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ENGLISH VOCABULARY SIZE GROWTH AND VOCABULARY LEARNING STRATEGIES:

A COMPARATIVE STUDY ACROSS THE THREE ENGLISH DEGREE YEARS AT THE UNIVERSITY OF ALGIERS 2

Thesis Submitted in Partial Fulfilment of the Requirements for the Degree of Doctorate ES-Sciences in English Linguistics and Didactics

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Declaration

I, Mrs Adela Talbi spouse Hassani, declare hereby that the work provided in this thesis is the result of my investigation. I declare that all the information that is not original to this work is cited in the reference section, and all the data that are original in this work have not been submitted elsewhere for any degree or qualification.

Date: *02/2021*
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ABSTRACT

This study is an attempt to investigate the relationship between the growth pattern of vocabulary size and vocabulary learning strategies use in a sample of 184 EFL students enrolled in the three-year English degree course of the department of English at the University of Algiers 2. The objective is to assess the increase of their written receptive vocabulary in relation to their use of vocabulary learning strategies for comprehension purposes. More specifically, the aim is to examine the extent to which the vocabulary size of students at different degree levels increases as a result of specific vocabulary learning strategies use from year one to year three of the undergraduate degree course. Three research instruments were used to collect both quantitative and qualitative data: a 14.000-item Vocabulary Size Test (adapted from Nation 2007), a Taxonomy of Vocabulary Learning Strategies (adapted from Schmitt 1997) and a Vocabulary Learning Strategies Questionnaire to elicit students' learning habits, and difficulties related to English vocabulary learning. The students' responses to all three instruments were compared at each degree year level. Findings revealed that the students' vocabulary size increased from 5924 to 7500 word families from the time they joined University to the end of their final year, with an average gain of 525 word families per year, and a significant gain from Year 1 to Year 2 of the English degree course. However, the students' vocabulary learning strategies behaviour did not change significantly over the three years. Even the students with the largest vocabulary size (7000 word families and more) used the same vocabulary learning strategies as the rest of the population. The most preferred strategies were the determination and metacognitive strategies, while the social strategies were used less frequently. Thus, the low correlation between vocabulary size growth and vocabulary learning strategies found in this study seems to imply that the nature of the students' vocabulary learning strategies had a non-significant effect on their vocabulary size growth. An exception was however observed among the freshers for whom metacognitive strategies involving the use of Internet to search for information or to communicate seemed to significantly correlate with their overall vocabulary size. Moreover, a large number of low-frequency words with a spelling similar to their French equivalents (cognates) were noted in many responses at various degree levels as many students showed knowledge of these words that were beyond their expected proficiency level. These results would imply that drawing on the students' previous knowledge of other languages (L1 and L2), use of multimedia resources, as well as focusing on strategy training and integrating explicit English vocabulary instruction may help to increase students' lexical repertoire, autonomy, and strategic competence.

Key words: Algerian higher education, EFL degree course, Vocabulary growth, Vocabulary learning strategies, Vocabulary size.

Dedication

This work is dedicated to the most important persons in my life, to thank them for their spiritual support during the challenging time of writing this thesis:

My daughters Neila and Meriem simply because I love them for the unbelievable happiness and joy they have brought in my life. Their smiles have been a real driving force that allowed me to overcome difficulties and delays in this work, and gave me the will to be a better person and always achieve more. All my achievements are dedicated to both of them because I want them to be proud of their mum.

My husband Mohamed for believing in me and for being a constant source of support and motivation in all aspects of life.

My father Mohammed and my mother Djaouida for their unconditional encouragements throughout all these years in all aspects of my life including my professional and academic career, my eternal gratitude goes to both of them.

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TABLE OF CONTENTS

Page

Declaration IV
Abstract V
Dedication.....VI
Acknowledgements.....VII
List of Tables XII
List of Graphs XIV

Introduction 1
Context of the Study 4
Research Problem 6
Research Objectives 6
Research questions 7
Organisation of the thesis 8

Part One: Theoretical Background ……..11

Chapter One:
Issues of Vocabulary Size and Growth in Foreign Language 12

Introduction 13
1.1 Defining Lexical Competence.....15
1.2 Vocabulary Knowledge, Comprehension and Acquisition.....18
1.3 Vocabulary in Receptive and Productive Skills 25
1.4 Vocabulary Instruction 31
1.5 Quantity and Quality in Vocabulary Learning 33
1.5.1 Defining Vocabulary Size 35
1.5.2 Measurement of Vocabulary Size 37
1.5.3 Vocabulary Growth 42
Conclusion 47

Chapter Two:
Learner Autonomy and Vocabulary Learning Strategies in an EFL Context
.....49

Introduction 50
2.1 Learner Autonomy in Language Learning 51
2.2 Vocabulary Learning Strategies (VLS).....53
2.2.1 Schmitt' Taxonomy of VLS 60

2.3 The Use of VLS by EFL Learners 63
2.3.1 Lexical Transfer in EFL Learning 69
Conclusion 79

Chapter Three:
Relationship between Vocabulary Size Growth and Vocabulary Learning Strategies.....81

Introduction 82
3.1 Vocabulary Learning Strategies and Language Proficiency 83
3.1.1 Vocabulary Learning Strategies and Multimedia Resources.....87
3.2 Vocabulary size and Vocabulary Learning Strategies.....94
3.2.1 Vocabulary Size and VLS use among Arabic EFL learners.....101
Conclusion ..... .108

Part Two: Empirical Study ……..……..110

Chapter Four: Research Methodology 111

Introduction 112
4.1 Research Design 113
4.2 Setting and Participants 113
4.3 Research instruments 116
4.3.1 Demographic Information Questionnaire (DIQ) 117
4.3.2 Vocabulary Size Test (VST) 118
4.3.3 Vocabulary Learning Strategies questionnaire (VLSQ).....121
4.3.4 Vocabulary Learning Open Questions (VLOQ) 126
4.4 Data Collection Procedure.....127
Conclusion 131

Chapter Five:
Presentation and Analysis of Results: Background information, Vocabulary size and VLS use.....132

Introduction 133

Section One:
5.1 Analysis of the Demographic Information Questionnaire (DIQ) 134
5.1.1 Gender and Age 134
5.1.2 Native Language 135
5.1.3 Previous EFL Instruction 137
5.1.4 Exposure to EFL 139
5.1.5 Choice of English Degree Course 140

Section Two:
5.2 Analysis of the Vocabulary Size Test (VST) 142
5.2.1 VST results of the BAC group 142
5.2.2 VST results of the LMD 1 group 146
5.2.3 VST results of the LMD 2 group 150
5.2.4 VST results of the LMD 3 group 152
5.2.5 Comparison of VST results of all groups 155

Section Three:
5.3 Analysis of the Vocabulary Learning Strategies questionnaire (VLSQ) 158
5.3.1 VLSQ results of the BAC group 164
5.3.2 VLSQ results of the LMD 1 group 170
5.3.3 VLSQ results of the LMD 2 group 171
5.3.4 VLSQ results of the LMD 3 group 172
5.3.5 Comparison of VLSQ results of all groups 174

Conclusion …….180

Chapter Six:
Presentation and Analysis of Results: Vocabulary Learning and Correlation between Vocabulary size & VLS ……...182

Introduction…….183

Section One:
6.1 Analysis of the Vocabulary Learning Open Questions (VLOQ) 183
6.1.1 Other VLS mentioned by the participants 184
6.1.2 Vocabulary and language skills 188
6.1.3 Vocabulary and other courses 192
6.1.4 Vocabulary instruction in the curriculum 195
6.1.5 Vocabulary Learning Difficulties 197

Section Two:
6.2. Correlation between vocabulary size growth and VLS use 201
6.2.1 Correlation between the VST and the VLSQ for the BAC group 203
6.2.2 Correlation between the VST and the VLSQ for the 1LMD group..205
6.2.3 Correlation between the VST and the VLSQ for the 2LMD group..206
6.2.4 Correlation between the VST and the VLSQ for the 3LMD group..208
6.2.5 Correlation between the VST and the VLSQ for the High proficiency students among the four samples.....210

Conclusion 217

Chapter Seven:
Discussion and Interpretation of Results 218

Introduction 219

7.1 Vocabulary Size Growth across the three years of the English degree course 219

7.2 Vocabulary Learning strategies across the three years of the English degree course 229

7.3 Relationship between vocabulary size growth and VLS use 240

7.4 VLS use among high proficiency learners with large vocabulary size 247

Conclusion 250

Conclusion 253

General Conclusion 254

Pedagogical Implications 257

Limitations of the Study 265

Scope for further research 269

References 272

Appendices 294

Abstract in Arabic 314

List of Tables

List of Tables **Page**

Table 4.1 Number of participants in present study.....116
Table 4.2 Categories and number of questions of the VLS Questionnaire.....126
Table 5.1: Demographic Information summary of all participants….. …...…..137
Table 5.2: Participants' previous EFL Learning outside University/Algeria 138
Table 5.3: Participants' exposure to English speaking media ….....140
Table 5.4: Participants' deliberate choice of enrolling in the English LMD degree course….....141
Table 5.5: VST results for the BAC group …….....144
Table 5.6: VST results for the 1LMD group ……..147/148
Table 5.7: VST results for the 2LMD group ...……...…….....151
Table 5.8: VST results for the 3LMD group …….....154
Table 5.9: Comparison of the VST results for the four sample groups…….....157
Table 5.10: Number of VLS used by each proficiency group (Comparison).....160
Table 5.11: Top-10 of the most frequently used VLS among the BAC group...175
Table 5.12: Top-10 of the most frequently used VLS among the 1LMD group.....176
Table 5.13: Top-10 of the most frequently used VLS among the 2LMD group.....177
Table 5.14: Top-10 of the most frequently used VLS among the 3LMD group …….....178
Table 6.15: Vocabulary learning strategies added by the subjects.....…185
Table 6.16: Students' preference in terms of language skills leading to vocabulary learning 189
Table 6.17: Students' preference in terms of modules leading to vocabulary learning 193
Table 6.18: Students' preference in terms of vocabulary instruction 196

Table 6.19: Vocabulary difficulties as mentioned by students and their suggested solutions. 198/199
Table 5.20: Classification of the 6 VLS categories by each proficiency group (Comparison).....163
Table 6.21: Pearson's correlation between vocabulary size and VLS categories 202
Table 6.22: Pearson's correlation between vocabulary size and individual VLS (BAC group) 204
Table 6.23: Pearson's correlation between vocabulary size and individual VLS (1LMD group) 206
Table 6.24: Pearson's correlation between vocabulary size and individual VLS (2LMD group).....207
Table 6.25: Pearson's correlation between vocabulary size and individual VLS (3LMD group).....209
Table 6.26: Selection of high proficiency participants based on VST scores 213
Table 6.27: Pearson's correlation between VLS of high proficiency participants 214
Table 6.28: Top-10 of the most frequently used VLS by the high proficiency participants.....216

List of Graphs

Page

Graph 5.1: VST scores for the 14 frequency bands (BAC participants).....145
Graph 5.2: VST scores for the 14 frequency bands (1LMD participants)……..149
Graph 5.3: VST scores for the 14 frequency bands (2LMD participants)……..152
Graph 5.4: VST scores for the 14 frequency bands (3LMD participants)……..155
Graph 5.5: VST scores for the 14 frequency bands (Comparison).....157
Graph 5.6: Classification of Discovery strategies based on students' preference (BAC group).....164
Graph 5.7: Classification of Discovery strategies based on students' preference (1LMD group).....170
Graph 5.8: Classification of Discovery strategies based on students' preference (2LMD group).....172
Graph 5.9: Classification of Discovery strategies based on students' preference (3LMD group).....173
Graph 5.10: Classification of Consolidation strategies based on students' preference (BAC group)..... 166
Graph 5.11: Classification of Consolidation strategies based on students' preference (1LMD group).....167
Graph 5.12: Classification of Consolidation strategies based on students' preference (2LMD group).....168
Graph 5.13: Classification of Consolidation strategies based on students' preference (3LMD group).....169
Graph 5.14: Comparing classification of the 6 VLS categories by each proficiency group 162

INTRODUCTION

In the past few years, the English language in Algeria has started to be regarded as the key to success in many professional fields, and more emphasis has been given to its instruction, starting from the middle school in the public sector but from the primary level in private schooling. This enthusiasm for the English language is also reflected in the huge number of students who choose to enrol in an English degree course after the Baccalaureate. Every year, the English Department of the University of Algiers 2 welcomes a high rate of newly enrolled students who come from different streams in high school (Science, Maths, Philosophy, Foreign Languages, Management, etc). The demand for this degree course has become so high that the University is bound to limit the pedagogical places, basing the admission process on the average marks obtained in the baccalaureate and the mark obtained in the English language exam paper.

Despite the fact that most students who enrol in the Department are supposed to be exclusively the ones who have chosen to study English - instead of being simply directed to this branch randomly or for availability considerations - the rate of success from a year to another is well below expectations. Many students seem to struggle with their studies during the three years of the degree course, even though they come to university with a minimum of seven-year experience of EFL learning in mainstream education. It is certainly very frustrating for the instructors as well as the administration to observe the rate of failure among students without clearly determining the reasons behind their EFL learning difficulties on the one hand, or finding possible solutions that can better lead them to success on the other.

Learning a FL that is different from one's own mother tongue is one of the most cognitively challenging ventures for most people, and learning the vocabulary of that language is perhaps the most crucial and demanding aspect if the purpose is to become proficient in this language. The fact is that the vocabulary is the most dynamic, changing, unstable and limitless component of a language because words of any given language are in continuous movement and

new words are constantly added to dictionaries as a reflection of the evolution of humans and changes in society and the world in general. In this perspective, it would be unrealistic to expect the very large number of words in a SL/FL to be taught within the classroom.

In the area of vocabulary knowledge and acquisition, many studies have focused on examining the extent to which FL students know the words they learn, and what it actually means to know a word. Beyond this interest in the depth of vocabulary knowledge, researchers in this field have also showed a strong interest in studying the breadth of vocabulary among SL/FL students as they believe that the number of words students know can be a good indicator of their overall lexical and linguistic competence. It is commonly agreed that the number of words that a child learns in his mother tongue is a clear indicator of his global linguistic ability, thus the influence of vocabulary size on the general literacy achievement is also true in the context of FL learning.

Following the shift from teacher-oriented EFL instruction to a learner-focused approach, the priority for teachers has aimed at assisting students in becoming more independent in their language learning instead of relying on the teacher to provide them with all they need effortlessly. With respect to vocabulary learning, this shift has led to the emergence of many prominent studies in the field of language learning strategies in general, and vocabulary learning strategies (VLS) in particular, to encourage EFL students to be dynamic and autonomous in developing their lexical knowledge. The use of learning strategies while learning vocabulary is believed by Schmitt (2000) to be easier than when learning other language components such as grammar or skills because the vocabulary of a language is a relatively discrete component that can easily be managed alone. Research in this area led to the conceptualisation of lists and inventories of VLS, and attempted to investigate the effectiveness of individual use of these strategies or rather a diversified use of mixed strategies. Moreover, different aspects underlying VLS use have been explored to identify what can impact on or assist the efficient use of these learning tools, or what strategies are more conducive to success in overall EFL learning. There have

been some studies that investigated the evolution of strategies use and preferences over time, showing that the proficiency levels and EFL experience of students have an impact on their expectations, choices and results of strategy use. However, the gradual change or progression in the use of these strategies by students at different levels of their proficiency in the target language has not been widely researched. Thus, this is an area of research that one part of the present study would attempt to contribute to by investigating the evolution of VLSs use by Algerian university students learning English as a FL from the time they enrol in the undergraduate degree course until the time they graduate. Besides, students' behaviour in terms of VLSs use is superposed with other aspects of language learning such as overall language proficiency in general and vocabulary breadth in particular. Despite the fact that the area of vocabulary size and VLS use has been extensively researched in the last few decades in various contexts, we are aware of very limited research exploring the relationship between these two concepts among Arabic speaking university students learning English as a FL at different levels of language proficiency. We believe that exploring this relationship among Algerian university students with their specificities and over a period of three academic years would contribute to a better understanding and evaluation of the vocabulary learning process and growth pattern in the Algerian context of EFL learning and studying.

On the basis of the researcher's experience, teaching EFL students at various levels of the undergraduate course at the English Department, it is clear that university students do not seem to acquire a large vocabulary repertoire by the time they graduate. Indeed, observation of students' oral and written production and comprehension in class appear to lead to the conclusion that lack of vocabulary is a major issue among the students at different degree levels. From the perspective of VLS use, the lexical difficulties of students might also be due to the way they use strategies to comprehend, acquire and retain new vocabulary. As the students go from one proficiency level to the other, their vocabulary growth as well as their use of VLS is assumed to become more efficient because they are supposed to gradually develop better autonomy in their

own learning process. Moreover, despite the fact that most students arrive to the degree course from approximately similar backgrounds and with more or less the same experience with learning English prior to university, some of them seem to succeed better in their overall language learning process, including in terms of vocabulary development. This latter point led us to question whether there were any strategic particularities among these successful learners that could have an impact on their lexical development.

Context of the Study

In the English Department of the University of Algiers 2, English is taught as a foreign language through the three-year LMD curriculum designed in the early 2000's; LMD stands for Licence, Master, Doctorate. This system was initially implemented at the English Department in the academic year 2009/2010, in parallel to the old four-year degree curriculum; the latter disappeared in July 2015.

The main objective of the implementation of the LMD in Algeria was to meet the increasing demand in foreign language teaching and to feed the socio-economic needs of the region. In the era of globalisation in which universities develop rapidly and open to the world, the LMD course was believed to provide a more work-oriented education/training that would better prepare the students to either EFL teaching or other polyvalent careers using English. Having English taught through LMD in Algeria implies that the training that Algerian students receive is falling into line with how English is taught elsewhere, because the LMD system is internationally used. It would, thus, give them an opening to universities abroad. With the Baccalaureate in hand, the student can enrol in the Licence degree which lasts six semesters. While the first two years courses heavily focus on language skills, the last year of the program is a specialization year during which students choose to major or specialize either in language teaching (Applied Linguistics and TEFL) or Anglophone cultures (Anglo-Saxon Studies). During this last year, the emphasis is less on language

skills, and more on content knowledge that would eventually prepare students for employment or post-graduate studies.

Among the aspects of language that seem to hinder the learning process of a great number of students, major lexical difficulties and gaps can be noted that usually prevent them from understanding the classes properly and therefore from achieving successfully at examinations. The four language skills (Listening/Speaking/Reading/Writing) require dense and diversified vocabulary that few students master; this is an observation that probably no language teacher has failed to notice. While this lack of vocabulary mastery can be understandable at the beginning of the academic degree course in Year 1, it can quickly become a hurdle as the students move to upper classes (Year 2 & 3) in which they are required to understand, retain and produce correct and rich language with appropriate vocabulary, more intensely and in all types of content areas. These difficulties might also be related to their lack of autonomy in language learning, and therefore insufficient or inappropriate use of vocabulary learning strategies as most students would rely entirely on the teacher to teach them all the words needed at degree level, which is of course an impossible mission.

The foreign language context of the English degree course at the University of Algiers 2 is believed to give enough immersion in the target language to encourage development of vocabulary knowledge. The use of English-only by teachers and the diversity of courses are supposed to give the students sufficient input to enrich their vocabulary. However, the English -medium programs cannot replace a second language context in which input is much richer and diversified because used in various areas of life beyond the classroom. Unlike a SL environment, in a FL context the student has to develop autonomy for his own learning process to cope with the limited exposure and practice of the target language that is available only within the classroom.

Research Problem

Given that the LMD course had been implemented for just five years (when the present study started), within the English Department of the University of Algiers 2, it was important to determine whether the three-year degree curriculum was giving enough vocabulary learning opportunities to EFL students to progress and succeed from one year to the other and to become autonomous learners. More specifically, one might ask if the students' lexical repertoire, which is a key component of the EFL learning process is taken care of within this system, or alternatively what can be done to improve this lexical support. Within the English curriculum, there is no direct vocabulary instruction, but this language component is indirectly integrated within the courses of reading/writing and listening/speaking. In these courses, students are presented to vocabulary through written or spoken content to encourage lexical comprehension in context. Even though these skills courses take into consideration the vocabulary component of language, there is no specific strategy training within the curriculum that teaches students ways to cope for insufficient vocabulary knowledge and encourage autonomous lexical learning. However, within the Reading course, students are introduced to the concept of reading strategies and teachers are required to provide enough practice on the use of these strategies. In an EFL environment like Algeria, university instruction of the English language is heavily dependent on the reading skill as a receptive written input provider. Students are gradually exposed to complex input through the various content courses as they move to upper proficiency levels. As such, they need to be independent enough in developing their reading ability and lexical strategies in order to make the most of their reading assignments in and outside the classroom, as the lexical input provided by the instructors within the class time can by no means cover all their needs.

Research Objectives

With regard to this situation, the present study has been undertaken to meet three objectives: firstly, to shed light on whether students are gaining enough

written receptive vocabulary knowledge needed for appropriate comprehension of all sorts of authentic texts and to assess the growth pattern of their vocabulary size as they go to upper levels of English learning. Secondly, to investigate the students' behaviour in terms of vocabulary learning strategies' (VLS) use and preferences and to see the degree of evolution in this behaviour from one proficiency level to the other. Thirdly, the present work aims at finding out if the gains in the students' written receptive vocabulary size are influenced by their choices or use of specific VLS and if the gains and the influence of VLS on these gains evolve throughout the undergraduate course. In this perspective, the outcome of the present study would possibly be an indicator of the students' autonomy development in terms of lexical learning. In order to investigate the relationship between the two variables of vocabulary size growth and VLS use more specifically, emphasis is also laid on a sample of high proficiency students in order to see if there are any particular characteristics to this group compared to the rest of the students. The aim of this latter group is to draw a profile of the students with the largest vocabulary size in relation to the strategies used that are conducive to better vocabulary knowledge and use.

The present study aims to contribute to a better understanding of the relationship between vocabulary size growth and vocabulary learning strategies behaviour of Algerian EFL students from the time they join the university degree until they are about to graduate. The relationship between these two constructs is investigated at the level of each year of the three-year LMD course, before a global comparison sets up the growth pattern of the whole population of the study.

