to meet the task demands, they have to process L2 morphosyntax and lexis at the same time. This
extra burden on the processing capacity of non-native language users is largely ignored in L2 oral tests.

A way to ease this burden is to allow the language users pre-task time to plan what they wish to say. Research has shown that even very short periods of time, i.e. one to two minutes, available for pre-task planning can lead to significant gains in accuracy (Wigglesworth, 1997; Mehnert, 1998), complexity and fluency (Wigglesworth, 1997). The results of the present study also confirm previous research findings.

The test designers need to be aware of the possibility that the simplicity, inaccuracy and dysfluency of the learner’s language is due not necessarily to poor proficiency but, on some occasions, to the subject being unfamiliar or the task being too taxing. It may be that the language user would have performed better if he/she had had time to prepare for the topic. The availability of planning time, then, can help language users to display their ‘real’ level of proficiency since they might not be burdened by the unfamiliar content of the topic. This also means that the assessment could be fairer.

Foster (2000:181) suggests that ‘giving candidates a brief period to prepare what they are going to say could permit them to display the higher, rather than the lower, limits of their proficiency.’ However, data from the case studies in the current study have shown that this is not necessarily the case. Indeed, for some learners planning time could work in the reverse direction. In Foster’s terms, they would not ‘display the higher’ but ‘lower limits of their proficiency’. In processing L2 lexis during pre-task planning, learners may raise their risk filter to allow relatively safer words than they normally would otherwise. The results of the present study have shown that individuals vary in their approaches to risk-taking and that planning time could prevent some learners from attempting the ‘higher limits of their proficiency’. Consequently, giving candidates time to plan what they are going to say may, on some occasions, result in a skewed representation of learners’ actual level of proficiency.
Thus, test designers should consider contextual factors as well as individual variation in utilising planning time when preparing and administering oral L2 tests. To reach even a more accurate assessment, the oral test could be broken down into several sets where the candidate is given the chance to perform tasks with and without planning time. The final assessment can then be made by comparing the candidate’s planned performance to his/her unplanned performance. Needless to say, the interaction between contextual factors and individual variation may make a completely correct and realistic assessment impossible.

7.1.2 Implications for L2 pedagogy

The analytical reasoning behind the study was that certain tasks would elicit certain types of vocabulary. Subsequently, elicitation tasks were set up to provide the transition from analytical reasoning to practical realisation. The tasks were implemented under two different conditions – with planning and without planning. The analyses of the results have indicated that there is a connection between task type and vocabulary use. The pedagogical relevance of this connection has considerable implications for L2 pedagogy, and specifically for task design and implementation, syllabus design and lexical development.

The present research study suggests evidence of the impact of discourse type (i.e. dialogic vs. monologic) on using lexis. Task design could be geared to a certain discourse type through appropriate task types so that a specific type of vocabulary can be elicited. In this respect, syllabuses should be revisited and subsequently restructured for an inclusion of such tasks. These tasks, however, should be designed and implemented in such a way that they will stimulate a focus on lexis while also retaining meaning as a primary focus. Through these tasks certain aspects of vocabulary can be facilitated. For instance, descriptive tasks of dialogic discourse nature can facilitate procedural vocabulary, while narrative tasks of monologic nature can facilitate schematic vocabulary. Both types of vocabulary are necessary for
effective communication. For each kind of lexis performs a different role but serves the same purpose – getting the message across.

A cautionary note about lexical stretching, which has implications for task and syllabus design, is in order here. Through the regulation of planning and task type the prominence of lexis can be increased; however, as the evidence from case studies in this thesis suggests, indeed no task design can make learners stretch their language unless there is a shared feeling of support or understanding to trigger risk taking. The present research study has shown that the learner may utilise the planning time to choose from his/her repertoire potentially less risky lexis to use. Planning time may, on some occasions, reduce risk-taking and thus decrease the likelihood of ‘cutting edge lexis’ being used. On such occasions, a risk-avoidance strategy as opposed to a risk-taking strategy is adopted. In this respect, the present research study has produced evidence of the impact of planning on individual approaches to risk-taking. It has shown that planning could be disorienting or inhibiting rather than facilitative in using the ‘cutting-edge’ lexis.

As a result, the expectation that planning time will push the learner’s interlanguage to its outer limits may not always be fulfilled; on the contrary, it is possible that planning time will push the learner back into safer limits of operation. This piece of finding is novel in planning studies. What revealed such a finding was an investigation of individual cases through retrospection. Planning studies have mostly failed to capture such data since the methodology used has generally been quantitative. Purely quantitative methods seem to be incapable of fully capturing the effects of planning time on learners’ oral performance.

7.1.3 Implications for research methodology

There are also significant implications for research methodology. Most other SLA areas depend merely on quantitative data. Although both quantitative and qualitative data are important, they have their limitations. The findings of the present research
study have shown that quantitative data alone may not fully grasp the interactions of various factors in communication. Quantitative results seem to average out the learner and essentially ignore individual differences. Statistical results may fail to account for the learners who behave differently under the same conditions. Thus, generalisations for the 'ideal learner' or 'general learner' in quantitative terms appear to contradict with the nature of learning – an individual enterprise constrained by contextual factors to a varying extent. Individual differences in language use can be captured through qualitative methods such as self-evaluative questionnaires and semi-structured interviews that encourage learners to reflect on their performances. In particular, in-depth analyses of individual cases, like those in the present study, will produce more comprehensive and reliable data.