Research Questions

The aim of the present study is to investigate the growth pattern of the written receptive vocabulary size from Year 1 to Year 3 of the English degree course, and to find out whether there is a change or development in the students' VLS use as they move to upper levels. Besides, the relationship between VLS use and the vocabulary size is also discussed in order to shed light on the effect of one

variable on another. As such, this cross-sectional and mixed research study aims at finding answers to the following research questions:

RQ1: How does the students' vocabulary size grow as they move from year 1 through year 3 of the English degree course?

RQ2: What vocabulary learning strategies do the students use in Year 1, 2 and 3 of the English degree course to understand and retain words?

RQ3: Is there a relationship between vocabulary size and students' use of VLS across the three years?

RQ4: What VLS do high proficiency students with a large vocabulary size use that contribute to the growth of their vocabulary size?

Organization of the Thesis

The present work is divided into two parts, a theoretical part including different aspects of the literature upon which the work is based, and an empirical part presenting the different steps of the study undertaken with the undergraduate students of the English Department. Each part of this work contains three chapters.

In the theoretical part, the first chapter focuses on the first key concept of the study, namely vocabulary size and growth. After paving the way with a definition of the notion of lexical competence, it discusses the various views about what constitutes the nature of vocabulary learning, how vocabulary is acquired, and its relationship with the four receptive and productive language skills and instruction. An analysis of the concept of vocabulary size is then provided as well as a description of vocabulary breadth measurement techniques and the growth pattern of the vocabulary size as discussed in the literature.

The second chapter provides a discussion of the second key concept of Vocabulary Learning Strategies and strategic competence. The importance of developing learner autonomy is first explained and various definitions and classifications of VLS by prominent researchers are presented. The chapter then concentrates on detailing how EFL learners use the different VLS in various

contexts and at different proficiency levels, and how their prior lexical knowledge in other languages can help them when learning a new language.
The third chapter focuses on the relationship between the two variables under study; it attempts to discuss how VLS use correlates with language proficiency in general and vocabulary breadth in particular. It also addresses how the use of technology-based resources can contribute in VLS use in foreign language contexts. Most importantly a review of key studies investigating the correlation between VLS use and vocabulary size growth – worldwide, including among Arabic speaking EFL students - provides a basis upon which the present study has been developed and in light of which the findings will be compared to.

The second part of this work deals with the empirical study itself. Thus, the fourth chapter presents the methodological design of the present work, including the sampling and context of the study. A detailed explanation of the research instruments is then given in order to provide a rationale for the choice of these tools and a thorough explanation of the way they were implemented in this work.
The fifth chapter presents the results obtained from the analysis of the data gathered from the two first research tools, after data were transformed into quantitative as well as qualitative information. In this chapter, the order of the results follows the order of implementation of the tools. Besides, at the level of each instrument, the data for each of the four sample groups are presented first before a comparison throughout the different proficiency levels is set up to demonstrate the growth patterns of vocabulary size and VLS behaviour.
Chapter six then continues the analysis of the results by focusing on the data obtained from the third instrument related to the participants` retrospection on their own vocabulary learning preferences and difficulties. At the end of this chapter, a detailed analysis of the correlation between the two constructs under study - vocabulary size growth and VLS use - is also drawn.
After the qualitative and quantitative presentation of results, the seventh chapter attempts to answer the research questions by interpreting and discussing the outcomes of the work in light of the findings of previous research in the field of

vocabulary size growth and use of vocabulary learning strategies. The aim of this chapter is to measure the possible impact of the findings obtained from this study with Algerian EFL students, and to check whether these results concord, complement, or contradict the findings of other researchers.

The work ends with a conclusion that deals with some pedagogical implications drawn from this study and suggests scope for further research in the field. The limitations of this work are also acknowledged and described to encourage future researchers to undertake complementary studies in the field of vocabulary knowledge and use.

PART ONE

Theoretical Background

CHAPTER ONE:

Issues of Vocabulary Size and Growth in Foreign Language

Introduction 13
1.1 Defining Lexical Competence.....15
1.2 Vocabulary Knowledge, Comprehension and Acquisition.....18
1.3 Vocabulary in Receptive and Productive Skills 25
1.4 Vocabulary Instruction 31
1.5 Quantity and Quality of Vocabulary Learning 33
1.5.1 Defining Vocabulary Size 35
1.5.2 Measurement of Vocabulary Size 37
1.5.3 Vocabulary Growth 42
Conclusion 47

Introduction

This first chapter of the literature review attempts to set up a theoretical background about the first major construct researched in the present work, namely vocabulary size, its measurement, as well as its growth in EFL learning. A number of concepts related to overall lexical competence, vocabulary acquisition, learning and teaching, and the place of the vocabulary component within the four language skills are also addressed.

Words are the key elements to people wanting to express their thoughts, gain knowledge, or learn new concepts in any field. This is particularly true in the educational scene, as the academic success of students is usually closely related to their vocabulary knowledge and use in their field of study. At university, vocabulary knowledge can determine the extent to which students are able to understand what they read or what they hear, as reading textbooks and listening to lectures are usually the major sources of input for university students, especially in a foreign language environment. Overall comprehension is obviously more than simply identifying words and recalling their meanings; it also involves other grammatical, discourse, sociolinguistic or strategic competences (Canal & Swain 1980). However, one has to acknowledge the fact that absence of a sufficient proportion of words in any aural/oral text can lead to a breakdown in the comprehension process, and at university level such breakdown can quickly lead to failure.

Having a limited vocabulary constitutes a hurdle for students to comprehend a written text for instance, which is usually the most common academic activity to get information. The difficulty and frustration to read without understanding the message can easily lead poor readers to skip this activity. Thus, they end up reading less, which reduces their chances to improve their vocabulary, when vocabulary could help them develop their reading comprehension skill. This vicious circle is one of the elements that can easily get quite problematic as students reach higher academic levels. Besides comprehension, anyone learning

EFL also needs sufficient vocabulary to be able to express himself adequately in writing and speaking. This is particularly true at university as students' performance is usually tested through written or oral assignments; and therefore, their vocabulary repertoire needs to get richer as they move to upper proficiency levels.

An EFL learner with limited grammatical mastery would possibly be able to convey a message while communicating in the target language, even though his speech might be full of grammatical mistakes. However, the same learner with a very small vocabulary would certainly find difficulties to communicate if he does not have enough basic vocabulary to express his thoughts. Thus, the communication is more prone to breakdown. The importance of lexical knowledge has been stressed by a number of researchers, such as Wilkins (1972) who stated that "...without grammar very little can be conveyed, without vocabulary nothing can be conveyed" (Wilkins 1972:111. In Singleton 1999:9). Mentioning the impact of grammar and vocabulary on the comprehension process, Widdowson (1978) also believed that native speakers of English would certainly find difficulties understanding grammatical utterances if the vocabulary used is inaccurate, while ungrammatical utterances with appropriate vocabulary would be easier to comprehend.

Among the various components of a language, vocabulary is probably the most dynamic and changing. Indeed, while other aspects such as grammar, syntax, phonology are quite stable and rarely influenced by external factors, words of any given language are in continuous movement since new words are constantly added to dictionaries as a reflection of the evolution of humans and changes in society and the world in general. For instance, in recent years, social media have been a fruitful source for a number of new English entries in Oxford dictionaries. Words such as *'Craptacular*' (remarkably poor and disappointing), or acronyms like *'YOLO*' ('you only live once'), were added in 2016. Other words like "*blog*" (a website in which a person/organisation write regularly about events/topics that interest them), "*youtuber*" (a person who makes and shares videos on YouTube website), or "*podcaster*" (someone who creates audio/video

recordings and puts them on the internet to be accessed) were also incorporated into dictionaries due to the emergence of social media channels as a major source of information. Moreover, social changes have also influenced the incorporation of new words like *'Gender-fluid'* (a person who doesn't identify with a single fixed gender), *'bronde'* (hair dyed both blond and brunette), or more recently entries like '*Covid-19'*, *'lockdown'*, and *'Black lives matter'*.

One has to admit that the English language, like any human language in the world, will never stop evolving, which certainly has an impact on its vocabulary learning and teaching. Adding to other aspects of language, students of English as a FL face the challenge of keeping up an appropriate level and amount of lexical knowledge in order to achieve comprehension in any context. The challenge is that language instructors should understand the mechanisms underlying this knowledge in order to assist the learners in developing it.

As the main focus of the present study is on vocabulary size and the vocabulary learning strategies that can contribute to its growth, this chapter gives an overview of the concept of vocabulary size, growth, and the complexity of its development. It starts with an analysis of the overall concept of lexical competence, i.e., vocabulary knowledge and what this knowledge implies, before presenting the mechanisms through which vocabulary is learned and taught. A critical account of the principal notions underlying vocabulary breadth and measurement are then set up.

1.1 Defining Lexical Competence

Throughout the acquisition process, learners internalise rules that are gradually organized under the form of competence. This system is used to comprehend input and produce language. The nature and content of competence has long been a source of disagreement among scholars. The assumption that prevailed in the early studies on the concept of competence was that grammatical knowledge is sufficient for an individual in order to be competent in a language (Chomsky 1965). According to Chomsky, only the linguistic rules, i.e. the

internalised grammar that govern a given language, are mentally represented by the learner. This knowledge of the language system constitutes a "homogeneous" competence that is called upon to achieve performance, i.e. comprehension and production of language. As it first emerged in Chomsky's works, linguistic competence mainly referred to syntactic competence, embodying knowledge of the rules or "pattern relations" that structure the way words come together in a sentence.

However, changes were brought in the 1970s by sociolinguists who felt gradually that there were many more parameters to consider when accounting for appropriate mastery of a language, whether first or target language. Hymes (1972) was among the first sociolinguists who investigated some extended notions of competence. He broadened the concept of linguistic competence by formulating the theory of communicative competence, which emerged as a reaction against the inadequacy of Chomsky's distinction between competence and performance. Hymes sees competence as a "heterogeneous" construct including not only knowledge of the linguistic rules of a language but most importantly knowledge of appropriate stylistic use of language, i.e. a variable set of rules that can be drawn upon in different ways and contexts. He stated that "there are rules of use without which the rules of grammar would be useless" (Hymes 1972: 45 quoted in Scarcella & Oxford 1992:68.), which means that being competent in a language implies knowing the grammar of the language as well as knowing what, to whom, when and in what circumstances the language is used. He was thus among the first to speak about communicative competence as being a system that enables the learner to know the overall rules underlying a target language, marking a shift of interest from linguistic competence towards communicative competence. Although lexical-pragmatic competence was not stated explicitly in Hymes' theory, it is clear that using the right words/phrases appropriately, taking into account to whom and when they are being used, is part and parcel of one's communicative competence.

Many scholars such as Labov (1972), Halliday and Hasan (1983) and others extended this notion of communicative competence and contributed to

Second Language Acquisition (SLA) theory. However, there was confusion and disagreement on what constitutes this communicative competence, and a number of classifications were suggested. In the present study, we shall adopt Canale & Swain's model of communicative competence (1980), as illustrated in the Tapestry Approach (Scarcella & Oxford 1992), which we believe is a comprehensive model of communicative competence that can best describe the problem under study. This model of communicative competence views language comprehension as being shaped by four areas of language knowledge, namely grammatical, discourse, sociolinguistic and strategic competences. The construct of grammatical competence within the framework of communicative competence is described as the ability to identify and effectively use the different phonological, morphological, lexical as well as syntactic structures of a language while communicating. Discourse competence refers to knowledge of the rules of cohesion and coherence that make a language meaningful, as well as knowledge of the different discourse genres proper to a language and ability to understand and use them coherently in communication. Sociolinguistic competence is shaped by the appropriate understanding and use of the common rules of interaction in various communication situations characterising a given speech community and culture. It implies that a learner has to know the different aspects of a culture, including social structures, values and beliefs, in order to understand and communicate with the members of that culture in the intended and appropriate way. The final aspect of communicative competence, strategic competence, refers to the appropriate use of different learning and communication strategies.

Despite the recognition of the complementary contribution of each aspect of communicative competence, within this framework, grammatical competence is given a crucial importance because the form of a language is considered as a vehicle for language content and appropriateness. According to Canale & Swain, "there are rules of language use that would be useless without rules of grammar" (Canale & Swain 1980:5, in Scarcella & Oxford 1992:72). This implies that a learner who knows the rules that govern the use of a target language would not

be able to understand and communicate competently if he does not know the grammatical principles that make language meaningful.

Even though grammatical competence was given an important role in communicative knowledge at that time, lexis did not receive the interest it deserved within this linguistic construct, compared to other grammatical aspects such as phonological, morphological or syntactic forms.

Lexical competence is a crucial aspect in language teaching which has long been de-emphasized in the English classroom where it was generally subordinated to the study of grammatical structures (Nation 1998). Awareness of the role of vocabulary knowledge in delimiting understanding of a foreign language has led researchers such as Laufer (1997) to emphasize the importance of acquiring and teaching a minimum of vocabulary required to understand a text, as "no text comprehension is possible, either in one's native language or in a foreign language, without understanding the text's vocabulary" (Laufer 1997: 20).

Meara (1996) also underlined the crucial importance of lexical competence stating clearly that "lexical competence is at the heart of communicative competence". (Meara 1996: 35). Supporting the fact that developing lexical competence does not have to be related to other aspects of language knowledge such as semantics or syntax; Meara was among the researchers who stressed the need for teachers to enlarge the size of learners' lexical competence through instruction. In other words, it was believed that teachers should concentrate on building up learners' lexical size and accuracy. This view was also sustained by researchers such as Harmer (1997), who stated that "if language structures make up the skeleton of language, then it is vocabulary that provides the vital organ and flesh" (Harmer, 1997: 153)

1.2 Vocabulary Knowledge, Comprehension and Acquisition

One cannot discuss word knowledge without determining what is meant by a word. Given that the present study focuses on the amount of word knowledge EFL students have, it is important first to explain what elements are being counted.

There are three components that should be distinguished, namely *a token, a type* and *a word family* (Nation and Webb 2011). A token refers to every single word in an oral or written text that stands syntactically alone; it is usually the reference which is used when one wants to count the number of words in a given text. *Types* are the words of a text that are not repeated, i.e., if a word is uttered or written more than once it is considered as one type. However, the two concepts of *token* and *type* cannot be used when counting vocabulary as the notions of repetition and derived forms of same word are not taken into account. Indeed, if tokens are used to calculate the number of words in a text, they in fact include all the words without exception, even if the same word is used many times in the same text. Moreover, using types as a method of counting is also seen as inefficient since the derived forms of the same word are counted as different types (Nation & Webb 2011). Thus, the best lexical unit that can be used when calculating vocabulary size should be *word families,* which refer to

> "a base word and all its derived and inflected forms that can be understood by a learner without having to learn each form separately. So, watch, watches, watched, and watching may all be members of the same word family for a learner with a command of the inflectional suffixes of English. As a learner's knowledge of affixation develops, the size of the word family increases." (Bauer and Nation 1993: 253)

Thus, if a learner knows the meaning of a given word, one can assume that he also knows the meaning of all the derived and inflectional forms of that word, which constitute one word family.

In light of the above discussion, the concept of *word family* will be used as a reference in counting the vocabulary size of the students in the present work, which means that when a student is said to know a word, what is meant in fact is that he knows the family of that word.

Scholars have long considered that the process of comprehension of aural or written language in general - and lexical comprehension in particular - goes through a hierarchical order, i.e., that listeners or readers process the input through distinct levels going from the smallest to the largest segment of language. Behaviourist theory believed that a text is understood by means of a "bottom-up" processing that is linear and data driven involving the decoding of

the language system going from isolated units of the text, i.e., letters, words, sentences to finally achieve comprehension (Gough 1972). This mechanical decoding advocated by the behaviourist model failed however to consider the unpredictability of language that does not allow for this step-by- step processing.

Later on, other scholars proposed an alternative model, the cognitive model that operates in the opposite direction, namely a "top-down" model. This process goes from background knowledge of the topic and discourse towards a more concrete analysis of the linguistic units in the text in hand. Thus, in a top -down model the learner uses his prior knowledge to understand the input (Goodman 1967). However, this top-down model of comprehension requires good language competence, which is acquired only at an advanced level of language proficiency. That is to say, such processing can hardly be used by a beginner who does not have a good linguistic mastery of the target language yet.

Thus, on the basis of the deficiencies of the two paths of comprehension functioning individually, Stanovich (1980) proposed the "interactive-compensatory" model according to which the learner can process a text more efficiently by balancing or shifting from top-down to bottom-up processes or vice versa, following the demands of the text in hand. During the complex mechanism of comprehension, the effective learners are believed to be those who use both processes at a time, that is, those who

> "...actively engage in the process of comprehension: they apply the relevant internal information available to them in order to construct their own interpretation of what has been said. They do not passively receive and record". (Anderson and Lynch 1988:6)

In this simultaneous use, the bottom-up process allows the listener or reader to be sensitive to the input received which may not fit his hypotheses about the content and structure of the text, while the top-down process helps the listener/reader solve ambiguities of the input by using his background knowledge. This implies that an interaction between the learner's schematic knowledge of content and structure on the one hand and the text, on the other, is involved during comprehension. It is this interaction that can lead to efficient interpretation.

According to a number of researchers, such as Anderson (1980), the concept of prior knowledge, i.e., "schemata", dates back to the 18th century during which it was claimed that all the new ideas that a reader/listener receives can be meaningful only when they are related to what is already known. This view developed later and formed the basis of Gestalt Psychology (1912) according to which an experience such as language is mentally represented as a whole entity, not as distinct parts. This theory influenced a number of psychologists such as Bartlett (1932, quoted in Anderson & Lynch 1988), who went further to speculate about the complex human mental organization. Among them, Ausubel (1968, quoted in Anderson & Lynch 1988) believed that the new information found in a text has a direct link with the learner's already known general ideas. Even though a great number of previous theories had already studied the concept of cognitive knowledge, the actual settlement of a proper Schema Theory as a model started in the late 1970's with the emergence of the notion of schema (Anderson and Pearson 1984). Schema refers to "large, complex units of knowledge that organize much of what we know about general categories of objects, classes of events and types of people" (Anderson 1980:128)

Schema Theory - based on the psycholinguistic model of reading comprehension- states that concepts can be meaningful only when they are related to something the subject already knows. That is to say, when a new language experience is encountered, it is understood only if it can be related to an existing schema and simultaneously become part of it. Thus, the comprehension of a text is considered to count much on the schematic knowledge of the reader/listener who makes assumptions about the information.

According to Schema Theory, input is mapped against a particular schema whose aspects must be in return compatible with the input information. It is this idea which gave rise to the two basic information processing models for comprehension mentioned earlier, namely: top-down and bottom-up processes.

Another element of vocabulary learning that has interested researchers is the storage of all the words a learner acquires, and how these words are organised and retrieved from the learner's head when needed for comprehension or production of language. Cognitive psychology, including schema theory, advocated that prior or background knowledge is organized and stored in the long term memory of the learner who can have access to it when interpreting discourse. In order to make sense of a given piece of discourse, the listener/reader must match up his own schematic knowledge with that of the speaker/writer. However, the way a learner can decide about what aspects of this knowledge are relevant to the interpretation of specific utterances is still a mystery for researchers. Some of them, however, attempted to find possible explanations to this decision making process.

According to Kintsch (1988, quoted in Harben 1999), the activation of background knowledge while processing an input is executed step by step. Indeed, the meaning of a particular element of the input acts as a trigger that activates background knowledge at random. Then, a pre -selection is processed by the learner to determine what schemata are relevant to the text and what schemata are irrelevant. Finally, a combination is formed by the learner between the appropriate background knowledge and the input in order to construct a mental representation of the gist of the text. In this perspective, one of the aspects of the learning context that can be influential on the vocabulary acquisition of EFL learners is their mother tongue. Some studies have shown that the L1 of a learner does have an impact on vocabulary acquisition. For instance, having similar or resembling orthographic or semantic cognates in the L1 can logically make the learning of these words in the FL much easier (Meara & Buxton 1987, Meara & Jones 1990). The possible facilitating effect of L1 cognates can therefore be an area that instructors and syllabus designers can make use of in order to adjust and maximise the vocabulary learning process, as raising learners' morphological and structure awareness can facilitate cognate recognition and consequently lead to easier lexical learning (Molnar 2010, Hancin, Bhatt & Nagy

1994). This aspect of the use of L1 while processing the TL will be thoroughly discussed in chapter two in relation to vocabulary learning strategies.

Lexical knowledge can be viewed from different angles. It could refer to the receptive vocabulary that one needs for aural/oral comprehension, or to the productive vocabulary needed to speak and write (Nation 1990). Receptive vocabulary is the number of words that one can recognize and understand whether orally or visually, i.e., when listening or reading. The words that one can produce in a spoken or a written form are categorised as productive vocabulary. In this perspective, knowing a word in the TL is not easy for EFL/ESL learners as it involves knowledge of various aspects of the word receptively and productively. According to Nation (2001), knowledge of a lexical item implies the ability to understand it while reading or listening, as well as the ability to use its written and spoken forms appropriately. Besides, he views vocabulary knowledge as covering three major concepts, namely form, meaning, and use in both receptive and productive ways. Knowledge of the form of a word means knowing its sounds and spelling, while knowledge of meaning implies the ability to connect its form with its appropriate meaning, knowing its various possible meanings in different contexts, as well as knowing what other lexical items can be associated with this word. The concept of word use involves knowledge of the part of speech of the word, its grammatical roles, and possible collocations (Nation 2001).

There were many studies that investigated these two dimensions of receptive and productive word knowledge to find out that language learners usually have a larger receptive repertoire than a productive one (Fan 2000, Webb 2008). This is due to the assumption that, in terms of order, learners tend to learn receptive words before being able to learn productive ones and put them into practice. Moreover, when exposed to aural or written input, learners have no control over the vocabulary they receive; they need to be able to decode it in order to achieve comprehension. When speaking or writing, however, they do have the possibility to choose and control the vocabulary they want to use - fitting their proficiency

level - in order to achieve acceptable production (Nation 2007). Taking this notion of control into consideration, learners are thus in need of knowing more receptive vocabulary than productive vocabulary in order to cope with any possible input.

The present study, even though acknowledging the complementary features and importance of both receptive and productive dimensions of vocabulary knowledge, would focus on measuring and analysing the receptive written vocabulary size exclusively, as it is believed that this aspect is one of the major components of language that might impact EFL students' achievements at university as written input is the major source of input in the Algerian EFL context.

Acknowledging the complex nature of FL/SL vocabulary acquisition process, one of the main distinctions mentioned in the vocabulary learning/teaching literature is the one between implicit and explicit vocabulary learning. Implicit learning - also called incidental learning - refers to vocabulary learning that can take place subconsciously while listening or reading in the TL, with a minimum of attention paid by the learner (Huckin & Coady 1999). In parallel, explicit vocabulary learning is believed to happen as a result of the learner's conscious and active use of vocabulary learning strategies which facilitates the learning process and lead to vocabulary acquisition. (Ellis 1995).

Taking the process of vocabulary learning in an L1 as a reference, a common belief in the literature is that there are so many words in a language that can never be covered by instruction; the largest quantity of words learned by an L1or L2 learner is certainly achieved through incidental learning (Laufer 1991). In other words, learners learn implicitly most lexical items of their repertoire through exposure to the TL, and their learning is indirect as it is usually achieved through learning from context. This process has its roots in Krashen's Input Hypothesis according to which repeated exposure to lexical items in various written or aural contexts is what allows the learner to internalise and therefore acquire words subconsciously (Krashen 1989). However, this reasoning can be

true mainly in the context of L1 learning, as thousands of new words can be acquired by young children learning their L1 at school or at home through incidental exposure to words in different contexts (Nagy, Hermann & Anderson 1985).

Researchers have expressed doubts about this type of learning in the context of L2 and claimed that the vocabulary gains that one gets through reading or listening for instance cannot be considered as significant enough (Meara 1997, Groot 2000). They believed that the context cannot provide enough repetition of the vocabulary items to allow the learners to acquire them in this indirect way because L2 instruction is much more limited than L1 instruction. The rationale behind this view is that a word is acquired and retained in the mental lexicon when there is enough exposure to this word in various contexts during which the learner picks up a different feature of this word on each encounter.(Meara 1997, Huckin & Coady 1999, Groot 2000).

Moreover, for incidental vocabulary learning to happen effectively, the learner needs to have sufficient mastery of the language in order to achieve acquisition (Schmitt & McCarthy 1997). For instance, inferring the meaning of a word from context, understanding the context, and being able to decode the written form of new words are all processes that require not only high proficiency level in the TL or a large lexical repertoire but also a good strategic competence -the latter concept will be explained and discussed in the forthcoming chapter. Thus, significant vocabulary gains can be reached incidentally for high proficient learners; however, learners who lack linguistic and strategic knowledge might not benefit significantly from this type of learning.

1.3 Vocabulary in Receptive and Productive Skills

Vocabulary is crucial for EFL and ESL learning, and one way of explaining this importance is through the analysis of the learners' needs as the role that vocabulary - or any other aspect of the target language -plays in the learning process is closely related to what learners need this language for.

For instance, an EFL student enrolled in an English language university degree course would need to become competent in all components of the language, including vocabulary, to be able to embrace an English language related career like teaching. One would expect him to understand any type of input in the target language while listening and reading, and to communicate correctly and comprehensibly when speaking or writing. Considering these four language skills, the vocabulary that an EFL student needs to know would certainly have an impact on the way he would use the receptive and productive language skills to read a novel, understand a lecture, make a presentation, write an assignment or a report, answer exam questions, etc

Research in second language education has come up with key findings about what influences and what results from vocabulary knowledge. One of its largely documented findings is the fact that vocabulary knowledge is strongly related to reading comprehension (Stahl 1999).

A number of studies (Anderson & Freebody 1981; Cunningham & Stanovich 1997) have demonstrated the high correlation between vocabulary knowledge and the skill of reading comprehension. Such studies established the gains in reading comprehension that vocabulary instruction can offer. Anderson and Freebody (1981), Stahl (1998) and Laufer (1991), showed a strong correlation between lexical knowledge and reading comprehension in the studies they conducted with non-English learners. They asserted that low reading comprehension is generally closely related to low vocabulary knowledge. This does not imply that "syntactic complexity" or lack of strategies cannot be a source of problems in reading comprehension, but the degree of their influence seems less important than that of lexical knowledge (Anderson 1984).

Thus, even though "reading in L2 is both a reading problem and a language problem" (Laufer 1991: 21 quoted by Coady and Huckin 1997), the solution for the first type of problem comes after solving the second type. In other words, to achieve good comprehension, the learner needs to have appropriate knowledge of the linguistic code of the target language, including vocabulary, before being able to go beyond the text to infer meaning through the use of strategies.

The reading task is a complex mechanism implying several mental processes before reaching comprehension. For example, to be successful while exposed to written input, the reader needs to be able to extract the main idea of the text, identify its type and purpose, as well as to infer meaning of unknown words. Thus, even though it is generally agreed that reading competence is not solely dictated by vocabulary and that other language components impact it, vocabulary knowledge is considered to be the most influential and predicting factor on reading comprehension (Laufer 1996).

Research in the field of vocabulary knowledge has heavily benefited from the reading skill (Laufer 1996, Qian 1999) as researchers have used this skill to investigate the different aspects of lexical knowledge, assuming that "there is a fairly straightforward linear relationship between growth in vocabulary knowledge for a text and comprehension of that text" (Schmitt et al 2011:39).

If the role of lexical knowledge in achieving comprehension has been studied by a number of researchers in relation to the reading skill, little research has been undertaken in relation to the listening skill. However, listening comprehension research has considerably benefited from findings in the field of reading comprehension. Both the listening and reading skills involve exposure to input and mental processes to comprehend this input. Comprehension processes in both skills are believed to be basically identical. Markman (1979), Garrod (1986) and Cole and Jakimik (1980, in Anderson and Lynch 1988), state, on the basis of their results that there is the same sequential processing at work in listening and reading. O'Malley and Chamot also remark that "language comprehension is viewed in cognitive theory as an active constructive process that applies equally to listening or to reading" (O'Malley and Chamot 1990:37).

Even though the listening and reading skills are both receptive processes involving more or less similar cognitive mechanisms, "listening is not merely an auditory version of reading" (Lynch & Mendelsohn 2002:197). Thus, one can assume that vocabulary does not necessarily play the same role with the two skills. In fact, the correlation between vocabulary knowledge and reading

comprehension has proved to be stronger than with the listening skill (Mecartty 2000). Nevertheless, a number of studies did demonstrate that vocabulary knowledge - and more specifically vocabulary size - had a highly significant relationship with listening comprehension performance (Kelly 1991, Bonk 2000, Staehr 2009). As Laufer and Sim (1985) claimed, learners consider that the main tool for text comprehension is the knowledge of the vocabulary used in the text, and "...tend to regard words as main landmarks of meaning" (Laufer in Coady and Huckin 1997:21). Moreover, before determining whether the listener knows the vocabulary of an aural text, one has to consider the dimension of words recognition in a continuous stream of speech. Indeed, knowing a word does not guarantee its recognition or identification in connected speech, as the contextual and phonetic characteristics of this word in a sentence make it sound differently from the way it is uttered in isolation.

Word recognition is said by scholars, such as Pearson (2002), to be the foundation of the comprehension process. However, there is much more to comprehension than word recognition. The listener needs to discern the grammatical elements to make a distinction between nouns, verbs, adjectives, adverbs, pronouns, etc, each element with its specific function; he must also make the appropriate connections to get the meaning of a sentence then a text. To reach this understanding, he also has to draw upon his prior knowledge of the different elements of the sentence and integrate it into the discourse of the situation. Thus, in the pyramid of sentence comprehension, word recognition is the basement without which none of the consecutive processes can be achieved appropriately. Rost (1990, 2002) classifies major causes of listening comprehension problems into three categories, namely, lexical, grammatical and conceptual. Lexical causes, according to him, range from the mishearing of an item or substitution to consider the possible ambiguities in lexical use or the false cognitive representations that a listener might have of a lexical item. The inaccessibility of some words is also stated as a cause of communication breakdowns. Likewise, Goh (2000) tried to identify "real time" listening comprehension difficulties of a group of ESL learners, on the basis of their own

introspection reports. She mentioned a number of factors that influence listening comprehension, namely speech rate, lexis, phonological features, background knowledge, text structure and syntax, insufficient exposure to the FL and lack of motivation. The fact that five of the problems identified by Goh out of ten were due to word recognition is quite revealing and shows that vocabulary recognition is a crucial process in listening comprehension. If the word is known to the listener, it is recognised when the listener selects the most appropriate candidate from his mental repertoire. The available choices can be narrowed down through the use of not only linguistic but also contextual and extra-linguistic information as indicators. What if the words are unknown to the listener, how would he cope with that?

Lexical ignorance, as an obstacle to listening comprehension, was also treated by Kelly (1991). In his study, Kelly supported the idea that the most handicapping listening comprehension difficulty experienced by advanced language learners is lexical ignorance. According to Kelly, mastering a word implies:

> " …knowing its form, whether it can be incorporated as frequent, infrequent or moderately frequent, whether it is suitable in a given context, how it behaves in relation to other words, the different semantic features that the word possesses, and the various meanings that may be attributed to it" (Kelly 1991:138)

Ideally, the mastery of these word characteristics by a learner would allow him to identify the word in or out of context, to make predictions about the lexical item and to make use of his background knowledge effectively so as to avoid misperception. However, it is not realistic to expect a non native EFL learner to have such a high level of lexical knowledge, when the native speaker himself does not have such total mastery.

In terms of the productive written language skill, it is commonly agreed that an EFL learner with good lexical knowledge in the target language would be able to produce a well-written academic text (Laufer 1994, Staehr 2008). This is certainly significant for university students who are expected to write various kinds of texts and assignments with not only correct grammar, syntax, discourse and ideas, but also very rich and diversified vocabulary.

In an attempt to research the impact of the number of words known by EFL learners and their performance while writing a 450 word text, Staehr (2008) measured the vocabulary size of 88 EFL lower secondary education students in Denmark, then corrected their pieces of writing taking into consideration the ideas as well as the grammatical, coherence and lexical mistakes. Comparison of results demonstrated that the higher the vocabulary size of the learners was - especially knowledge of the first 2000 most frequent words - the more likely they were able to score above average in their writing test.

Even though the relationship between the speaking skill and vocabulary knowledge has been less documented than for the other language skills, a correlation does certainly exist. When speaking, an EFL learner would have difficulties to convey a comprehensible message if he lacks mastery of basic grammatical, syntactic or discourse rules. However, not having the appropriate vocabulary or "losing his words" would most importantly cause communication breakdown. One of the few studies investigating the relation between speech fluency and vocabulary knowledge was undertaken with 56 university students of different origins learning English, Italian or French languages in France (Hilton 2008). This study showed that 78% of the pauses and hesitations of foreign language learners while speaking were due to lack or search for appropriate vocabulary, when other grammatical difficulties did not seem to hinder their speech fluency.

The highly influential role of vocabulary knowledge on speaking fluency was also confirmed in a study documenting the contribution of vocabulary size and depth to the performance of 224 Japanese EFL high school learners with a beginner to low-intermediate level in English (Koizumi & In'nami 2013). These researchers came to the conclusion that while describing pictures or introducing themselves orally, the learners who performed better and more fluently were the ones with higher vocabulary size.

1.4 Vocabulary Instruction

Despite the fact that vocabulary is critically important for any language learner, the learning and teaching of this component has been undervalued in second language acquisition research. Vocabulary has long been considered as a part of language not carrying its own dynamics to be taught explicitly and separately; it was seen just in terms of grading and selection and thus its teaching aimed only to assist the teaching and learning of grammar and syntax. The air of change was raised during the 1970's with scholars such as Wilkins (1972) and Lord (1974) who recognised the prominent role of vocabulary. Indeed, the 1970's marked a turning point among many scholars as the vocabulary component stopped being the "Cinderella" of language teaching (Lord 1974) and various studies shed light on the importance of teaching it. It is true that the learning process underlying vocabulary acquisition is now much richer than it was in the past with a good number of studies undertaken in the field; however, the teaching of this language element is still neglected compared to other language components such as grammar, syntax, phonology.

It is now commonly agreed in the literature that learning a large number of lexical items is crucial in the EFL/ESL learning process, and that vocabulary acquisition is a gradual process that is very demanding for the students. This means that students view this part of learning as the most challenging task that causes them problems in their EFL learning, and that the best way - from their perspective - to help them in this task would be to teach vocabulary explicitly (Folse 2006). Considering the fact that the ability to converse in English requires knowledge of a minimum of 2,000 words families, 3,000 words to comprehend authentic written texts, and at least 10,000 words to be able to understand academic texts, Folse (2006) sees the need to develop appropriate materials and syllabuses to teach vocabulary in a way that helps EFL/ESL learning efficiently.
Even though vocabulary knowledge has been recognised as a crucial component in the EFL learning process, as well as SL success (Schmitt, Jiang & Grabe 2011), there is still very limited attention given to it in most teaching curricula, as it is still relegated to other courses. This surprising fact is possibly due to the

common shared belief that vocabulary can easily be learned indirectly through various language courses, and that most EFL learners are able to pick up new words while learning grammar, language skills or content subjects. Indirect vocabulary learning of new words can take place while reading and listening to input thanks to the insights provided by the context most of the times; and an important number of words can indeed be learned in this way (Honeyfield 1977, Hulstijin 1992, Fraser 1999, Gass 1999, Brown et al 2008). Teaching methods encouraging a great deal of reading and listening to the target language can therefore be efficient if they include graded exposure to input.

However, the unlimited number of words that any language possesses makes the task of EFL/ESL learners quite complex as they will for sure not be able to learn all the words, and even if they attempt to learn the maximum, they would only be able to achieve that goal step by step on a gradual basis. Moreover, depending on the purposes for which the language is needed, some words might possibly be more important and more of a priority to learn than others. As such, research in the area of language teaching in general and vocabulary teaching in particular has raised the issue of the way vocabulary should be graded and organized effectively to lead to learning and acquisition. It was believed that priority should be given to vocabulary teaching in a way that would make the students achieve communicative success, bearing in mind that they will only be able to acquire a limited number of lexical items (McArthur 1998).

Besides, teaching learners strategies to guess the meaning of words from context can also be a complementary tool for vocabulary instruction (Clarke & Nation 1980). If incidental vocabulary learning is undoubtedly important, its complex and unobservable nature makes it however quite difficult to examine and assess. In any language classroom, learners can be encouraged to read and listen, but the extent to which specific input leads to better learning of vocabulary through language skills can be a source of questioning. Thus, direct vocabulary learning - i.e., teaching strategies to guess meaning of words from context for instance - can also be efficient as a complementary method in order to target specific vocabulary learning areas and possibly speed up the lexical learning process

(Nation 1983, 1990). Thus, the crucial role of direct vocabulary learning can be quite interesting for instructors and syllabus designers, and knowing how vocabulary learning strategies can eventually lead to efficient vocabulary acquisition can classify strategies in terms of priorities in language and vocabulary teaching. This is one of the aspects investigated in the present study, as the focus is on how the use of vocabulary learning strategies can impact the growth of vocabulary size of EFL students. This part will be detailed and explained in the following chapter.

A common belief in the past was that exposure to aural and written input and picking up vocabulary incidentally is the most effective way to learn words in a TL (Gass 1999, Brown et al 2008). A change was observed in 1990's, as many researchers started to advocate the benefits of direct integrative vocabulary instruction (Laufer 1991, Webb 2008). It was thought that EFL learners would gain a lot of vocabulary quite rapidly- specifically high frequency words - if this component is taught in isolation instead of being related to other language aspects. However, despite the increasing interest in direct vocabulary instruction approach, there were limited insights into how such direct instruction could be integrated within a FL curriculum concretely.

1.5 Quantity and Quality in Vocabulary Learning

Acknowledgement of the highly influential role of vocabulary knowledge on the four language skills is now commonly agreed within SL research. This role is important at the various proficiency levels an EFL learner could go through. However, it is undoubtedly even more crucial at university level where the expected standard in the four language skills - and therefore in vocabulary mastery - is meant to be high. Thus, when discussing the extent to which an EFL student is supposed to know the vocabulary of the target language, there are two dimensions that should be considered, namely depth and breadth (Anderson & Freebody 1981; Read 1988; Qian, 1999; Schmitt 2010).

Breadth refers to the vocabulary size or quantity of the lexical items that one can understand or produce, while depth constitutes the quality of this knowledge in

terms of mastery of the different aspects and meanings of the lexical items. It is agreed that when talking about language learning in general and vocabulary learning in particular, both dimensions of breadth and depth are important to focus on. The importance of depth lies in the fact that a learner needs to have accurate knowledge of the various meaning facets of a word that goes beyond the superficial recognition in order to achieve appropriate comprehension and use of it (Schmitt 2008). Besides, having a large lexical breadth is crucial for anyone wanting to comprehend and use the TL effectively without assistance, when knowledge of 98% of the words in any given text is considered by many researchers as a key requirement to achieve comprehension and avoid communication breakdowns (Hu & Nation 2000, Nation 2001, Schmitt, Jiang & Grabe 2011).

Even if both dimensions of breadth and depth of vocabulary are important to develop during the vocabulary learning process, breadth usually receives more emphasis since it is a key parameter that can easily measure the progress of language learning in general and vocabulary knowledge in particular (Lu 2008).

In second language acquisition (SLA) research, studies in the field of vocabulary learning focused mainly on the depth of vocabulary knowledge of learners, aiming to set up the aspects involved in knowledge of words (Nation 1990, 2011; Qian 2002). However, besides determining what is meant by knowing a word, i.e., vocabulary depth, it is also equally important to set up the breadth of this lexical knowledge, as the number of words that learners know – or should know – is a key reflection of their overall lexical competence. (Meara 1996, Laufer 1997, Schmitt 2000, Nation 1990, Nation 2001). Thus, vocabulary size or "breadth", more than depth has been viewed as a key element in the success of EFL learners, as many studies have shown its strong correlation with good reading comprehension (Koda 1989), with speech fluency (Laufer 1998) as well as with writing quality (Astika 1993). Moreover, it also seems to have a positive influence on the overall development of language proficiency as most learners consider the growth in the number of words they know as evidence of their progress in their language learning performance (Laufer 1998).

In the present study, even if reference is made to depth (quality) of vocabulary knowledge, the focus is on the breadth (quantity) or size of the students' vocabulary and its relationship with the vocabulary learning strategies they use.

1.5.1 Defining Vocabulary Size

In the discussion regarding the vocabulary size that learners need to reach in order to be successful, the present study addresses the reading skill as it is the most common skill used by researchers when determining the vocabulary size objectives. Moreover, the fact that university instruction - especially in an EFL environment - does heavily count on reading as a source of most input, makes this skill a key tool for academic success (Schmitt, Jiang & Grabe 2011).

The idea of knowing what is the minimum vocabulary size that EFL students need to have in order to be competent readers, writers, listeners, and speakers, is an element of FL learning that has long interested researchers, instructors and syllabus designers. Vocabulary threshold is seen as important because it allows teachers to know what level their learners have to reach according to what they need the language for, and syllabus designers to adjust the learning goals and meet learners' needs. As such, many studies have been undertaken in this field on the basis of the reading comprehension needs of learners and their expected lexical competence (Nation 2006, Laufer 2010). Discussion on lexical threshold is closely related to the idea of vocabulary text coverage, i.e. the number of words that a text has and the percentage of unknown words that an EFL learner can cope with before having comprehension difficulties.

One of the first studies was done by Laufer (1989) with 92 first year university students learning English for academic purposes in Palestine, and whose native language was Hebrew or Arabic. Comparison between the results obtained from the reading and vocabulary size tests of the participants came up with the percentage of 95% being the expected number of words that an EFL university reader needs to know in any given academic text to achieve acceptable comprehension, while the percentage of 55% was viewed as a minimum below which comprehension would not be possible.

Later, Laufer came up with another important finding in relation to the number of lexical items a learner needs to have in his personal repertoire in order to comprehend a reading text (Laufer 1992). On the basis of reading tests as well as vocabulary tests, she discovered that the higher number of word families a learner has in his mental lexicon, the more lexical coverage of the reading text he can reach. Knowledge of 3000 word families was thus considered to be the minimum a learner needs to have to reach the objective of 55% text coverage, while 5000 words seemed to lead to 70% of text coverage. The notion of text coverage was also thoroughly investigated by Nation (2001). He compared the scores of reading comprehension tests of various texts ranging from coverage of 80% to 100%, using nonsense words as replacement words. Besides, he used only the first 2000 most frequent words of English in all the texts to make sure the learners know them. Results of his study showed that with coverage of 95%, only a minority of participants reached adequate comprehension, while those who had the text of 80% coverage were not able to comprehend at all. Thus, even the threshold of 95% suggested by Laufer (1989) seemed insufficient for Nation, and he came up with the conclusion that a lexical coverage of 98% is what can guarantee adequate and ideal comprehension of any text, while 95% can be considered as a minimum only below which comprehension is hindered (Nation 2001). These conclusions were also confirmed by Schmitt (2011) who considered the coverage figure of 55% suggested by Laufer (1992) as not being sufficient and ambitious enough to ensure acceptable comprehension, while a lexical coverage of 98% was seen as much more acceptable reference for learners (Schmitt, Jiang & Grabe 2011).

A few years later, Nation (2006) continued his investigations in the field attempting to find out - apart from the 98% lexical coverage limit - the number of words that a learner should have in his mental lexicon in order to achieve comprehension of various types of input (spoken and written) matching his needs. For that purpose, a list of 14 frequency bands based on the British National Corpus was used, comprising 1000-word families for each band. Results of his experiment allowed the conclusion that - with an objective of

ensuring the ideal lexical coverage of 98% - a minimum knowledge of 7000-word families was required for appropriate spoken English, 8000 for reading newspapers, and 9000 for reading novels. Besides, non-native speakers enrolled in undergraduate studies in EFL environments were thought to need knowledge between 5000 and 6000 to succeed in their university studies, while the ones at PhD level required 9000-word families (Nation 2006).

Laufer complemented these findings after large-scale research undertaken with 745 students at Haifa University; her conclusions confirmed Nation's threshold of 8000-word families for optimal comprehension of any academic un-simplified text, while 5000 was considered as a minimum. (Laufer and Ravenhorst-Kalovski 2010)

The concept of vocabulary size and lexical coverage has triggered many studies involving different contexts, samples and methodologies. However, despite the diversified findings they came up with, they all seemed to agree on the fact that lexical coverage and vocabulary size threshold are closely related and dependent on the extent of comprehension a learner needs to attain, and are in fact two possible options to choose from.

In a recent study investigating the relationship between knowledge of high frequency words and speech performance of EFL students, a comparison was used between two groups of students, one of which had better knowledge of high frequency words of English. (Shahrestanifar & Rahimy 2014). On the basis of the interviews they had, it was concluded that one of the key elements that can enrich their speech performance significantly was a wide knowledge of high frequency words.