The current study also suggests that it is worthwhile to show greater sensitivity to the social context. Specifically, more emphasis needs to be laid on individual and contextual factors. Drawing on the evidence from qualitative results of the current study, I argue that there is a strong case for multiple methodologies. That is, quantitative and qualitative methods can and should be combined. When they are used in alliance, research is more likely to produce much richer data and more reliable results.

To sum up, for a more reliable representation of the learner's performance research design should accommodate as many individual and contextual factors as possible, and employ multiple methodologies, namely a combination of qualitative and quantitative methods. In this way, the inadequacy of mere quantitative methods could be compensated for and more thorough analyses could be possible. Consequently, these detailed analyses could give us an accurate and informative picture of how learners operate in language use.
7.2 Future directions for research into planning, lexis and grammar

The present study provides support for the supposition that lexis and grammar cannot be separated. It suggests interdependencies of and trade-offs between lexis and grammar, and more significantly, unprecedented interdependencies within lexis. Consequently, future research should take into consideration the intricate relationship between lexis and grammar, rather than investigate the former or latter in isolation.

More of future SLA research should account for the complex interrelationship of lexis and grammar in a task-based context, where individual and contextual factors are also taken into consideration. Such research designs could produce further evidence of the tensions between language deployment and contextual factors, imposing, in particular, constraints on the ways in which L2 lexis and grammar are used. Thus, this particular line of inquiry seems to be fruitful for future research.

Planning as a task feature has been researched into from different perspectives. Various lines of inquiry based on Skehan’s (1996) theoretical framework for task-based learning have been followed. They have sought to explore this framework in terms of how the learner’s attention can be manipulated through task design and implementation and how it is allocated to the competing goals of accuracy, complexity and fluency. For instance, Skehan and Foster (1997) have investigated how attention could be manipulated by means of post-task activities, rather than pre-task planning. They have found that the post-task of learners’ transcribing their own recorded performance influences accuracy positively. Foster and Skehan (1997) have looked into how mid-task intervention could interrupt pre-task planning and discovered that it has little effect. In addition, Skehan and Foster (1999) researched into the effect of task type (two narrative tasks, one being more structured in its storyline than the other) on performance and found that it interacts with planning time, resulting in positive influences on certain areas of performance. It should be noted, however, that none of the previous studies have investigated the effects of planning from the perspective of lexis and grammar or offered a comprehensive
lexical analysis, with the recent exception of Foster (2000) study which analyses the use of prefabricated phrases.

The interaction of planning time with task type appears to be a fruitful line for future research. Recent research has already found that when learners are asked to do a clearly-structured task with well-known subject matter but without planning, they would prioritise fluency (Foster and Skehan, 1996; Skehan and Foster, 1997). However, they would prioritise complexity in their performance if asked to do tasks which require transformation or interpretation of information (Skehan and Foster, 1997). When learners perform tasks with planning time on familiar information with a clear structure, they are likely to prioritise accuracy (Foster and Skehan, 1996).

In the present research study, discourse type (dialogic vs. monologic) seems to be closely associated with lexical use. Yet, it would be particularly useful for further research to focus on, for instance, two kinds of descriptive tasks to test whether the same kind of lexical density, variety and/or phonological complexity will emerge. It could be that it is the task type rather than the discourse type that induces lexis of greater complexity (i.e. richer, denser, phonologically more complex).

Another useful way of utilising tasks is the provision for repeated task production, where similar gains are reported to have been made in pushed output, particularly in complexity (Bygate, 1996). Although there has been growing empirical support for task-based planned output and task repetition (Bygate, 1999; Gass et al., 1999; Lynch and Maclean, 2000, 2001), research in this strand generally fails to take account of the contextual constraints on the language user. This is what the present study attempted to do to a certain extent. However, further research as well as replications of previously conducted studies are needed into this line of inquiry. Particularly telling would be case studies and preferably longitudinal studies offering analyses of learners’ language production – specifically lexis and grammar – as constrained by socio-psychological factors. This line of research would produce results that could usefully be applied to the L2 classroom.
7.3 A final note

As a final note to her thesis, Foster (2000:193) states that 'we need to know what learners are likely to do [emphasis in original], so that we can design classroom procedures that seek to harness instincts useful to SLA'. To be able to predict learners' language behaviour, we need to know how this behaviour is influenced by various interacting factors. The challenge for the studies in SLA is to conduct experimental work that integrates multiple methodologies (i.e. quantitative and qualitative) and takes into consideration the contextual and interpersonal factors for a fuller account of the complexities of language use. Results obtained in such an inquiry would be of practical use in the classroom. They can urge us to reconsider current classroom practices and guide us in making more informed choices when designing language teaching. Ultimately, we can create the optimum conditions for language learning to take place.
BIBLIOGRAPHY


Laufer, B. (1997). ‘What’s in a word that makes it hard or easy: some intralexical factors that affect the learning of words.’ In N. Schmitt and M. McCarthy (Eds.), *Vocabulary: description, acquisition, and pedagogy* (pp. 140-155). Cambridge: Cambridge University Press.


251


254