1.5.2 Measurement of Vocabulary Size

Vocabulary knowledge with the complex components it involves cannot be measured by the same instruments; each aspect is in fact analysed by means of different tools that can best reflect its facets. The focus in the present study is on the dimension of size or breadth of vocabulary knowledge, and an account of the

most used measurement techniques developed by prominent researchers is presented in the following section.

Despite the recognition of the importance of vocabulary in overall language learning, it is only until the 1980's that the value of tests measuring vocabulary knowledge began to be recognised. In order to achieve a better comprehension of the vocabulary size objectives that EFL learners should reach through language instruction, researchers investigated the vocabulary breadth of native speakers first. For instance, evidence was provided that a native speaker of English who has undergone education knows about 16,000 - 20,000 word families among approximately the 54,000 word families of English (Goulden et al 1990, Nation & Waring 1997, Schmitt 2010). Besides, the vocabulary size of a native speaker studying at university is believed to be around 17,000 word families. (Goulden, Nation & Read 1990).

If these figures seem realistic for someone speaking his mother tongue, they are certainly too ambitious for a non-native speaker learning a FL/SL. Thus, researchers have attempted to figure out the vocabulary size that these learners need to achieve sufficient comprehension of authentic input as well as appropriate language production. This attempt has led to the creation of a number of diagnosis tests aiming at measuring the number of words known by different proficiency learners in various FL/SL contexts (Nation 1983, Nation & Beglar 2007). Most of these tests share the fact that they are reliable, easy to administer and score, and relatively not time consuming, these features made them popular among researchers investigating the field of FL/SL vocabulary breadth.

The tests used to calculate the vocabulary size of learners usually use the concept of frequency bands, classifying words from the most frequently to the least frequently used in English. The idea behind this classification is the belief that the acquisition of vocabulary by EFL learners is gradual and follows the frequency pattern of words (Schmitt 1994). As such, tests measuring the breadth of vocabulary knowledge calculate the number of words known at each frequency band, before a total figure is estimated to reflect the overall size.

Nation (1983, 1990) was among the first to design a test dedicated to measurement of vocabulary size, namely the Vocabulary Level Test (VLT), which was later revised by Schmitt (2001). The aim of this test is to measure the vocabulary size taking five frequency bands as reference, i.e., 2000, 3000, 5000, 10,000 word levels. The selection of these five levels only instead of all the frequency bands is aimed at having a balance between the high frequency words (2,000-3,000), the intermediate level (5,000), and the low frequency word families (10,000). Moreover, the test also includes items based on the University Word List (Xue & Nation 1984) - then later on the Academic Word List (Coxhead 2000) - and measures the learners' knowledge of the most frequently used words in academic texts. Even though this test can be used to calculate the overall number of words known by the test-takers, it is believed that the score at each frequency level is more useful as an indicator of the words that the learners need help with at each individual band (Nation 1990).

If the VLT is suitable enough to measure the vocabulary breadth of learners in mainstream education, some researchers believe that it does not fit the profile of advanced language learners (Nguyen & Nation 2011). Indeed, the fact that this test counts only on five frequency bands, among which only one of them represents the low frequency word families (10,000), might only partially determine the test takers' overall vocabulary knowledge of bands between 5000 and 10,000. One reason for this criticism lies in the fact that it is quite possible for a test taker to know the meaning of words that are not supposed to be within his proficiency level if for instance the low frequency words have common features with his L1 cognates, or if they belong to an area he is knowledgeable about. (Nation 2007)

Thus, due to the doubts that emerged from studies regarding the suitability of the VLT as a complete test to measure the overall vocabulary breadth, Nation and Beglar (2007) revised it and tried to adjust its weaknesses, which resulted in the design of a new instrument called - the Vocabulary Size Test (VST) - that was believed to measure the receptive written vocabulary size more precisely and more exhaustively. Within this VST, word family is a measurement aspect that is

accounted for to evaluate overall vocabulary size. VST does not measure knowledge of words individually but rather knowledge of word families, each word family consisting of the basic word as well as all its derivative and inflected forms. The idea behind the VST is that if a learner knows one word, he would certainly know the other vocabulary items belonging to the same family, without necessarily learning them all.

Based on this idea, the VST includes the 14,000 most frequently used word families of English, and each 1,000 group of words is referred to by "K". The items of the test are divided in terms of frequency levels or bands, ranging from 1K - which comprises the 1,000 most frequently used words of the language - to 14K - which is made of the 1,000 least frequently known words. Each level consists of 1,000 word families tested through 10 test items. As such, the overall test is made of 140 items, each of which is presented to test-takers within a short indefinite context that does not provide any contextual clues, only some syntactic indication that can help them guess if it is a noun, verb, adverb, etc.

The VST comprises 140 multiple-choice questions related to lexical items taken from the British National Corpus (Bauer & Nations 1993), which is believed to be much more updated than the outdated Thorndike and Lorge list (1944). The VST is believed to assess knowledge of the first 14,000 words, graded from the high-frequently to the low-frequently used words in English. As testing learners on all 14,000 words of this corpus is practically impossible, Nation's VST tests knowledge of only 10 lexical items from each 1,000 word family level, these 10 words reliably representing most of the other words contained in each family level. To obtain the overall receptive vocabulary size of the participants, the scores of the VST need to be multiplied by 100.

For each lexical item, the test takers must choose the definition of the word that seemed the best to them from a choice of four suggestions, and the tested words appear in short simple sentences that do not provide a lot of context. Nation's purpose of de-contextualizing the lexical items is to ensure that the VST assesses exclusively knowledge of the word itself without the influence of contextual clues.

Unlike other vocabulary measurement tools - such as the Vocabulary Levels Test (Nation 1983) - which select only a few word bands of frequencies to adjust to the proficiency levels of the test-takers - the VST assesses participants knowledge of all frequency bands, including the ones that can be considered beyond their knowledge level. Moreover, the high frequency word bands such as 1K (first high frequency 1,000 words) and 2K (second 1,000 words) were also taken into consideration in the present study, even though they might be considered too easy for the participants' proficiency level. Some scholars (such as Ozturk 2012) when testing the vocabulary size of their participants decided to omit the 1K band as knowledge of the words in this level was taken for granted and its score automatically added to the overall score of the test. However, in the present study it was decided to include even the first bands of the test in order to give the participants the benefit of doubt and assess their real vocabulary size score instead of just assuming what they might know.

Even if the participants are required to answer all 140 lexical items, the scores of each band are logically expected to decrease gradually as they got to the low-frequency words. The overall calculated score of the VST is thus supposed to reflect the written receptive vocabulary size of the test-taker.

In an attempt to assess the validity of the VST, Hunt & Belglar (2005) demonstrated that this vocabulary measurement tool, thanks to its clear and unambiguous format, assesses exclusively written receptive vocabulary knowledge and that there is very minor influence of other factors. Indeed, except for a minimum of reading skills, sitting the test does not require other competences apart from vocabulary knowledge. The fact that there is no option for an "I don't know" answer to the test items, the test does encourage informed guesses of word meaning. Therefore, the participants have a choice of four possible answers to each question; and even though they might have never encountered the tested words before, they could still draw on their partial or subconscious knowledge to make intuitive guesses.

As the purpose of the present study is to assess the number of words known by FL students on the one hand, and the extent to which they use VLS to go beyond

vocabulary ignorance and possibly guess the meaning of words on the other hand, the Vocabulary Size Test is one of the research tools used to gather data in this work.

1.5.3 Vocabulary Growth

For many decades, there was the assumption that learning new vocabulary is mainly a matter of dictionary use and memorization of wordlists; however it became clear that such methodology would not allow the learner to acquire the meaning of a large number of words needed to achieve appropriate communication in a TL (Read 2000). In fact, to communicate adequately, a SL/FL learner needs to have knowledge of a vast number of lexical items, with sufficient information about each item such as its orthographic form, its pronunciation, its various meanings, and the ways in which it can be used in different contexts, etc (Nation 1990). Having such information about words would allow the learner to be ready to access any of them appropriately during the communication process. Thus, word knowledge is much more than simple memorization of words in isolation, and researchers have indicated that exposure to the TL over time leads EFL learners to achieve complete knowledge of words in a gradual manner (Read 2000).

When learning a mother tongue, one would develop one's lexical repertoire through repeated exposure to various words in different contexts; as a result learning usually happens incidentally. However, when learning a target language (SL/FL), gaining vocabulary knowledge is a more complex process as it involves limited input in which the frequency of encounters of words has little influence on the growth of the learners' lexical repertoire. This situation is even more complex in an EFL environment as the only source of TL input is usually restricted to the classroom in which the instructor has an important role and influence on the learners' overall TL learning, and vocabulary learning in particular (Laufer 2003). Moreover, there are external factors that might come into play in a FL environment and which might impact vocabulary growth, such

as the amount of time allocated to TL learning, the teaching methodology and materials used by instructors, or even the degree of similarities or differences between cognates of the L1 and the L2 of the learner (Goulden, Nation, & Read 1990). The closest the L2 word is to the learner's L1 cognate, the easiest it is to learn (Webb & Nation 2017). Thus, the possible similarities and borrowing between L1 and L2 of the learner can potentially help him in understanding and acquiring these words with more ease than other words that have nothing in common with his L1 cognate. This view was also shared by Groot (2006) who stated that when the L2 word has a similar orthographic form as in the L1 of the learner, this word is easier to understand, learn and retain. The process through which the learner goes to link the new unknown L2 word with his existing knowledge of a similar known cognate in his mother tongue reflects a certain degree of deep mental processing. Considering that around 60% of the words in English come from French, Latin and Greek (Webb & Nation 2017), one can assume that learners with knowledge of these three languages would have some advantages when facing the English words that come under this category of borrowing.

When one thinks of vocabulary learning, one usually relates it to an intentional and deliberate behaviour that is achieved through formal instruction. However, there is a large amount of vocabulary learning which is thought to take place without deliberate intention, i.e., incidentally (Ellis 1999, Nation 2001, Schmitt 2000). Incidental vocabulary learning is the main source of learning for someone learning his mother tongue, as the input he gets in all aspects of life and in different contexts provides a strong source for vocabulary learning. In the context EFL/ESL learning, such rich exposure and repeated encounter of words in the TL is much more limited. However, vocabulary learning is still believed to occur incidentally through listening and reading. Even if the primary focus in these tasks is not on vocabulary learning but rather on comprehension, the more input the learner receives, the more opportunities he gets to encounter words repeatedly, and the more likely he would acquire these words (Webb & Chang 2015a). Considering that L2 input in an EFL context is often limited to the

classroom only, expecting the teacher to teach most of the words the learners need is impossible. Thus, researchers believe that a great deal of vocabulary learning and growth in EFL contexts comes from the learner's deliberate learning (Laufer 2003, Cobb 2007). In other words, the EFL learner can take responsibility for his own vocabulary learning process by intentionally doing tasks that can help him focus on vocabulary. Instances of such deliberate tasks can be using a dictionary to discover meaning, asking someone for help, focusing and analysing the spelling of a word in order to remember how to write it next time, comparing the new word with words already known, etc (Webb & Nation 2017). Such behaviours can complement the intentional teaching of vocabulary that takes place in the EFL classroom and thus contribute to larger vocabulary growth.

In fact, incidental and deliberate vocabulary learning are complementary as they offer the EFL learner better and more varied opportunities to learn L2 vocabulary. The advantage of deliberate vocabulary learning is that it leads to larger and quicker learning of words, however, it is believed to provide less depth of vocabulary knowledge; for example, it would be difficult to cover all the different forms and meanings of a word that can be conveyed in different contexts. On the one hand, incidental vocabulary learning through listening and reading has the advantage of providing repeated encounters of words in both aural and written forms, and thus to allow the learner to discover various meanings in different contexts. For this variation to occur, the learner, however, needs to read and listen to a large amount of input in the TL, and this is time consuming and makes vocabulary learning quite slow (Webb & Nation 2017). On the other hand, incidental learning is easier and more efficient for high proficiency learners with large vocabulary size and who have a sufficient knowledge of the TL already to be able to focus more on unknown words they encounter (Liu & Nation 1985, Webb 2008). Therefore, a combination of both incidental and deliberate vocabulary learning seems to be the best method to consider in EFL vocabulary teaching (Webb & Chang 2015a, Webb & Nation 2017).

A native speaker of English is believed to learn about 1,000 word families per year from childhood until the age of 20 (Goulden, Nation, & Read 1990). This growth is mainly influenced by the large amount of input he receives incidentally in various contexts, as well as the numerous opportunities he has to produce the language and therefore to develop his receptive and productive vocabulary size. Knowledge of the first 2,000 most frequent word families is thought to allow the learner to recognize up to 70% - 90% of English (Webb & Nation 2017), while knowing the first 4,000 word families would lead to appropriate understanding of academic spoken discourse (Dang & Webb 2014). Moreover, knowledge varying between 8,000 and 9,000 word families is said to allow the learner to read and understand written texts such as newspapers and novels (Nation 2006).

These figures suggested by researchers are assumed to apply to both L1 and L2 learning, and they are mainly related to vocabulary knowledge in the reading skill. It is clear that there is more to reading comprehension than vocabulary knowledge, but these figures demonstrate the extent to which vocabulary learning in a TL is a challenging task. Indeed, it would be unrealistic to expect the vocabulary size of FL/SL learner to be similar to an L1 learner.

Despite the fact that the development of lexical knowledge has been recognised as a crucial area in the language learning process, the growth pattern of vocabulary breadth among FL/SL learners has not been largely documented and researched, especially over long periods of time. Thus, the number of words that L2 learners are supposed to reach with time throughout their gradual proficiency levels is still unclear (Webb & Nation 2017). Knowledge of the amount of vocabulary a student should aim to acquire per year or during a course would in fact be a very important piece of information that would guide language teachers and curriculum designers in order to adapt the available resources to meet these objectives.

According to Webb & Nation (2017), one of the reasons for the lack of research on L2 vocabulary growth is the difference in terms of the ability of learners to learn L2 vocabulary, as the degree and rate of progress can vary considerably.

Such variation has made the study of this growth pattern difficult to manage and to generalize. Moreover, the fact that researchers interested in the field of vocabulary growth have used different units of counting - for instance lemmas, words, tokens, word families - has made their findings difficult to compare or generalize (Webb & Nation 2017). However, the studies undertaken with the unit of word families as a reference are thought to be the most sensible as they count what really should be counted and take into consideration repetition, inflections and derivations.

A number of studies investigating the vocabulary size growth of EFL learners found that even after a significant long period of exposure to the TL, the mastery of the first 2,000 high frequency word families was not reached. For instance, with about 6 years of English instruction, EFL university students in Indonesia knew only 50% of the first 2,000 most frequent word families of English (Quinn 1968, Nurweni & Read 1999).

In a more recent study undertaken with EFL high school students in Denmark, the mastery of the first 2,000 word families was found to be achieved by only 48% of the students even after 9 years of prior English instruction (Danelund 2013). Among Taiwanese EFL learners, this proportion was found to be 47% of mastery at the first 1,000 word families and only 16% at the level of the 2,000 most frequent word families (Webb & Chang 2012).

Apart from knowledge of the most frequent word families, researchers have also attempted to investigate the average uptake of words for L2 learners. For instance, in a study investigating the vocabulary size of learners learning French as a FL over seven proficiency levels, Milton (2006) found out that the size growth was largely dependent on the amount of time spent learning the TL, ranging from 170 words per year when having between 58-78 hours of instruction, to 530 words per year when receiving around 117-175 hours. The influence of the amount of instruction time on the vocabulary size growth was also observed by Webb & Chang (2012) in their longitudinal study with EFL learners over a period of five years between high school and university as this growth varied between 18 and 430 word families per year of instruction.

In the literature, receptive vocabulary is considered to grow with an average of 400-500 words per year in FL mainstream school learning environments (Richards, Malvern & Graham 2008; Milton 2009), while at university the uptake was found in some contexts to be as low as 200-330 words per year (Schmitt & Meara 1997, Ozturk 2012).

When one compares the fact that adult native speakers of English are said to reach knowledge of 15-20,000 word families with an uptake of 1,000 per year until the age of 20, while most EFL learners seem to struggle mastering the first 2,000 most frequent word families, one might question the effectiveness of EFL instruction in terms of vocabulary growth (Webb & Nation 2017). It is true that expecting EFL learners to have the same rate of growth as native speakers would be unrealistic, mainly because there is a huge difference between the two learning contexts in terms of exposure to the language and input received. In this perspective, a yearly objective of 500 word families for EFL learners is considered reasonable enough (Webb & Nation 2017). Moreover, appropriate mastery of the first 2,000 most frequent word families of English should be considered by EFL/ESL teachers as a motivating objective to reach (Webb & Cheng 2012).

Conclusion

On the basis of the discussion provided in this chapter in relation to vocabulary acquisition and learning essentially, it is believed that in order to function efficiently in a foreign language, learners need to master a sufficient number of lexical items and to expand their overall vocabulary knowledge as they progress in language learning (Nation 2006, Schmitt 2010). Apart from the learner who is the major protagonist in this learning process, knowledge of whether language learners are gaining enough lexical items in the L2 and the norms of this size growth is of major interest to anyone involved in the learning process, namely, teachers, materials designers and researchers (Schmitt 2010). Such knowledge would clearly shape a more adequate planning and assessment of language syllabuses and teaching methodology. This implies that it is

important to carefully plan how the vocabulary component should be taught in a language course or institution in order to assist the students in becoming better learners and optimize their learning process to get the most of it.

Given the relatively recent implementation of the LMD curriculum at the English Department of the University of Algiers 2, we believe that any studies that attempt to document the impact of the new curriculum on the development of EFL students' competencies would help its assessment. Thus, the concept of receptive vocabulary size growth is one of the aspects that the present study attempts to research among the undergraduate EFL students of this university. One of the purposes behind this study is to see whether the students gain a sufficient amount of vocabulary knowledge as they go to upper proficiency levels, i.e.; whether the instruction they receive has any influence on the growth of their vocabulary size. The present study focuses on the three first years of the English course, i.e., from year 1 to year 3 of the undergraduate level, and it aims at investigating the construct of vocabulary size growth from the time the students join the undergraduate course until they graduate. Moreover, this study also aims at investigating other aspects involved in this process of vocabulary size growth, namely the use of vocabulary learning strategies and the extent to which this use contributes to vocabulary growth among these university students. The other construct of vocabulary learning strategies and the different aspects related to them are analysed and discussed in the next chapter.

CHAPTER TWO

Learner Autonomy and Vocabulary Learning Strategies in an EFL Context

Introduction 50
2.1 Learner Autonomy in Language Learning.....51
2.2 Vocabulary Learning Strategies (VLS) 53
2.2.1 Schmitt' Taxonomy of VLS 60
2.3 The Use of VLS by EFL Learners.....63
2.3.1 Lexical Transfer in EFL Learning.....69
Conclusion 79

Introduction

As discussed in the previous chapter, it is clear for anyone interested in EFL learning and teaching that the vocabulary component is a key element that dictates success or failure in the target language. Considering the importance of vocabulary knowledge, it is therefore crucial for researchers, instructors and syllabus designers to attempt to find ways to expand learners' vocabulary size in the target language. Beyond the linguistic knowledge of vocabulary that students need to develop, there are other competencies that also contribute effectively to better lexical knowledge, one of which is the ability to use vocabulary learning strategies (VLS) to comprehend and retain words. Thus after addressing the construct of vocabulary size and growth in chapter one, the concept of VLS is the second key construct on which the present study focuses. The current chapter aims at analysing and discussing the role of VLS in helping FL learners to develop vocabulary knowledge and become autonomous learners.

In recent years, a growing interest in the concept of learner autonomy has emerged, supporting the idea that the learner should be proactive in his own learning process instead of waiting for everything to be delivered to him effortlessly. This is relevant when talking about vocabulary knowledge, as the EFL learner needs to autonomously help himself through the use of learning strategies that could cover for insufficient lexical knowledge and eventually help in building up a rich vocabulary. The need for being autonomous becomes particularly crucial as the EFL learner moves to higher proficiency levels because the lexical repertoire he is supposed to master at advanced levels is impossible to cover only through direct vocabulary instruction; only his self- implication in this task can help him enrich his vocabulary adequately. This is particularly relevant in the context of the present study, as the students in the undergraduate course are expected to learn English for general and professional purposes, and therefore becoming autonomous in their own language learning is certainly an objective to attain throughout the three years.

2.1 Learner Autonomy in Language Learning

Referring to child learning, Cullingford (1990:1) states that "what children learn depends on how they learn". In other words, learning is not only an outcome of teaching, it should also depend on the way learners learn by themselves. In a foreign language context, the teacher is usually the only source of target language that learners can count on to get language input. This situation puts pressure on the teacher to constantly be active in the classroom, much more than the learners who tend to be superficially involved in their own learning process, expecting the teacher to deliver everything. The challenge of the EFL teacher in this case is to find a balance between input delivery and encouragement of learner autonomy, taking into consideration the learners' styles, personalities as well as their learning strategies. This marks a clear shift from the teacher-centred approach to learner-centeredness that accounts for autonomous learning, flexibility and sense of responsibility in the learning process.

Holec (1981) is among the first scholars who researched this concept of autonomy and defended the idea that any person interested in language learning and teaching should integrate and encourage the development of this autonomous learning among language learners. According to him, learner autonomy is "an ability to take charge of one's own learning" (Holec 1981:3). He viewed this ability as something that could either be self-developed by the learner himself, or with the help of another person such as the teacher.

Since the 1990's, learner autonomy has become a key concept in EFL/ESL research, and learner's learning strategies have been recognised as the most important aspect of this autonomy that can have a concrete effect on the success or failure of language learners (Benson 2001). Within this perspective, Benson (2001) also regarded learner autonomy, and therefore learning strategies as involving the learner's individual effort and process in helping himself, as well as the interaction and intervention of others through strategy training for instance.

According to the Communicative Language Teaching approach, the most important element that instructors should focus on when it comes to vocabulary

teaching is to encourage the learners to extract meaning of lexical items from context, instead of directly teaching them new words. Indeed, some researchers (Hunt & Beglar 2005) see the usefulness of explicit vocabulary teaching only during the early stages of EFL instruction - i.e. beginner and intermediate levels - while more advanced learners should be encouraged to develop their lexical repertoire primarily through extensive reading and listening to lectures, especially at university level, as the amount of vocabulary needed at advanced levels is so large that no direct instruction can cover all learners lexical needs.

Foreign language learners are usually encouraged to guess meaning of unknown words from context. However, if this learning strategy is indeed valuable, it requires the learners to know about 95% of the text in hand in order to be able to guess appropriately from contextual clues; otherwise, the inferencing process would be random (Kelly 1990, Nation 2001). Indeed, being able to guess meaning using contextual clues usually requires the learner to understand the context, achieve at least 95% coverage, and have good reading strategies. These aspects are usually acquired at advanced proficiency levels only (Huckin & Coady 1999). The guessing strategy needs therefore to be associated with other vocabulary strategies to be fully efficient.

Brown (2007) focused on the importance of learning strategies stating that they are "the key to learner autonomy and one of the most important goals of language teaching should be the facilitation of that autonomy" (Brown 2007:140). A learner must be conscious about how he learns, what facilitates his acquisition, what learning tactics are helpful to his learning style and personality, and which ones are less useful. Knowing how all these mechanisms work for him, he would be more autonomous and responsible in stepping-up from the usual teacher-centred kind of input and therefore could play an active role in his own learning process. (Ellis 1992).

In this perspective, Allen (1983) considers that the role of any EFL/ESL teacher should be to encourage and help the students to take responsibility for their own language learning in order to become autonomous and independent learners. As the students go to upper proficiency levels, the difficulty of the material they read

increases gradually and they encounter more new words they do not know the meaning of. EFL/ESL teachers therefore cannot teach all the new words in the classroom as spending too much time teaching vocabulary will not serve the interests of the students because this would maintain their dependence on the instructor, prevent them from the usefulness of using a dictionary on their own, as well as would limit the time allocated in class for communicative practice of the language. (Allen 1983). Thus, encouraging learners 'use of learning strategies is an important element in the EFL/ESL classroom that can lead to successful vocabulary learning especially for advanced language learners.

2. 2 Vocabulary Learning Strategies (VLS)

Considering the fact that when learning a foreign language the vocabulary component is possibly the most demanding and challenging part (Meara 1995; Schmitt 2000, Nation 2001, Milton 2009), it is important that the learner is equipped with the necessary lexical competence in order to become proficient in that language. However, foreign language pedagogy has been heavily teacher-oriented for many decades, and the shift towards learner-centred instruction has encouraged for more learner autonomy and self-management by the learners themselves in all aspects of the TL, including vocabulary. This shift in paradigm has increased the researchers' interest in language learning strategies as an area that could explore and solve the vocabulary learning difficulties experienced by many FL/SL learners (Schmitt 2000). The integration of learning strategies into the learning of vocabulary was thought to be easier given the fact that the vocabulary component is distinct and therefore easy to manage (Schmitt 2000), while other language components are usually more complex.

When learning a FL/SL, a learner needs to be active and have self-control over his own learning process, and his adequate use of LLSs is believed to make him proficient in that language (O'Malley & Chamot, 1990). In this perspective, it is commonly agreed that L2 learners are not equal in terms of success in the TL and therefore some of them achieve better than others; appropriate and effective use of learning strategies is claimed to be strongly related to this success in

general, including with regards to the vocabulary component (Nunan 1999, Anderson 2005). The idea behind viewing learning strategies as one of the keys to successful learning is due to the fact that they allow the learner to achieve tasks such as discovering the meaning of unknown words, to store them in his memory, to be able to retrieve them on demand to meet various contexts, and to use them productively in spoken or written language (Schmitt 1997, Oxford 1990). Such complex processing certainly requires the learner to be proactive and autonomous in his language learning.

One cannot discuss Vocabulary Learning Strategies (VLSs) in particular without firstly going through Language Learning Strategies in general (LLSs), as VLSs framework derived from research undertaken on LLSs.

There have been various definitions and classifications of LLS within Second Language Acquisition research, most of which agree on the fact that any learner learning a SL/FL needs to use these strategies as a platform that shapes his overall learning process. However, despite the agreed recognition of the crucial importance of LLSs as a framework, there were some aspects of the nature and use of LLSs that raised questioning and disagreement among researchers.

For instance, the categorisation of these strategies as behaviours or mental processes has led to various views. If some studies (Sanaoui 1995) considered LLSs as behaviours that can be observed and imply that the learner does something concrete to achieve learning, some others (Macaro 2006) defined LLS as exclusively mental activities that learners undertake. However, it was clear to most researchers that there was much more to LLSs than simple behaviours or simple mental processing. These views failed to consider the fact that many LLSs that learners use involve not only behaviours such as making word lists, using dictionaries, or reviewing words learnt previously, but also mental processing such as inferencing word meaning. Thus, many researchers agree on the idea that LLSs should be conceptualized within a "combined approach" (Oxford 1989, O'Malley & Chamot 1990, Gu 2012) that views learning strategies as a complementary combination of both behaviours and mental processes, as one cannot function without the other.

In terms of use of LLSs, the conscious or subconscious use of these strategies by learners has also been controversial among researchers. Some of them (Cohen 1998, Macaro 2006, Oxford 2013) defined LLSs as being primarily conscious behaviours implying that the learner is always aware of the strategies he uses and therefore selects the ones that meet his needs in terms of language learning. Other researchers (Bialystok 1990, Gu 2012) argued that the learner does not always have control over the selection of LLSs he uses, as there are many behaviours or mental processes that he might undertake subconsciously or in an automatic manner without being aware. Later on, most prominent studies undertaken in the field of LLSs have accounted for the complementary features of conscious and subconscious use of strategies within their LLSs classifications (Oxford 1990, O'Malley & Chamot 1990, Gu & Johnson 1996, Schmitt 1997, Fan 2003), since a clear distinction between cognitive and metacognitive strategies has been set up. As such, language strategies have been described as "a dynamic process with problem-solving as its central aim (....) Competence or performance, general or specific, controlled or automatic, learning strategies are what the learner utilizes when confronted with a learning task" (Gu 2012:340). This means that taking apart the controversies over the nature or the use of learning strategies, what is important to consider is the crucial role of the learning strategies as problem-solving solutions the EFL/ESL learners should use to improve their language learning process.

During the past four decades, the flourishing interest given to the area of language learning strategies (Rubin 1987, O'Malley & Chamot 1990; Oxford 1990; Cohen 1998) has led to various studies classifying the strategies involved in learning specific aspects of FL, including vocabulary learning strategies (VLSs). While some studies investigated the extent to which individual VLSs were efficient (Hulstijn 1997, Fraser 1999; Chan 2012), some others explored the effectiveness of combined use of VLSs by FL/SL learners (Gu&Johnson 1996, Schmitt 1997, Fan 2003).

Rubin believed that it was important to identify the strategies used by successful learners in order to encourage less successful learners to use them. However,

other researchers - such as Politzer & McGroarty (1985), Schmitt && McCarthy (1997) - believed that what can lead to success in learning are not specific strategies but rather the context and the way they are used, their frequency of use, and certain combinations of various strategies at the same time.

Rubin (1975, 1987) was among the first scholars who attempted to set up a classification of language learning strategies, with SLA research as a reference. She classified learning strategies into two major categories, namely Direct and Indirect strategies. The first category involves Learning strategies and refers to the behaviours that have direct contribution to language learning such as the problem-solving techniques requiring the learner to analyze or transform the input through guessing, memorization, etc (cognitive strategies), and self-directed strategies through which learners plan, monitor or evaluate the language (Metacognitive). On the other hand, Indirect strategies are viewed to be the ones involving the use of communicative knowledge such as gestures, repetition, synonyms, etc (Communicative), as well as strategies allowing the learner to practice the language and therefore contributing to his learning indirectly, such as use of radio, TV, movies, or books, etc (Social).

Research in the field of language learning strategies started to benefit from findings in the area of cognitive psychology, and this enriched and enlarged the research perspectives. For instance, while studies by Rubin were experimental and used mainly observation to identify and classify the strategies, other researchers such as O'Malley & Chamot (1990) had a more global philosophy, mixing between observations, interviews and think-aloud procedures on the one hand and adding other theoretical background related to the reading comprehension process on the other. Their classification of strategies has therefore contributed greatly to research in LLSs. In their inventory, a distinction was made between cognitive, metacognitive and social types. The cognitive category of strategies refers to the strategies that involve direct manipulation of the incoming information in a way that enhances language learning, such as inferencing or grouping, translation, note-taking and word imaging. The Social/affective category includes interaction with others with the purpose of

seeking assistance; it also involves using control over affect such as asking questions for clarification or self-talks. The self-management and monitoring of the activity and the evaluation of the learning success are the components of the metacognitive category of strategies which comprise identification of problems, planning, selecting attention, etc. The positive point about this classification is that it came as a result of many empirical findings rather than from theoretical background as in Rubin's framework. However, O'Malley and Chamot's categorisation of strategies has been criticised because some subclasses were judged to be similar leading to overlap issues; for instance, the two metacognitive strategies labelled "selective attention" and "directed attention" seemed to refer to almost the same idea.

One of the prominent contributions in the field of LLSs is Oxford's categorisation of language learning strategies which was based on the theory that "the learner is a 'whole person' who uses intellectual, social, emotional, and physical resources and is therefore not merely a cognitive/metacognitive information-processing machine" (Oxford 1992:20). As such, Oxford divided LLLs into direct and indirect categories (Oxford 1990) under which a comprehensive and complete list of 62 strategies was set up. While the first category comprises strategies that involve mental processing of the TL and are directly related to the language being learned, indirect strategies involve the use of external aspects of learning and general management of the learning process which are aspects that are independent from the TL itself. The distinction between Direct and Indirect categorisation had many common points with Rubin's framework (Rubin 1987), however, Oxford's definition was slightly different in that she believed that the two categories complement each other and some overlapping between strategies can exist as learning is a global process and not simply distinct and separate types of behaviours. Direct strategies include cognitive strategies, memory strategies and compensation strategies. These three categories derive directly from the FL/SL being learned and thus imply that the learner makes use of them directly to achieve learning that meets his purpose.

She was among the first to separate between cognitive and memory processes while previous scholars tended to consider them as one behaviour.

For instance, cognitive strategies such as summarizing and repeating allow the learner to comprehend and produce the TL; memory strategies like use of images or grouping act as facilitators for the storage and retrieval of new information, while compensation strategies are mainly used to overcome lack of vocabulary knowledge through inferencing from context.

The second category of indirect strategies comprises all that can be done indirectly to achieve learning without direct reliance on the TL. In other words, it relies on external sources for help; these indirect strategies include social, affective, and metacognitive strategies. Through the social strategies such as asking questions to the teacher the learner tries to make use of social interaction; affective strategies involve the learner's control of his own emotions or motivation to diminish his anxiety for example, while metacognitive strategies allow the learner to control and coordinate his own cognition and learning process through strategies such as planning or monitoring one's own learning.

Oxford considered language learning strategies as “specific actions taken by the learner to make learning easier, faster, more enjoyable, more self-directed, more effective, and more transferable to new situations” (Oxford 1990:8).

Thus, one of the main contributions of Oxford's classification is the fact that the different strategies are related to specific productive and receptive language skills - i.e., writing, speaking, reading, listening - which makes this framework a reference for not only different classes of strategies, but also for the different purposes and tasks these strategies could be used for by the learner.

Taking previous research as a reference and building on earlier categorizations, Oxford synthesized the various strategies mentioned in the literature and compiled the Strategy Inventory for Language Learning (SILL), one of the most comprehensive and detailed questionnaires that became a reference for researchers undertaking research in the area of learning strategies in various contexts and settings. This inventory has served as a reliable data collection tool in many studies involved in Foreign/Second language learning strategies.

On the basis of the different classifications of language learning strategies, a number of scholars have attempted to set up specific categorisations of vocabulary learning strategies that focus on the way learners process language to achieve acquisition and learning of lexical items in FL/SL.

One of the first scholars who considered classifying vocabulary learning strategies was Cohen (1990), with a framework containing three categories, namely: strategies for learning words, strategies for remembering words and strategies for practising words. The first category consists of three strategies involving the process through which learners discover the meaning of new words, such as use of dictionary, analysis of word and cognates learning.

To remember words, the second category of strategies includes processes aimed at generating associations, ranging from linking the word to the sound of a word in the native language, to the sound of a word in the target language, paying attention to the structure of the word, or creating an image of the word mentally for instance. The third category of strategies for practising words contains three sub classes aimed at consolidating the vocabulary learning through practice. These strategies are grouping, using flashcards and cumulative vocabulary study. The issue in Cohen's classification (1990) is that the number of strategies is very limited and not exhaustive enough. Moreover, the labelling used in this framework is not specific and detailed enough causing overlap of strategies, especially between the two categories for remembering and practicing words.

Taking the work of O'Malley and Chamot (1990) as a reference, Gu & Johnson (1996) divided the vocabulary learning strategies into cognitive and metacognitive classes, with the first category involving selective-attention and self-initiation, while the second category has six subclasses namely: guessing, dictionary use, note-taking, rehearsal, encoding and activating strategies. In total, with all the subcategories, their taxonomy contained 74 strategies.

A few years later, Nation (2001) developed a taxonomy in which he made a distinction between the source and the processes of vocabulary learning, with strategies under the headings of: planning, sources and processes.

Taking into consideration works by O'Malley & Chamot (1990) and Oxford (1990), Schmitt (1997) proposed his own VLSs taxonomy in which he included four categories from the six described by Oxford: Social, memory, cognitive, metacognitive. He then added a new category of determination strategies. He was also the first to make a clear comprehensive distinction in his taxonomy between what learners do when encountering unknown words for the first time (Discovery strategies), and what they do to reinforce and retain words once they have been encountered (Consolidation Strategies). This distinction was in fact inspired by Nation's (1990) who made a separation between 'increasing vocabulary' and establishing vocabulary' (Nation 1990:6). The first category refers to learning of new vocabulary items introduced to learners for the first time, while the second category involves building on the vocabulary knowledge that learners already have to try to strengthening it. Schmitt's classification system contributed greatly to the field of VLS as it provides a comprehensive framework in which various aspects of vocabulary learning are taken into account. The vocabulary strategies questionnaire derived from his taxonomy had largely been used by researchers investigating the field of VLS use in FL/SL contexts.

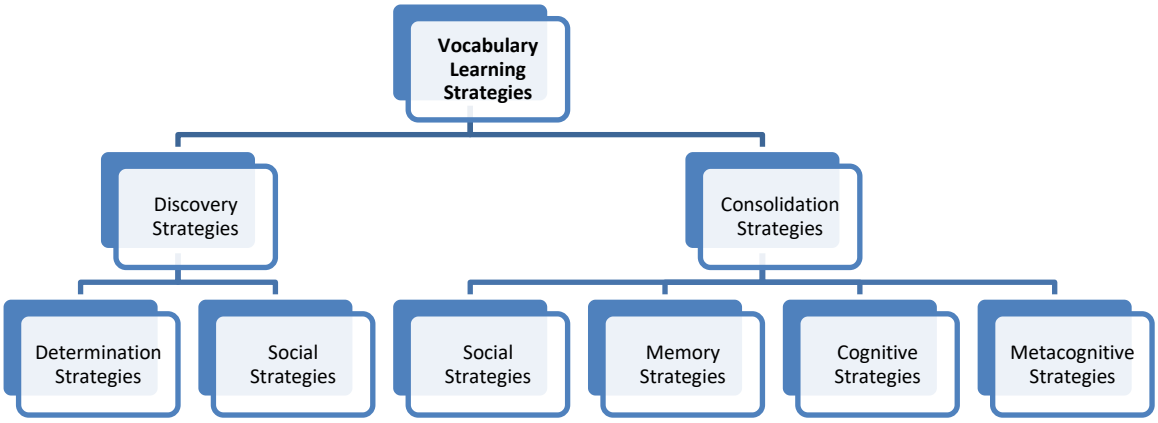
2.2.1 Schmitt's Taxonomy of VLS:

The increasing interest in the field of LLSs in general and VLSs in particular led to many studies offering a number of classifications of these VLSs, each of which had documented the process of vocabulary acquisition (Cohen 1990, Oxford 1990, Rubin & Thompson 1994, Sanaoui 1995, Gu & Johnson 1996, Schmitt 1997, Nation 2001). One of the most comprehensive classifications that has become a well-recognised reference by a large number of researchers is the one developed by Schmitt (1997) which was in its turn inspired by research undertaken by Oxford (1990) and Nation (1990); the thing that has made it popular among researchers in the field. Schmitt proposed a well-defined taxonomy in which a clear distinction was made between discovery strategies, i.e.; the ones used to discover the meaning of unknown words encountered by the

learner, and consolidation strategies, i.e.; the different techniques used to reinforce and remember vocabulary items (Nation 1990). Moreover, he also integrated within this taxonomy the categories suggested by Oxford (1990), namely cognitive, metacognitive, social and memory. He then added the category of determination strategies as a subclass of discovery strategies and which refer to what learners do to discover the meaning of a new word without the help of another person.

On the basis of his findings in a study with Japanese EFL learners and feedback received from teachers, he developed a taxonomy with 58 strategies categorized under the two headings of discovery strategies and consolidation strategies (see Appendix 4). Thus, Schmitt's taxonomy has been used in many studies investigating VLSs and vocabulary learning in general, and it has been considered as an exhaustive list because it was based not only on theories of language learning but also on theories of memory and cognition, an element that was often neglected in other taxonomies (Catalan 2003).

The following diagram illustrates the different categories of Schmitt (1997), below which each category is explained and defined.



Schmitt's Taxonomy of Vocabulary Learning Strategies (1997: 205-210)

Strategies under the heading of discovery are divided into determination and social categories, and they all refer to what the learner does when encountering new words and trying to discover their meaning. For instance, when attempting to determine the meaning of a word he can guess from his knowledge of the language structure, guess from context, guess from an L1 cognate, or by using reference materials such as dictionaries or word lists. He can also make use of social aids to discover meaning of new words by cooperating and asking assistance from someone else such as the teacher or classmates. He can for instance ask the teacher for translation in L1, for paraphrase, or for a synonym of the word; as he can also ask classmates for explanation of the word meaning, or try to understand the meaning from group work activities.

Besides, once encountering new words and discovering their meaning, the learner needs to consolidate the meaning and retain it, and this is the role of the consolidation strategies that are divided into four subcategories. The social strategies under the consolidation category refer to the interaction between the learner and other persons for the sake of achieving retention of the words' meanings. These include strategies such as the study and practice of new word meaning in a group, interaction with native speakers, or it implies that the teacher checks students' flash cards or word lists for accuracy.

Memory strategies are those which relate the words to learn with prior knowledge of the learner in order to retain meanings in the mental lexicon, and this memorisation process is achieved through either organisation of mental representations together or by transforming this information in order to make it easier to memorize. They include techniques such as forming an image of the lexical item's meaning, relating the word with a personal experience, using the word in a sentence or saying it aloud, analyzing the spelling or sound of the word, studying the parts of speech, etc.

The cognitive strategies refer to the ability of the learner to manipulate the TL in a way to transform it and make it easy to retain, for instance through repetition or use of flashcards and notebooks, verbal or written repetition, taking notes of new words or using the vocabulary glossary in textbooks, etc.

All conscious analysis of the learning scene and decision-making about what needs to be done by the learner, are metacognitive strategies (Schmitt 1997). This category includes strategies such as the use of English-speaking media (songs, movies, newscasts, etc.), testing oneself with word tests, carrying study of new words over time.

In an attempt to test his taxonomy and investigate the strategies used by EFL learners as well as the helpfulness of strategies from their own perspectives, Schmitt tested no less than 600 Japanese participants in a study undertaken in 1997 (Schmitt 1997). Strategies such as use of bilingual dictionaries, verbal or written repetition, and analysis of word spelling or guessing meaning from context were reported by the participants to be among the most popular VLSs. Besides, the ones which seemed to be much less used were the ones related to L1 cognate, semantic maps or physical action.

It appeared from Schmitt's study (Schmitt 1997) that the choice and the way VLSs are used by learners change with time as these learners grow older; moving from simple to more complex strategies. In other words, as learners mature their choices tend to change from mechanical strategies involving basic cognitive effort to more demanding strategies involving deeper processing such as use of word association or the keyword method. However, Schmitt himself recognised that these findings might not be generalisable as they implied Japanese EFL learners exclusively; and that learners from other cultures might not have the same developmental pattern.

The fact that Schmitt's (1997) taxonomy was considered to be comprehensive and largely used by most researchers in the field of vocabulary learning strategies makes it a major reference for the present study using participants from Algeria, a culturally different EFL context.

2.3 The Use of VLS by EFL learners:

As stated by Schmitt (2010), learners of a FL/SL are usually quite conscious of the crucial role of vocabulary knowledge, a fact that is reflected in

their frequent use of dictionaries that they usually carry with them throughout their learning process, instead of carrying grammar books.

In a study investigating University students' beliefs about the learning of grammar, pronunciation, and vocabulary (Simon & Taverniers 2011), most students viewed the vocabulary component as much more important to focus on than the other two language components, as it is the aspect that can easily lead to communication breakdowns. On the basis of their beliefs, the learners stated that acknowledgement of the crucial role of vocabulary knowledge leads them to frequently use language learning strategies, such as use of dictionaries, in order to overcome communication breakdowns, while they rarely use conscious strategies to correct their grammatical or pronunciation mistakes.

The VLSs taxonomy developed by Schmitt (1997) has contributed greatly in developing knowledge about the vocabulary learning strategies used by learners of a FL/SL. Moreover, the large-scale survey undertaken with 600 Japanese EFL students also provided valuable insights about the use, effectiveness, as well as the usefulness of the different VLSs among participants of various ages and educational levels. The participants were asked through a questionnaire to indicate how frequently they used specific strategies and to evaluate their effectiveness from their perspective.

Results of this survey showed that in order to discover the meaning of unknown words, the most frequently used strategies are the ones related to use of bilingual dictionaries, guessing from context, as well as asking classmates for meaning. On the other hand, to consolidate the meaning of words, the most popular strategies were verbal and written repetition, note-taking and word lists, studying the written or the aural form of the word, as well as pronouncing the new words aloud. Besides, the strategies that were reported to be the least frequently used are the ones related to relating meaning to L1 cognate, using semantic maps, using flashcards, or asking teacher for explanation.

When learners encounter unknown words in the target language and they are unable to guess or infer their meaning from the context, they commonly use a dictionary, and this is considered as part of the intentional method of vocabulary

learning which means that the learner uses a strategy directly to learn vocabulary (Nation 2001). Studies have shown that the use of a dictionary is a popular strategy used by many EFL/ESL learners, and that this strategy can have a causal effect on the development of lexical knowledge (Summers 1988, Gu & Johnson 1996, Nation 2001). There has been a debate over the use of monolingual or bilingual dictionaries, as each type seems to have positive and negative aspects. Monolingual dictionaries have the advantage of providing exhaustive information about the word; however, they can be difficult to understand for someone with limited or beginner knowledge of the target language (Thompson 1987). On the other hand, if bilingual dictionaries are easier to use whatever the proficiency level of the learner, they only provide translation of the word and not information about how it is used in various contexts. Moreover, using bilingual dictionaries tends to encourage the learners to count on translation and comparison with their mother tongue; a strategy that can be useful at the early stages of L2 learning but which can become harmful when moving to higher proficiency levels (Nation 2001). With the advances in technology, the emergence of online dictionaries or electronic dictionaries can make this strategy of dictionary use even easier for learners as it is usually quicker and easily accessible.

Incidental vocabulary learning is usually related to the use of strategies such as inferencing or guessing the meaning of words from context. When a learner encounters unknown words in the communication process, he attempts to make use of the other information available to him in order to infer the meaning of the word itself or at least the general meaning of the text, and to get the language message across. Within the category of cognitive strategies, Gu & Johnson (1996) identified two ways of guessing meaning: the first one involves use of background knowledge of knowledge of the world, while the second one relies on the direct context and more specifically on the linguistic clues available in the context the word appears in.

In the same perspective, according to Haastrup (1989), when guessing meaning of unknown words from context the learner can either use a top-down method or

a bottom-up one. In the top-down, the learner makes use of what he already knows in order to guess meaning, however, this method might not lead to vocabulary learning or retention in the long-term (Kelly 1990), but it rather helps the learner cope with the activity in hand such as reading. The fact is that this strategy allows him to focus on decoding the message conveyed by the unknown word in a specific context, instead of focusing on learning meaning of the word itself. The bottom-up method on the other hand relies more on the linguistics characteristics of the word such as part of speech, its relation with other words in the context in hand, as well as its relationship in terms of conjunctions. Thus, this method is thought to provide better chance to learn vocabulary. (Haastrup 1989, Nation 1993). Nation (1993) considers that the choice of one method or the other is not based on the decision of the learner, but rather on the relation between the text and the background knowledge of the reader. For instance, if reading a text in a foreign language the learner does not master well but covering a subject area he is familiar with, the top-down method might be useful in guessing some unknown words and to understand the overall idea of the text. Another example would be to read a text that is within the proficiency level of the learner, i.e., containing a lot of words he knows, but about an unfamiliar subject matter. In such situation, the bottom-up method could be used to guess the meaning of unknown words (Nation 1993).

After many years during which traditional teaching methodologies were used in the EFL/ESL classroom, communicative methodologies advocated the need to focus on strategic reading and guessing meaning from context (Knight 1994). According to Nagy (1997), the success in guessing meaning of words from context lies in three types of knowledge, namely linguistic, strategic and knowledge of the world. Besides, Schmitt (1997) stated that a learner is able to guess the meaning of unknown words if he analyses the part of speech, roots or affixes of the unknown word, links the new words with cognates in his mother tongue, or he tries to infer meaning from context, and success in such practices is higher as the students gets to higher proficiency levels in the TL. Use of knowledge of the world to infer meaning relates to the prior knowledge the

learner might have about a specific subject or context in which the unknown word appears, and vocabulary learning is thought to be more difficult when the learner encounters new words in an unfamiliar new subject area (Nagy 1997). The strategic knowledge involved in guessing from context implies "conscious control over cognitive resources" (Nagy 1997:65), and it refers to the idea that if learners are taught explicitly strategies to help them guess, they would become better guessers. In other words, practice in the gradual and separate steps involved in guessing, such as analysis of parts of speech, of roots and affixes, and context could assist the learners in using the guessing strategy more effectively (Nation 2001). Even though the guessing strategies are popular among EFL/ESL learners at different proficiency levels, using the contextual clues only does not always lead to vocabulary learning, unless the guessing is complemented by other strategies such as dictionary use in order to check the meaning of the unknown word (Kelly 1990, Fan 2003). The use of guessing by means of linguistic clues is thought to be more effective and reliable (Kelly 1990).

There are many studies that demonstrated that the guessing strategy is largely used by L2 learners in the skill of reading (Haastrup 1989, Hulstjin 1992, Fraser 1999) and that it can be useful for both comprehension and vocabulary learning. However, there are factors that may have direct influence on the success or failure of guessing, such as the nature of the text read by the learner, learner's proficiency level, or the choice of the knowledge source to use for guessing. Researchers such as Liu & Nation (1985) and Nation (2001) focused on the need for the reader to know a minimum of 95% of the words occurring in the text to be able to infer the meaning of the unknown words successfully, thus the nature of the written text and the coverage of the known words is considered as a factor that facilitates the guessing and makes it effective. In this respect, texts in which the density of unknown words is high are likely to make the guessing less effective for L2 learners (Nation 2001).

Besides, some researchers declared that the more proficient the learner is in the TL, the more successful his guessing of unknown words can be (Qian 2005, Nassaji 2006). The fact is that when a learner is proficient in the TL, it implies

that the depth of his vocabulary knowledge is significant enough to allow him to make use of it to guess the meaning of unknown words successfully.

Moreover, the success of guessing seems also to be related to the selection by the learner of the appropriate knowledge sources that best meets the needs of the guessing task (Hu & Nassaji 2014). In other words, instead of using the knowledge sources separately to infer meaning of unknown words in a text, successful guessers seem to be those who combine their linguistic, contextual as well as background knowledge, and to check throughout the process if their guesses are appropriate or if adjustments are needed.

Thus, if the reader has high proficiency in the TL, if he knows at least 95% of the lexical items in the text, and if he is able to use the appropriate knowledge sources, then guessing strategies are likely to be successful. If these conditions are not available, then the learner needs to rely on other strategies and resources to comprehend the text and to achieve vocabulary learning.

There were many efforts in the literature to identify the individual vocabulary strategies that are likely to lead to efficient vocabulary comprehension and learning. However, the greatly positive effect of using a variety of strategies at the same time instead of individual ones has been largely advocated by researchers in the field of vocabulary learning (Ahmed 1989, Sanaoui 1995, Gu & Johnson 1996, Schmitt 1997, Fan 2003, Tseng & Schmitt 2008). Besides, Schmitt (1997) as well as other researchers such as Ahmed (1989) and Oxford (1989) indicated that age and proficiency levels of the learners can have an impact on the choice of vocabulary learning strategies. In fact, young and low proficiency learners are believed to count on mechanical repetition strategies that are not very cognitively demanding such as use of word lists, flashcards, or written repetition. As the learners mature and become more proficient in the TL, they start using analytical strategies like analysis of part of speech and guessing from contextual clues (Schmitt 1997).

It is commonly agreed that the learning process in any EFL context is quite challenging for students as their exposure to the TL as well as the opportunities

they get to practice it are limited. Thus, the learner has to make use of all the resources available to compensate for these limitations, and the use of VLS is a major tool. One of the resources the learner can use is his prior knowledge of other languages that contribute in a way or another to his comprehension and production of the TL; this is particularly relevant to the Algerian context. In Algeria, students learn English as a foreign language as its practice is limited to the classroom. These students have Arabic as an L1, and many also speak Tamazight as their mother tongue. Besides, many Algerians - mainly in big cities - are quite heavily impacted by the French language given that it is present in many aspects of life as different television channels, newspapers, administrations, and instructional bodies operate using French as a medium. As a matter of fact, the Algerian student does therefore have a linguistic richness that certainly has an influence in a way or another on his learning of English as FL. The next section of this chapter attempts to address and discuss some of the key aspects regarding this possible influence.

2.3.1 Lexical Transfer in EFL learning:

Language transfer is considered as an important aspect in Second Language Acquisition theory. However, defining the processes involved in this phenomenon has long been a source of debate among researchers; even the terminology used was different. For instance, this process was referred to as "Language mixing" (Kellerman 1983), "linguistic interference" (Ringbom 1987), "language transfer" (Kellerman 1983, Odlin 1989), or "crosslinguistic influence" (Kellerman & Sharwood 1986). Nowadays in the literature, the terms "transfer" and "cross-linguistic influence" are used frequently and interchangeably to refer to this phenomenon; and it is also the case in the present work.

Language transfer can be defined as the "influence resulting from similarities and differences between a target language and any other language that has been previously (and perhaps imperfectly) acquired" (Odlin, 1989: 27).
This influence can have an impact on the way the newly learned language is recognized, interpreted, processed, stored and produced (Jarvis 2009). In other

words, this means that prior knowledge of a learner, in any language he already knows, will somehow have an influence on his comprehension and production of the target language. This influence can be facilitative in the TL learning process when the language system that is being learned has similarities with other language/s that the learner already knows. While in some other cases, the interaction between the TL and previously learned languages can have a negative hindering effect and lead to errors (Odlin 2003).

If modern SLA research has shown a considerable interest for language transfer for the past few decades, this concept was neglected in SLA for a long time during the era of behaviourist theory of language learning. At that time, a learner was believed to acquire a language through processes such as repetition, imitation and reinforcement (Ellis 2008); any sort of influence of L1 on TL learning was viewed as a "habit" that the learner carries with him from his mother tongue. Positive transfer was thought to occur only when the L1 and the FL were similar, while differences between the two languages would most of the time be negative and cause errors. It is only in the 1950s - with the emergence of Contrastive Analysis - that the phenomenon of language transfer started to be extensively researched. According to the Contrastive Analysis theory advocated by Lado (1957), the grammatical and lexical specificities of the learner's mother tongue (L1) have a direct influence on the way he acquires a FL. This influence was said to take place because of the learner's assumption that the subsystems and forms in his native language can be applied to the TL. Therefore, any similarities between the two languages would help in the acquisition of the new language, whereas any differences would in contrast hinder it. However, the simplistic view about the positive and negative effect of similarities and differences was a source of debate. Many scholars criticised this view and noted that many students make errors even when their L1 and L2 are similar, while differences between the two languages were not necessarily a hindrance in the learning process (Thomas 2013). An important contribution to language transfer research was provided by the generativist theory according to which the influence of L1 did not come from its linguistics components such as lexis,

sounds or syntactic forms, but rather depends on the extent to which a learner knows the basis of the L1 linguistic components. (Thomas 2013). This marked a change in perspectives from the explicit to the implicit processing that is involved in language transfer (Foley & Flynn 2013). Taking Chomsky's Universal Grammar Hypothesis as a reference, many researchers later stated that the L2 acquisition process was impacted by not only learner's knowledge of the universal characteristics of languages, but also by his own knowledge of his L1 (Foley & Flynn 2013).

In the past few decades, more extensive research has been undertaken to shed light on different factors which might impact language transfer like learner's age, gender, proficiency level, and the learning context. Moreover, the extent and variation of language transfer at various levels of language knowledge such as phonology, syntax, morphology, semantics, pragmatics, sociolinguistics, and lexis has been widely researched (Jarvis & Pavlenko 2008). In other words, it became clear that language transfer is a complex process that can take place at various subsystems of the language. Lexical transfer is believed to be the most relevant aspect of cross linguistic influence between languages of European origins given that words are more visible and diversified than other language components such as grammatical structures (Ringbom 1987). Given that the present work relates to the lexical paradigm, the focus in this section is on lexical transfer.

Lexical transfer occurs when the learner's vocabulary knowledge in his L1 influences his comprehension, acquisition, and production of words in the target language (Jarvis & Pavlenko 2008). When learning a second language, lexical transfer from the mother tongue is believed to be an important cognitive process (Ringbom 2006). This processing is particularly relevant for beginner learners for whom L1 is the only linguistic reference in terms of vocabulary, so they try to find relationships between the lexical items of both languages when they find equivalence. Their vocabulary acquisition in L2 can also be influenced by the hypotheses they might make on the basis of their knowledge of their L1. In this

respect, such linguistic processing can be viewed as a learning strategy that contributes in second language acquisition (Murphy 2003). This strategic tool of lexical transfer from L1 to L2 is consciously or unconsciously used when the learner has no or incomplete knowledge of L2 words, or when he encounters a communicative situation that is cognitively demanding (Manchon 2001). That is to say, when producing TL, lack of vocabulary knowldge can lead to use of transfer from L1 as a compensatory strategy to overcome communication breakdown. Knowledge in the lexical area of cross linguistic influence was drawn from the investigation of the mental associations that learners make between the different aspects of all the languages they already know and the target language in hand. That is to say, the comprehension, acquisition, and production of new words in a TL can be influenced by the learners' knowledge of words in the language/s they already know (Jarvis & Pavlenko 2008).

Given that this phenomenon has long been labelled as a transfer of knowledge from one language to the other, it has long been perceived as an unintentional mechanism that happens when learning a new language (Jarvis & Pavlenko 2008). However, this perception has evolved with time and it became clear that this transfer can also be an intentional strategy that learners consciously apply to achieve their learning purpose.

As categorized by Ringbom (1987, 2001), the scope of cross linguistic influence has been divided into two major types, transfer of form and transfer of meaning. These two categories were also respectively referred to as lexemic and lemmatic transfer by Jarvis (2009). The first type accounts for the phonological as well as the graphic form of words, while the second type is related to the syntactic and semantic characteristics of words. Transfer of form takes place when there are similarities in lexemes between the two languages which activate transfer processes and lead to instances of coinages, borrowing or false cognates for example (Jarvis 2009). Coinages refer to cases where the stem of a word is modified to make it look or sound as a word in the target language, as it can also refer to a mix of two words or morphemes originally from different languages.

Borrowing and false cognates are examples of the possible inappropriate use of a word due to its similarity of form in the two languages - false cognates are words that have the same spelling but different meanings. At the level of meaning, transfer can occur when syntactic or semantic extensions are made by learners. These can take for instance the shape of calques, i.e., direct translation of idioms and compound words, semantic extension involving use of authentic TL words to express inadequate meanings, or polysemy related semantic transfer (Jarvis & Pavlenko 2008).

The way in which different language systems are associated in the learner's mind can be helpful as it can also constitute a hindrance to correct comprehension and production of the TL. Indeed, negative transfer can occur when errors are made as a result of inappropriate transfer of form or meaning, as it is the case with false cognates, language mix, or semantic extension for instance. However, positive transfer is noted when the cues provided by the already known language/s ac as a facilitator in the comprehension and production processes (Odlin 2003, Jarvis & Pavlenko 2008). Even though these two categories of lexical transfer can be observed at various levels of the TL acquisition process, this transfer is said to gradually evolve from form-based to a more meaning-based processing as the TL learner moves to upper proficiency levels (Ringbom 2001). That is to say, during the early stages of TL learning, lexemic transfer can happen more frequently, when lemmatic transfer is more prompt to happen at advanced levels of TL learning, depending on the learners' needs (Ringbom 2001).

The process of language transfer is complex and there are many factors that are involved in it which are either specific to the learner or to the language.
A major aspect that is mentioned in the literature to affect lexical transfer is related to the language itself, i.e., the typology of the first and second languages. In other words, the closeness and distance in lexical forms between the language/s already known by the learner and the TL can determine the degree of difficulty and the speed in learning words of a new language. Kellerman (1977,

1983) was among the researchers who extensively studied the similarities between languages. According to him, the extent to which a learner would use transfer while learning a TL depends on the way he perceives the closeness or distance between the TL and his mother tongue. His own perception of similarities, combined to his incomplete knowledge of some aspects of the TL, would lead him to hypothesize the possible transferability from L1 to L2.

Odlin (1989) illustrated this aspect with the example of the words "*justifier*" in French and "*justify*" in English. He stated that the similarity in the morphological and phonological form of these words makes their comprehension and memorization much easier for a native English speaker learning French.

When the learner's L1 and TL are typologically close, the effect of this closeness on the aural and written comprehension (listening/reading) is much bigger than when the two languages don't have much in common linguistically and lexically (Ringbom 1992). During the reading comprehension process, the learner is seen by Ringbom to make use of "L1-based potential knowledge" (Ringbom 1992:92) of cognates which have similarities with the TL, and this can lead to positive transfer. Indeed, when reading and listening, if a learner encounters a word that looks or sounds similar to a known word in another language, he would assume that the meaning is also equivalent. However, this is not always the case as the phenomenon of "*false friends*" or "*false cognates*" can lead to negative transfer.

Thus positive transfer is reached only when the formal and functional similarities between the two words is established by the learner (Ringbom 2007). However, having clear similarities of this kind between TL and L1/L2 words does not necessarily guarantee that the learner would be able to apply cross-linguistic transfer (Odlin 2003). Indeed, being able to notice the similarities and making the link with what he already knows, relies on the individual learner's strategic competence.

One of the most important learner-centred factors reported in the literature to determine when language transfer occurs is the proficiency level of the learner. It is commonly assumed that strategies involving language transfer are used at

the early stages of TL learning, and while the learner moves to upper proficiency levels, this crosslinguistic influence decreases (Ringbom 1987/2001/2007, Odlin 1989). In his various studies undertaken in relation to comprehension and production of TL, Ringbom viewed lexical transfer as a remedial way to overcome gaps and lack of lexical or syntactic knowledge in the target language learning process. As such, the fact that low proficiency in the TL affects use of transfer is believed to result more frequently in negative transfer, i.e., errors among low proficiency learners, while such instances tend to be less noted as proficiency increases (Ringbom1987). Thus, lexical transfer is a strategy used to compensate for lack of lexical knowledge in the TL (Murphy 2003).

Lexical transfer at lower proficiency levels is said to count mainly on the formal characteristics of the words, and the extent to which they are similar or different in the two languages. However, this surface transfer is thought to be more meaning-based when the learner becomes more proficient in the TL as his strategic competence as well as knowledge of not only the form but also the use of different words in different contexts would have developed (Ringbom 2007).

In fact, this is quite logical as one would assume that the more proficient a learner gets in TL, the larger and deeper his vocabulary knowledge would become, and therefore he would be able to develop his comprehension and production of the TL without necessarily borrowing or transferring words from his mother tongue to overcome communicative breakdowns.

Transfer is also possible at higher proficiency levels, but as it is related to deeper features of words (such as cognate vocabulary use) and is more cognitively demanding, it is likely to be positive in TL processing (Odlin 1989).

Thus, lexical transfer is a strategy used at many stages of SLA, however, the way and extent to which it is used changes as learners' proficiency in L2 increases. It is therefore clear that there is a correlation between L2 proficiency and the quantity and quality of lexical transfer in SLA contexts.

Research on cross-linguistic influence or language transfer in FL learning was initially concerned with the way native language knowledge impacts on the

L2 learning process. However, there was a rising interest in the study of this transfer in multilingual environments, looking at it from the perspective of the influence that learners' other non-native languages might have on each other, i.e., "lateral transfer" (Odlin 2003, Jarvis & Pavlenko 2008). It became clear that the way a learner acquires a new language can be impacted by not only his mother tongue, but also by his knowledge of any other language (Ringbom 1987, 2001). It is only since the 1990s that research in the field of Third Language Acquisition (TLA) started to expand as a distinct discipline and separate from SLA. It is important to mention that most studies in this field focused on cross linguistic influence in the production rather than comprehension of language.

In the context of TLA, the learner is in contact with three or more languages - each with its own system - among which he needs to adapt to meet various communicative settings. Therefore, this context is believed to be more complex than in SLA in which he approaches the TL learning process differently having only the mother tongue as a reference (Ringbom 2007). Despite this complexity, knowledge of more than two languages is seen as a source of many useful and facilitative cues offered by the different languages already known to achieve good comprehension and production in the TL.

Learners of more than two languages might have a more developed understanding, sensitivity and awareness of different language systems than SL learners for whom L1 is the only source of information. (Thomas 1988). This linguistic diversity is seen by Thomas (1988) as a possible advantage that helps during the process of learning a new language, and that TLA students tend to achieve better than SLA students. Besides, some studies that investigated cross-linguistic influence in the context of speakers of more than one language noted that those learners tend to count on their knowledge in a second language (L2) - rather than their L1 - especially when the L2 is typologically connected to the new language being learned (L3) (Ringbom 1987, Cenoz 2001. In Cenoz 2003). Cenoz (2003) gave the example of someone learning English or French and whose mother tongue is a non-Indo-European language. He believed that this

learner would use his lexical knowledge of other Indo-European languages he knows because of their closeness to the TL, instead of using his L1.

The phenomenon of lexical transfer between French and English was reported in a study involving 126 EFL students enrolled at the University of Burundi at four various English degree levels, and for whom French is the L2 and English L3 (Sikogukira 1993). The focus of this study was on the synonymy/hyponymy semantic relations between French and English cognates as well as on false friends between the two languages. Results showed that the closeness between the two languages was viewed as positive by the students and that their use of superficial form-related transfer seemed to decrease at higher proficiency levels leaving more space for semantic-based lexical transfer. However, apart from the proficiency aspect, the extent of which they used the transfer strategy was also dependant on the type of cognates and the meaning relations between the words.

In the Algerian context of the present study, Arabic is the L1 of the learners (and also Tamazight for some of them), French is their L2 and English is their L3. The phenomenon of cross linguistic influence is therefore relevant in this linguistically diversified context.

In a study undertaken with 25 EFL Algerian students enrolled in a Master degree at the University of Chlef, Hanafi (2014) investigated the extent to which positive or negative transfer occurred when translating written texts from Arabic and French into English. Results showed that there were more mistakes in the Arabic-to-English assignments than the French-to-English ones. The fact that French and English are two languages that share many similarities at the morphological and syntactic levels was seen as a possible facilitator for positive transfer. Even though the errors with French were much less than with Arabic, there were still some negative lexical transfer that was noted, such as the use of *"necessaire"* instead of *"necessary"*, or the use of *"progrmmation"*. These errors were thought to reflect the learners' attempt to overcome their gaps in English lexical knowledge by transferring the words they know in French. However, knowledge of French was found to be more facilitative than disruptive.

Besides, in a Master research aiming at investigating the possible negative impact of French-English lexical transfer among Algerian students at the University of Oum El Bouaghi, Zinai & Saidi (2018) analysed questionnaires given to 10 written expression teachers at the English Department. The answers confirmed the hypothesis that most errors in writing are due to lexical form-related borrowing between French and English, even though other factors such as vocabulary size and proficiency level were also reported to cause lexical mistakes but at a lower extent. In other words, lexical transfer from the L2 to L3 was found to be more negative than positive despite the closeness between the two languages. The students were thought to have difficulties finding the appropriate words in English, which led them to borrow French words with similar forms to overcome lack of vocabulary; their assumptions regarding the similarities between the two languages seemed quite superficial.

When asking 82 EFL undergraduate students at the University of Constantine about their use of learning strategies, Nouioua (2018) found out that no less than 71% declared frequently using the translation strategy. The use of such technique while learning English was thought to derive from the previous French language learning experience of the Algerian students who tend to transfer information and rules from French to English due to the similarities that exist between the two languages (Nouioua 2018).

The facilitative aspect of French language when learning English in Algeria was also advocated in another study undertaken with a group of 25 elementary level EFL learners enrolled in a private school in Tlemcen (Negadi 2015). When asked to translate a short text from English into French or Arabic, a majority of the participants seemed to have high proficiency in French and were therefore able to translate the text into English quite easily, making use of the lexical and syntactic similarities between the two languages to guess the meaning of the English text. On the other hand, the remaining 5 participants who had a low proficiency in French experienced more difficulties to understand the text and to translate it. The closeness and typological similarities between French and English were believed to allow the learners to transfer the language strategies

they learned in one language and apply them to the other despite the fact that they were beginners in English. Thus, apart from the difficulties and misunderstanding that can be caused by false cognates, knowledge of the French language was considered to be "a richness" for Algerian EFL learners that should be exploited in English language instruction at various levels of language processing (Negadi 2015).

In light of the studies mentioned above, it would be interesting to observe the possible phenomenon of lexical cross linguistic influence among the population of the present study and the extent to which this influence is reflected in the results of the different research tools. Even though this aspect is not one of the focuses of the present work, we think that it might be visible in a way or another especially that one of the major research tools used to measure the vocabulary size of the students contains a significant number of French-related cognates. This is an aspect that will be highlighted in chapters 4 and 5.

Conclusion:

This chapter has attempted to address some of the most prominent and relevant aspects related to vocabulary learning strategies and vocabulary development in EFL contexts, as this is one of the major variables upon which the present study focuses.

The field of language learning strategies in general and Vocabulary learning strategies in particular has greatly evolved over the past thirty years and thus a large number of studies flourished to investigate various aspects such as nature of these strategies, their classifications, factors influencing them, and their use by different learners in a variety of contexts and settings. However, the gradual change or progression in the use of these strategies by learners at different levels of their proficiency in the TL and over time has not been widely researched. Thus, this is an area of research that the present study would attempt to contribute to by investigating the evolution of VLSs use by Algerian university students studying English as a FL from the time they join the undergraduate degree course until the time they are about to graduate, that is, over a three-year

period. Moreover, the evolution of VLS use is compared to the growth of the vocabulary size of the same students in order to attempt to find correlations between the two constructs. In the literature, the relationship between VLS use and overall EFL/ESL proficiency - including vocabulary knowledge - has been researched in various contexts; this theoretical background is covered in the next chapter.

CHAPTER THREE:

Relationship between Vocabulary Size Growth and Vocabulary Learning Strategies

Introduction 82
3.1 Vocabulary Learning Strategies and Language Proficiency 83
3.1.1 Vocabulary Learning Strategies and Multimedia Resources 87
3.2 Vocabulary Size and Vocabulary Learning Strategies.....94
3.2.1 Vocabulary Size and VLS use among Arabic EFL learners..... 101
Conclusion 108

Introduction:

Having set up a theoretical background of the key concepts of the present study - vocabulary knowledge, size, and growth in Chapter one, and vocabulary learning strategies in Chapter two - it is important to discuss the relationship between the two constructs upon which this work is based. Thus, this third Chapter of the literature review accounts for some of the previous studies documenting the correlation between overall vocabulary knowledge and VLS use, and more specifically on the relationship between vocabulary size growth and the use of VLS among EFL/ESL learners in different context.

Throughout this chapter, we attempt to focus on studies involving Arabic EFL learners in general and Algerian University students in particular in order to approach the context of the present study. After accounting for some major worldwide studies documenting the correlation between vocabulary knowledge/size and VLS use, it seems important to discuss the findings that other researchers have reached with relatively similar populations to the current study, i.e., Arabic speaking EFL students learning English as FL.

When learning a target language, learning the vocabulary of this language is one of the tasks that the learner can undertake individually and independently from the teacher. More specifically, an EFL learner needs a very large amount of vocabulary knowledge to be able to operate efficiently and correctly in the TL; however, such large amount cannot be taught by the teacher in the classroom. Thus, EFL learners are expected to take responsibility for much of their vocabulary learning, which implies the use of conscious techniques or strategies. Moreover, the fact that vocabulary is an element of language that constantly evolves and expands makes the use of strategies very useful for the learner in order to cope with this unique changing nature of vocabulary. The strategies that the learner might make use of outside the classroom, i.e., without the teacher's help, are considered by Nation (1990) to be the most crucial in the vocabulary learning process. Identifying the strategies that learners use to expand their vocabulary knowledge is therefore a highly critical element that allows a better

understanding of the process through which learners acquire the TL in general and the vocabulary component in particular (Sanaoui 1995).

3.1 Vocabulary Learning Strategies and Language Proficiency

Research in the field of language learning strategies was driven by a desire to help language learners to overcome their difficulties, to cope with any learning context, and therefore to develop high level proficiency in the target language (Anderson 2005). In fact, for many researchers, the reason behind investigating Language Learning Strategies has been to shed light on the correlation between the use of strategies and proficiency in the TL (Anderson, 2005). At various levels of proficiency and experience with the TL, EFL/ESL learners are believed to approach the language learning differently and therefore to have different assumptions about their VLS use (Wenden 1998). In a study undertaken with Japanese L2 learners with different proficiency levels ranging from junior high school to adult learners, Schmitt (1997) stated that the higher the proficiency of the learners, the more complex strategies they use. For instance, low-proficiency participants in his study demonstrated reliance on mechanical strategies like use of flashcards and word lists as well as aural and written repetition strategies. On the other hand, as the learners move to higher proficiency levels, they seem to prefer strategies that are more complex and involving the learners' metacognitive awareness such as guessing from context, relating the word with personal experience, or asking the teacher for paraphrases.

Research investigating the relationship between strategy use and language proficiency has demonstrated that EFL/ESL learners at different proficiency levels have different beliefs and behaviours in terms of strategies which are influenced by their level of knowledge of the TL (Wenden 1998). The more proficient the learners are, the more successful they are in using a variety of cognitively complex strategies, while learners who are less knowledgeable or successful in the TL tend to use a limited number of strategies most of which are usually less demanding cognitively. Thus, the general belief is that the nature, frequency and adequacy of strategies use among learners can easily allow for a

clear distinction between successful and less successful EFL/ESL learners (Ahmed 1989, Gu &Johnson 1996, Schmitt 1997, Fan 2003, Catalan 2003, Tseng & Schmitt 2008).

Some researchers suggested that one of the elements that can positively predict success in language performance is the conscious and active involvement of the learner himself in the learning process through use of strategies (Rubin 1975, Ahmed 1989, Oxford 1993, Green & Oxford 1995).

Rubin (1975) was among the first to investigate the difference between good and poor language learners in terms of their VLSs use, and according to him what distinguishes a good learner from a poor one is the fact that a good learner is interested in any opportunities that allow him to learn and communicate, as he is willing to improve his own performance and learn meaning of unknown words. Similarly, in a study involving 300 Sudanese EFL learners, Ahmed (1989) suggested that a good learner pays active attention to different aspects of words including collocation, spelling and various contexts, while a poor learner is usually quite passive in his language learning, considering the words superficially as isolated items, unable to relate new words to those previously learned, or simply ignoring new words and not attempting to guess their meaning.

Oxford (1990) also believed that the appropriate use of learning strategies, including vocabulary strategies, leads to increased self-confidence and responsibility of the learners, and improved proficiency in the target language. Thus, high proficiency and success in language learning is seen as positively dependent on the learners' active use of strategies (Green & Oxford 1995).

The necessity for any EFL/ESL learner to consciously optimize and develop his vocabulary knowledge is an area that many researchers in the field of SLA have advocated since the 1970’s (Singleton 1999, Schmitt 2000, Nation 2001). In this perspective, a vocabulary learning strategy is supposed to be complex involving gradual learning processes, to offer learners the possibility to choose from many options, and also to benefit from training in order to be efficient and lead to better vocabulary development (Nation 2001).

Another aspect of the difference in VLSs use between good and poor learners is related to the frequency of use of these strategies. The high number and frequency of VLSs use is considered to be an indicator of the learners' high proficiency in EFL (Fan 2003, Liu 2004). Thus, a good learner is described as the one using regularly not only a large variety of learning strategies but also different combinations of strategies while a less proficient learner tends to use much less strategies. (Liu 2004)

Through a large-scale study undertaken with university students in Hong Kong, Fan (2003) tested the proficiency of the participants with a vocabulary test and their use of vocabulary learning strategies with a VLS questionnaire inspired by Oxford (1990) and Gu &Johnson (1996). His findings showed that even though students consider vocabulary learning strategies as important and useful for learning, they did not seem to use them very often, and the frequency of use of these strategies seemed to be what distinguished proficient from poor learners.

As noted earlier, learning vocabulary is a challenging task for anyone wanting to learn a TL, as a large vocabulary size is needed to function appropriately in the language, and efficient use of learning strategies is required to assist this learning process. Thus, one of the aspects related to the difference between good and poor learners relates to the types of strategies that successful learners use, and the ones that less successful learners prefer. Information about this difference is believed to provide insights about the strategies that can lead to improvement in language proficiency and success.

One of the major studies documenting this distinction is the one undertaken by Schmitt (1997) with different participants whose proficiency levels ranged from high school, to university students or adult learners in Japan. Results showed that basic strategies such as word lists, flashcards, and repetition are commonly used by learners with a relatively low proficiency, while more advanced learners are able to be more autonomous by using strategies like guessing from context, analysing word form, or using personal experience to understand vocabulary items, the latter processes being much more cognitively demanding.

The popularity of basic VLSs that involve little cognitive processing among the learners was also advocated by other studies in the field (Ahmed 1989, O'Malley & Chamot 1990). Thus, successful learners are believed to be those who use a large number of strategies that require cognitive efforts, while less successful learners tend to use fewer strategies and not always efficiently. As a matter-of-fact, research in cognitive psychology has demonstrated that when a learner makes cognitive effort in learning a word, it would make the recall of that word easier at another time or in other contexts (Schmitt & McCarthy 1997).

In her study undertaken with ESL learners in Canada, Sanaoui (1995) found out that successful learners tend to use certain strategies to help them retain new words; instances of these strategies involve repeating the learned words aloud, writing them down, using them in sentences or in conversations, connecting the words with an event or a picture in the mind, as well as translating the words in the L1.

Similarly, in a large-scale study undertaken with 300 Sudanese students learning English as a FL, Ahmed (1989) attempted to investigate the students' behaviour in terms of learning strategies use and the possible distinction between poor and good learners in this respect using observation, think-aloud and questionnaire tools. Results shed light on 5 macro strategies - general learning behaviours - and 38 micro strategies - specific strategies included in the macro categories. At the level of macro strategies, even though categories such as memorization and note-taking were commonly used by most participants, no significant difference was observed between good and poor achievers, except for the category named ‘practice’ which implies practicing the new words in different ways to retain it. However, at the micro strategies level, some specific strategies reflected the distinction between good and poor learners. For instance, strategies involving the use of L1 were more frequently used by poor achievers; asking for the translation of the new word into Arabic or using bilingual dictionaries. On the other hand, good achievers seemed to be more prompt to use strategies directly related to the L2, such as the use of synonyms in the TL or paraphrasing the new words into English. Moreover, the more proficient the learners become, the more they seem

to move from L1 related strategies, which means that the use of L1 as a strategy to learn vocabulary is more frequent during the early stages of language learning and gradually diminishes as the learners move to upper proficiency levels.

The findings of Ahmed's study (1989) are in line with research in cognitive psychology (Schmitt & McCarthy 1997) which revealed that when a significant cognitive effort is made by the learner to learn a word, the recall of this word becomes easier as that effort reinforces memorization.

3.1.1 Vocabulary Learning Strategies and Multimedia Resources

Teaching vocabulary at university level is quite challenging specially in an EFL environment in which exposure to the TL is usually restricted to the classroom. The fact that the number of students in the classroom is usually quite large may lead to limited participation and language practice in class. Also, the restricted time spent in class makes it impossible for the teacher to teach all the vocabulary the students need. One of the tools which can be used to provide more exposure to the TL, better opportunities to practice the language, as well as varied sources for vocabulary learning is the use of multimedia. Indeed, technology-based resources can support learner autonomy in language learning in general by giving learners the possibility to take control of their own learning and use their strategic competence; such resources are believed to activate learners' cognitive and metacognitive awareness (Mayer 2005 in Rahimi & Allahyari 2019).

When one thinks of communication in language learning, the ‘classical’ context is usually a face-to-face setting during which individuals exchange in many ways. However, the emergence and democratization of internet and various electronic tools have led to new forms of communication, bearing in mind that English has become the most predominant language used on the internet (Bensemmane & Boukhedimi 2017).

One of the prominent researchers who advocated the importance of integrating multimedia resources into language teaching is Mayer who suggested the Multimedia Learning Theory (Mayer 2005 in Kabooha & Elyas 2018).

According to him, using images, sounds and words makes language learning more effective as they allow the learner to be strategically involved in his learning process and developing mental representations of the input. Integrating the auditory, textual and visual information, making mental connections between them, as well as relating them to prior knowledge are all mental processes that involve the active multi-sensory engagement of the learner, and this is believed to trigger construction of new language knowledge, including vocabulary. Thus, the self-directed and strategic learning that is achieved through technology-related resources can lead learners to become agents in their own language learning process by controlling different features of their learning to meet their objectives, managing aspects such as their emotions and cognition, as well as choosing and using the appropriate learning strategies that match various tasks (Oxford 2013). Such awareness-raising is valuable when one knows that progress in vocabulary learning is highly related to the extent to which a learner has metacognitive awareness of his own needs and learning strategies use, and is therefore able to structure his learning adequately and make use of various vocabulary strategies to meet his learning objectives (Ahmed 1989, Sanaoui 1995).

One of the benefits of multimedia and internet resources is the amount of visual and auditory materials that learners can very easily have access to, most of the time free of charge. These materials provide them with real-life and authentic input that can motivate them to learn language directly or indirectly. The materials available through technology-based resources can be in the form of texts, graphics, images, audio, and video. In terms of using multimedia in language teaching, the use of visuals and sensory-aids plays an important role in making strategy instruction in the classroom more effective and realistic (Oxford 2011). This is particularly relevant in EFL environments in which the only source of input is the teacher; then, the use of multimedia-related resources can be an alternative technique to incorporate visuals and sensory effects into vocabulary learning strategy instruction and improve vocabulary learning in general. For instance, some studies have demonstrated that the use of multimedia resources to

integrate pictures and word definitions maximize vocabulary retention among learners (Yanguas 2009). In his study undertaken with 94 college-level students learning Spanish as a FL, Yanguas investigated the possible effect of multimedia glosses on written text comprehension as well as on vocabulary learning. While reading a written text online, three types of multimedia words glosses were used, namely textual, pictorial and a combination of both, while a control group was given the written text without any glossing, i.e., without explanation of the underlined words. Results showed that the groups who had access to the different types of multimedia glosses were able to recognize the targeted words much more significantly than the control group who was given the text to read directly. Thus, whether textual, pictorial or a combination of both, the glosses provided by technology seemed to play an important role in the cognitive processing of the students to achieve text comprehension; the use of a combined textual-pictorial gloss proved, however, to be more significantly helping comprehension.

Besides the early 2000's technology-based resources that can be used to enhance vocabulary learning, such as CDs, internet websites and platforms, social media have been considered recently to play a more significant role in the development of vocabulary knowledge in various EFL/ESL environments (Puspa 2018). Indeed, these tools allow the learners not only to get input and information about different aspects of the TL, but they most importantly enable them to interact with other native or non-native speakers of the TL, and therefore to develop their communicative competence in and outside the classroom.

In Algerian society, the use of social media has become a major source of information and news, especially among young people in large cities, and a means of expression and empowerment. In recent years, the popularity of social media platforms such as Facebook, Twitter, Instagram, YouTube, Tiktok, WhatsApp, etc. has enabled people of different ages to interact and share contents in various aspects of life, through computers or smart phones. As far as language learning is concerned, the emergence of social media in the last couple of decades has started to attract interest as some studies worldwide have investigated the effect of such resources on language learning in general and

vocabulary acquisition in particular (Alqunayeer 2016, Kabilan & Zahar 2016, Al-Tamimi et al 2018, Nikbakht & Boshrabadi 2015 In Alharthy 2020). All these studies undertaken among university level students learning English as a FL have demonstrated that the adequate use of tools such as Twitter or Facebook makes a significant difference in terms of gaining larger vocabulary knowledge, especially when compared with control groups for whom more traditional multimedia-free teaching was applied. In order to reflect the Algerian context which the present study addresses, the works mentioned in the following section focus mainly on Arabic speaking EFL learners - including Algerian students - and the extent to which their vocabulary knowledge is impacted by the use of multimedia resources.

By means of questionnaires given to 114 Master students studying English, French, German, Italian, and Spanish at the University of Algiers 2, Bensemmane & Boukhedimi (2017) asked them about when and how often they use the English language in or outside university contexts, including throughout their use of social media. Some of the most common uses of English that the students stated were to exchange emails, to chat online with friends or other speakers, and to exchange thoughts and various kinds of information, mainly through social media platforms such as Facebook, Twitter, WhatsApp...etc.

In a study involving 120 first and second year Master EFL students at the University of Jijel (Algeria), Bouzar et al (2012) administered a questionnaire aiming at shedding light on the possible effect of technology use in the classroom on learners' motivation. Results showed that 87.5% of the population considered that technology-based resources would be a highly motivational resource if used in the EFL classroom, and 92.5% believed that the use of materials such as PowerPoint presentations or any other multimedia aids would increase their comprehension, enhance their language learning, and make the lectures much more enjoyable.

Another multimedia tool that can be exploited in the language classroom is the use of subtitled movies. A study was undertaken by Bellalem et al (2018), with 27 university students studying ESP as part of their Licence (BA) in History at the University of Mostaganem (Algeria). The purpose was to investigate the extent to which the use of Arabic subtitles when watching a movie in English could impact vocabulary gains. Results showed that the experimental group learned a much higher number of new vocabulary items than the control group. When comparing results of pre and post vocabulary tests, the difference between the two groups was significant as the subtitles seemed to have provided better learning opportunities to the experimental group.

A recent study involving Arabic speaking students learning English as FL investigated the possible vocabulary gains obtained as a result of a well- known and highly used multimedia resource used worldwide, namely WhatsApp (Bensalem 2018). This phone application allows for calls, messages and exchange of various types of content via smart phones. Forty Saudi university EFL students enrolled in an elementary English course were divided into an experimental group and a control group and were requested to submit vocabulary assignments throughout the six weeks of the experiment. After a pre-test aiming at checking their knowledge of a number of vocabulary items, the experimental group was given a list of 20 words per week via WhatsApp and asked to submit a weekly vocabulary assignment via the same application, while the control group was given the same list of words and same assignment but on a paper form. A post-test was then administered at the end of all assignments to check any improvements in vocabulary knowledge. Results showed a significant difference in vocabulary gains between the two groups as the use of WhatsApp seemed to have led to greater vocabulary improvements compared to the traditional paper-and-pen method. Using this application seemed to have boosted the learners' motivation to learn and lowered their classroom anxiety; the feeling to belong to a learning community and being part of a WhatsApp group was also believed to have acted as a booster for better learning commitment.

Another technology-based resource that is popular among learners is the use of YouTube, which is an application offering access to limitless videos on any possible subjects; this resource provides aural as well as visual language input for free. One of the recent studies that investigated the effect of using YouTube on vocabulary development of university students was undertaken in Saudi Arabia. (Kabooha & Elyas 2018). A hundred female pre-intermediate EFL students were given a pre-test, post-test and a questionnaire to assess their vocabulary knowledge as well as their views regarding using YouTube as a teaching tool. The experimental group was presented with YouTube videos to support their reading class, while the control group had no access to videos. The use of this multimedia resource was found to lead to student significant improvement in vocabulary comprehension and retention. The authentic and attractive input provided by videos is seen as highly motivating and enjoyable; this type of input boosts learners' involvement and engagement in the learning process and allows them to learn more strategically.

However, if there is evidence that the use of technological tools in general and social media in particular plays a role in the development of learners' communicative competence, language comprehension and vocabulary knowledge, the effect of such tools on the production of language can sometimes be less evident.

The emergence of technology-related resources has resulted in the use of a special communication language on the internet with the use of informal written language and distorted punctuation and capitalisation (Riley 2013 In Ghouali & Benmoussat 2019). Most of the writing errors that have been reported are believed to be influenced by the spoken language used by young people in social media platforms; this language is reproduced in writing with the same non-standard spelling, shortcuts and contractions of nouns, specific abbreviations, as well as highly informal expressions and symbols (Crystal 2001, Varnhagen et al 2010. In Ghouali & Benmoussat 2019). In their study, Ghouali and Benmoussat (2019) aimed to investigate the possible negative effect of social media use on the written production of students. Two questionnaires were used with 31 EFL

students enrolled in the final year of a three-year undergraduate English degree course at the University of Tlemcen (Algeria), and 22 teachers of English in the same department; a writing task was also administered to the students to identify the type of errors made. Analysis of the students' written productions showed many errors generally related to syntax and spelling of words, non-respect of written language rules in terms of punctuation and formality, as well not meeting academic English standards they are supposed to learn. Despite the fact that some teachers viewed social media as highly positive to learners as they assist them in developing their writing, most answers to the questionnaire highlighted the significantly negative impact of social media. In fact, all the students declared using very frequently social media, and more specifically Facebook to which they developed a sort of dependence. Thus, the language used in this context, with its characteristics such as informality, abbreviations, slang vocabulary, symbols, tended to feature in their academic writing, leading to a large number of errors that showed lack of mastery of the linguistic conventions of English. Besides, most of these errors seemed to be fossilized errors, as the constant use of social media led to the development of language habits that the students took as references and used in their academic writing continually.

Besides the possible negative impact that multimedia resources can have on language learning, if not used adequately, one has to mention that lack of knowledge about how to use these tools can also lead to non-beneficial outcomes. For instance, in a recent small-scale study on the teachers' perception of the very recent use of Moodle platform in Algerian universities, Saihi (2020) administered a questionnaire to 8 EFL teachers at the University of Biskra. Their answers reflected a general interest in the interactive aspect of using such electronic platform as it allows for quick feedback and encourages autonomous learning. However, lack of training of both teachers and students on how to best use this tool can reduce its benefits. Both participants expressed their need for more materials to make this platform more accessible.

In fact, the Algerian Ministries of National Education and Higher Education and Scientific Research started a technology e-learning project in the 2000’s that

aimed to gradually integrate technology in schools and universities and to generalize it in 2020 (Bellalem et al 2018). Moodle is an e-learning university platform that is meant to enable virtual classes as well as access to various contents. When the Covid-19 pandemic broke out in March 2020 in Algeria, some universities started to use Moodle platforms for teaching, as an alternative channel of communication with their students who could not attend on-site classes.

Most of the studies mentioned above advocate the need to integrate different types of multimedia or technology-based resources in and outside the EFL classroom as such tools can be complementary to traditional classroom teaching and can help students to develop better vocabulary knowledge and more autonomous and strategic learning. Indeed, when the learner is involved in his own learning process, the more autonomous he is, the more appropriate choices he makes in terms of learning strategies to achieve better vocabulary acquisition. However, the use of digital technology in general and social media in particular should be monitored in order to minimise the negative effects of these devices and maximize their benefits. For instance, it is usually agreed that most students tend to be quite dependent on social media and can therefore easily lose track of their advantages and develop inadequate linguistic codes that can become fossilized and difficult to readjust. Offering guidance to students on how to best use other input resources such as multimedia would in a way promote learning how to learn.

3.2 Vocabulary Size and Vocabulary Learning Strategies

It is commonly agreed that language use is primarily a matter of words, and that the language ability of a learner of a FL/SL is significantly predicted by the size of his vocabulary repertoire (Gu 1996). Besides, given that one of the major factors that can lead to success in FL vocabulary learning is the use of vocabulary learning strategies, researchers have advocated the importance of

spending more time in the classroom on strategies rather than on the teaching of individual words (Nation 2001).

A number of studies attempted to investigate the possible correlation between VLS use and vocabulary size among EFL learners from different backgrounds and in various contexts. Most of the studies conducted in this field, including recent ones, seem to agree on the fact that the contribution of VLS use on vocabulary learning progress can no longer be questioned (Cohen 1990, Schmitt 1997, Hamzah et al 2009, Fan 2003, Gu 2010, Kalajahi & Pourshahian 2012, Tanyer & Ozturk 2014), even though a clear correlation with vocabulary size growth specifically was not always established.

For instance, in a study involving L2 Chinese EFL learners, Gu & Johnson (1996) found that the strategies that are the most prone to predict gains in vocabulary size and language proficiency are the ones that involve deep elaborate processing such as guessing from context, note taking, dictionary use, or metacognitive techniques; extracurricular time spent learning English outside the classroom was also found to play an important role in vocabulary development. On the other hand, superficial strategies such as visual repetition and word imaging showed negative correlation with vocabulary size. However, researchers such as Schmitt & McCarthy (1997) discovered in their studies that most learners have a clear preference for superficial mechanical vocabulary strategies while complex ones are usually much less used.

Gu's results, like other studies mentioned above, confirm the idea that the use of vocabulary learning strategies seems to be a key predictor of development in vocabulary breadth and in vocabulary knowledge in general.

In another study, Gu (2010) also documented the relationship between the type and frequency of use of VLSs and the progress of Chinese participants in terms of vocabulary proficiency. The participants were 100 students enrolled in an English language program aiming at preparing them to study in English-medium universities in Singapore, and the variables were researched at the beginning as well as at the end of the six-month program in order to shed light on the evolution of VLS use, frequency and vocabulary proficiency over this time. In

terms of vocabulary size, the participants seemed to have significantly enlarged their receptive and productive vocabulary over the six months period. As for the VLS use, an evolution was also found in the number, variety and frequency of use reflecting a more strategic awareness of the participants at the end of the program. However, the most frequently used strategies remained the same during that period, among which dictionary use and contextual guessing had the highest scores. On the other hand, there was also a non-significant difference in terms of the least frequently used strategies, namely the memory strategies such as visual repetition and semantic encoding. The participants who showed varied and frequent use of VLSs in the VLS questionnaire were also the ones who seemed to have progressed in their receptive vocabulary size, while the effect on the development of productive vocabulary was not significantly observed. This reflected Laufer's (2005) assumption that the developmental pattern of receptive and productive vocabulary is different and that if a learner improves his receptive vocabulary size, he might still not be able to reflect this improvement productively.

One of the studies which highlighted the non-existence of a correlation between vocabulary size and VLS use was the one involving 125 undergraduate students enrolled in an English language teaching degree in Cyprus undertaken by Seyed et al (2012), in which a VLS questionnaire and the VLT were used to investigate the VLS behaviour and vocabulary size of the participants. Results showed that despite the significant high frequency of use of VLS - with a preference for psycholinguistic categories including memory and cognitive strategies -, there was no correlation between the two variables. One of the main concerns about this study is the fact that information about the participants' background, experience with EFL, or proficiency level was not specific enough, while such information could have brought more insights regarding the results.

In the Turkish context, a frequently cited study in the literature is the one undertaken by Tanyer & Ozturk (2014) with a group of 80 advanced EFL university students learning English to become EFL teachers in Turkey. The

study tested participants from year 1 to year 4 of the course. The vocabulary size was measured with a Vocabulary Level Test (VLT), while the use of vocabulary strategies was researched through the VLS questionnaire and a VLS survey. Results of their study showed that the most frequently used vocabulary strategies were the ones involving guessing from context and use of dictionary; while social strategies were clearly the least frequently used by this population. However, despite the popularity of determination strategies among the participants of this study, their use seemed to have no effect on their vocabulary size. The overall use of VLSs though explained 17.8% of the variation in vocabulary size, which meant that there was some positive effect of one variable on the other. However, the fact that the vocabulary size of these participants was measured with the VLT can be seen as a limitation as the VLT reflects more vocabulary growth rather than vocabulary size (Nation 2001), because it tests only selected frequency bands.

Another study in the Turkish context was undertaken by Kirmizi (2014) with 130 FL undergraduate students of English at three different degree levels. The vocabulary size which was measured with the VLT was found to be quite high in the first 2000 and 3000 word families as well as the academic vocabulary, while it was moderate to low ranging between 5000 and 10000 word families. The vocabulary size at grade level increased when moving from the second to the third grade, while the VLS use also significantly differed from one grade to the other. Indeed, the more proficient the students became, the more frequently they used bottom-up strategies such as guessing from context, using linguistic clues, and note-taking by writing down the new words using L1, strategies which are believed to be developed thanks to the extensive academic readings the students are supposed to do as they move to upper proficiency levels.

However, in that study, no significant correlation was set up between vocabulary size and VLS use which means that the students seem to be using the same sort of strategies whatever their grade, even though the frequency of use did differ between the two grades.

Şener (2015) researched the correlation between the two variables with 305 pre-serviced Turkish EFL teachers at two stages of proficiency - namely the first and fourth year of the course -using a VLS inventory and VLT to collect data. The most preferred category was the determination strategies and the least frequently used were the cognitive and social subclasses. As for the individual strategies, the participants seemed to like guessing from context (Determination), note taking (Cognitive), and interacting with native speakers (Metacognitive). While most strategy categories showed low correlation with the VLT results, only the relationship between cognitive and metacognitive strategies, and vocabulary size was significant enough to be acknowledged. A surprising result was observed in terms of vocabulary size, as the first-year students had higher scores than the fourth-year students. The higher vocabulary size of the first-year students was thought by Sener (2015) to be due to the fact that the entrance test they take just before joining the undergraduate course motivates them to memorize as many words as possible and learn grammar to pass the test. On the other hand, the drop of vocabulary size towards the end of the university course is believed to result from a decrease of motivation and therefore attrition of vocabulary that was probably stored in the short-term memory only. Sener's assumption goes in line with the conclusions of Ur (2002) who also considers that motivation of the learners plays a crucial role in achieving success in language learning.

In Thailand, a study investigating the correlation between VLS use and vocabulary size was undertaken with 257 university undergraduate students enrolled in various disciplines (Nirattisai 2014). The data were collected by means of a VLS questionnaire (adapted from Schmitt 1997) and a vocabulary size test (adapted from Nation & Beglar 2007) - both instruments presented in the Thai language - as well as semi structured interviews to collect more information about the strategy use of some participants. On the basis of the English vocabulary size results, and taking the figure of 6000 word families as a threshold, the population was divided into two groups: a high group that scored

6000 or above, and a low group with a score of less than 6000. Overall, the use of VLS was found to be significantly related to the vocabulary size of the participants in both groups. However, in terms of types of strategies leading to higher vocabulary size, there was a difference between the two samples, as the vocabulary size of the students in the first high group was found to be significantly correlated with cognitive, metacognitive and determination strategies on the one hand, with the strategy involving watching TV/movies in English having the highest correlation. On the other hand, the low group showed a higher correlation mainly with memory and social strategies, the strategy of asking a classmate for translation being the most highly correlated with vocabulary size. The fact that the vocabulary size of most students with knowledge of less than 6000 word families did not show correlation with determination strategies was thought to be due to their lack of vocabulary knowledge that did not allow them to effectively use strategies such as analyzing parts of speech, affixes or textual clues to guess meaning.

Hamzah, Kafipour and Abdullah (2009) conducted a research study involving 250 students enrolled in the second year of the EFL undergraduate course in different universities of a province in Iran. The aim of this study was to investigate the VLS behaviour of these subjects and to determine the frequency of use of these strategies as well as the possible correlation between use and vocabulary size. The vocabulary learning strategies use was researched by means of Schmitt's (1997) VLS questionnaire, while the vocabulary size was calculated through Nation's (2007) Vocabulary Size Test. Results of this study categorized the participants as medium users of VLS, which means that they do have awareness of strategies and their contribution to learning but still demonstrate limited effectiveness in using them (Oxford 1990). Encouraging these students to use strategies more often in and outside the classroom is believed to benefit their vocabulary learning (Hamzah & Al 2009). Awareness of VLS is assumed by Hamzah & Al (2009) to be triggered by the "Study Skills" course the students attend during the first semester of their undergraduate studies. This course

familiarises the newly enrolled students with some techniques and strategies that can be used to improve language learning.

The strategy categories reported to be the most frequently used were the determination, memory and metacognitive categories. More specifically, the use of monolingual dictionaries and guessing meaning from context were the most popular determination strategies, while the use of English-speaking media and the study of new words repeatedly were the most preferred metacognitive strategies. Within the category of memory strategies, the use of words in sentences and linking them to synonyms and antonyms were the most frequently used strategies. Many social strategies were reported by the participants to be the least frequently used, among which asking the teacher for definition, asking classmates for meaning, or talking to native speakers. In terms of correlation between VLS use and vocabulary size, among the 41 VLS of the questionnaire, only nine showed significant connection with vocabulary size. Strategies such as use of English language media, study of words many times, and note- taking demonstrated significant correlation, knowing that they were reported to be among the most popular among the participants. However, some of the least frequently used strategies showed strong correlation as well; these included mainly social strategies involving asking assistance from classmates and talking to native speakers.

Another study documenting the correlation between vocabulary size and VLS use among Iranian EFL learners was also undertaken by Ansarin, Zohrabi & Zeynali (2012). This study involved 150 students enrolled at an English Language Centre with elementary, intermediate and advanced proficiency levels. Researchers used the Vocabulary Level Test and the SILL questionnaire to collect data. Results demonstrated that the metacognitive strategies were the most frequently used category, while the social category was the least frequently used. The popularity of metacognitive strategies was mainly observed among the advanced group who used them more than the other sample groups, thus implying that these advanced learners are more prompt to plan, monitor and

assess their learning process than low proficiency learners. Besides, even though the advanced participants with high vocabulary size were the ones who showed the highest use of VLS, correlation between vocabulary size and VLS use was found only among the elementary sample, when no significant relation emerged among the intermediate and advanced levels.

In a more recent study investigating the relationship between VLS preferences and vocabulary size of 90 Iranian EFL university students, Maghsoudi & Golshan (2017) confirmed the popularity of metacognitive strategies among Iranian students, while social strategies were again found to be the least frequently used. If the frequent use of metacognitive strategies was explained in the Iranian study by the fact that these students were able to monitor and assess their own vocabulary learning, neglecting social strategies was thought to be due to the lack of collaborative learning habits and interaction in the Iranian instruction model. In terms of correlation between vocabulary size and the different VLS used, findings showed no significant positive relation between the two variables in this context.

Compared to other contexts, there were limited studies that documented the correlation between VLS use and vocabulary size among Arabic EFL learners. Given that the present study focuses on the analysis of vocabulary size and VLS use of Algerian university students learning English, it is important to set up a theoretical and practical background of EFL learners with approximately similar linguistic profiles. Comparison of results in the forthcoming chapters is believed to enrich the discussion and analysis of data. Therefore, the following section attempts to present some of the main works undertaken with Arabic speakers learning English as a FL, in order to set up a reference base upon which the present study relies.

3.2.1 Vocabulary Size and VLS use among Arabic EFL Learners

One of the studies investigating the two variables of vocabulary size and VLS among Arabic speaking learners of English was recently undertaken by

Alahmadi et al (2018). Except its interest in the two constructs, this study also aimed at researching the possible influence of learners' styles on their use of VLS and on their overall vocabulary learning. The participants included a group of 49 undergraduate students studying EFL in Saudi Arabia as well as a group of 22 postgraduate students evolving in an L2 environment for their studies. The vocabulary size of the undergraduate participants was found in average, to be low, reflecting serious difficulty in lexical knowledge, while the postgraduate students' vocabulary size was acceptable and allowed them to perform basic academic tasks. In terms of VLS use, there were many similarities between the two sample groups. For instance, all participants had a significant preference for the strategy of guessing from context as it was stated to be the most frequently used one, together with the strategy involving watching English speaking TV, and both strategies seemed to be positively correlated with the vocabulary size of the participants. . However, undergraduate students were on the one hand found to use superficial and basic strategies such as the ones considering the words in isolation rather than in context. Postgraduate students on the other hand seemed to be using VLS more frequently than the other sample, with a preference for strategies involving putting the word in context or sentences to be memorized and therefore to consolidate its meaning. With regards to the effect of learners' styles on VLS use, results showed that the profiles that emerged from the study were more related to the frequency of use of the VLS rather than on the individual differences between learners, and that learners' style did not significantly relate to vocabulary learning in that context.

Following up on these findings, Alahmadi very recently pursued this research, together with Foltz (Alahmadi & Foltz 2020), with a special focus on the two determination and social strategies of inferencing and dictionary translation, attempting this time to go deeper and try to find out which variable influences the other. In other words, their concern was to see if the vocabulary size of the students increased as a result of their use of the inferencing strategy, or if inferencing was made easier because they had significant vocabulary knowledge. For this purpose, they adopted a longitudinal methodology in which

they followed a group of 61 senior undergraduate students studying EFL in three Saudi universities. By means of a vocabulary size pre-test, two vocabulary training sessions, a post-test, a self-assessment questionnaire about proficiency level, and a VLS questionnaire, the researchers attempted to analyse the correlation between vocabulary size and VLS use as well as overall proficiency over several weeks. After measuring their vocabulary size and language proficiency, the students had two training sessions practicing the strategies of guessing from context and lexical translation while reading texts. Their vocabulary size was also measured at the end of the training sessions and they were asked to state the strategies they used through the VLS questionnaire. Results showed that the students who declared frequently using the social strategy of asking the teacher for word meaning were the ones with lower vocabulary size, while those with larger vocabulary size declared using more often strategies involving guessing from context. Besides, the use of bilingual dictionaries to check meaning of words seemed to have led to larger vocabulary size throughout the several weeks of the study. The researchers reached the conclusion that there was a correlation between vocabulary growth and the use of inferencing strategy, but this was dependent on the extent to which students were familiar with it. Therefore, strategy training on how to best use guessing from context was believed to be crucial as students need to be guided in this sort of strategic behaviours in order to achieve greater lexical knowledge.

Another study undertaken with Arabic speaking EFL students involved 118 junior university EFL students in Iraq. It was found that the most frequently used VLS was the memory strategy implying the study of the word's sound, the metacognitive strategy of watching English speaking TV, as well as the cognitive technique of repeating the learned word many times. (Mahmoud & Yalcin Arslan 2017). The least frequently used strategies were mainly the social ones such as the ones involving group work or asking the teacher for assistance. Besides, the receptive vocabulary size - investigated through the VLT - of these participants was found to be below the average set up by Schmitt et al (2001). There was no

VLS that showed significant positive correlation with vocabulary size, and the VLS used contributed only to an average extent to the receptive vocabulary knowledge of the participants in this context.

As far as the Algerian context is concerned, to the best of our knowledge very little research has investigated the correlation between vocabulary size and VLS use among university students. Even though the two constructs have been researched separately among Algerian learners at various proficiency levels, studies investigating the extent to which one construct influences the other are scarce. In terms of vocabulary size, Arab & Benaissa Bouhass (2020) investigated very recently this construct among 58 advanced EFL students at the English department of Sidi Belabbes University. The population of the study was a mix between 42 Master students (1st and 2nd year) and 16 teachers at the same department, most of whom were also undertaking PhD research. Analysis of questionnaires and a vocabulary size test (VST by Nation & Belgar 2007) completed by the participants demonstrated an average vocabulary size of 7.794 word families for the Master students and an average of 9.950 for the PhD students/teachers. Knowing that non-native speakers enrolled in undergraduate studies in EFL environments are thought to need knowledge between 5000 and 6000 to succeed in their university studies, while the ones at PhD level require 9000 word families (Nation 2006), the results of Arab & Benaissa Bouhass (2020) seem to fit with these thresholds. However, when considering that most of these students were to become future EFL teachers, and that most of the teachers had an average experience of 24 years, these VST scores might seem insufficient, especially that some inconsistencies were noted. For instance, there was no significant difference in vocabulary gains between year 1 and year 2 of the Master students (only 255 word families); also some Master students had much better scores than some teachers with extensive teaching experience, and the difference in scores between the Master students and the PhD students/teachers was not significant enough when considering the big difference in exposure and practice of the FL. This study seems to suggest that the amount of exposure to the target language does not suffice to increase vocabulary growth, the most

important aspect is the quality of this exposure, and this point should be taken into consideration during EFL instruction. (Arab & Benaissa Bouhass 2020).

One of the recent studies that investigated the learning strategies used by Algerian EFL undergraduate students was undertaken at the English department of the University of Algiers2 (Aoudjit Bessai 2018). However, Aoudjit Bessai's study did not deal with vocabulary strategies in particular but rather the overall learning strategies used at different levels of language learning. The population targeted in her study was a group of 56 first-year students and a group of 56 third year students enrolled in the undergraduate EFL degree course. Results obtained by means of a Language Learning Strategies Inventory Questionnaire (SILL adapted from Oxford) showed that third year students' use of language learning strategies was more frequent than for first year students. In terms of strategy types, apart from the fact that memory strategies were declared to be the least frequently used among both groups, there was a quite significant difference between the two groups regarding the other types. Thus, the freshers declared using more compensation strategies that allowed them to overcome lack of language knowledge - such as guessing from context, skimming, scanning, and paraphrasing -, while third year students had a higher preference for metacognitive and cognitive strategies which allowed them to control their own learning - such as planning, self-evaluation, and paying attention. Overall, the findings of this study suggest that strategy use seemed to increase as the proficiency study level became more demanding from one year to another.

In another recent study, Nouioua (2018) investigated the strategic awareness, use of learning strategies and their impact on overall academic achievement of a group of 82 Algerian EFL students in their final year of undergraduate studies at the University of Constantine. Results showed that most students had a positive attitude towards learner autonomy and were aware of the importance of using learning strategies, while the common assumption of many EFL teachers was that most students at university level are on the contrary quite dependent (Nouioua 2018). Despite this declared awareness of the

importance of autonomy, a majority of students viewed the role of the teacher in the classroom as being a significant contribution to their academic success, which demonstrates their inclination to traditional teacher-centred learning. The participants also declared using a large number of strategies, with a significant preference for cognitive and metacognitive strategies, while social strategies were the least frequently used. Their preferred strategies were thought to reflect their awareness of the importance of managing and monitoring their own learning, especially at university level. Despite the fact that the EFL environment in which Algerian learners learn English does not offer many opportunities to practice the language outside the classroom, the use of such social strategies did not seem to be widely used by the participants; this may be due to a possible reluctance to use English to communicate outside classroom settings.

We are aware of only one study that documented the correlation between vocabulary size and VLS use among Algerian university students; it was undertaken with 46 second year students enrolled in an English degree course at the University of Tizi Ouzou (Anber 2010). Anber attempted to identify the strategies used by the students and compare them with their vocabulary size. Using The University Word Level Test (Belglar et al 1999), she first identified the vocabulary size of the participants and divided them into two groups on the basis of their high or low scores. Using the Strategies Inventory for Language Learning (SILL, Oxford 1990), the learning strategies of each of the two groups were compared. Results showed that overall the participants used cognitive and social strategies, and the most frequently used category was metacognitive strategies such as paying attention to English speakers, reflecting on their own learning progress, having clear objectives to become better learners, as well as trying to learn from their own mistakes. Besides, in terms of comparison between the participants with large or small vocabulary size, high achievers showed preference for strategies that require more efforts and time, i.e., strategies that are more cognitively demanding such as guessing from context, making summaries or trying to use the TL in different contexts in order to improve vocabulary

knowledge; the strategy which involves reading in English as a source of learning was also mentioned by this group. On the other hand, participants with low scores in vocabulary size seemed to rely more on simpler or less complex strategies such as rote learning as a source of memorization, or use of gestures to overcome communication difficulties.

The studies presented and discussed in this chapter have attempted to investigate the correlation between VLS use and vocabulary size, and the findings are quite varied in terms of VLS preferences as well as in relation to the impact that VLS can have on the development of vocabulary knowledge. It is clear that the context, participants, and instruments differed from one study to another; however, they all seem to agree on the fact that vocabulary growth and use of VLS are complementary aspects to take into consideration when attempting to understand language learning in general and vocabulary learning in particular.

Besides, most studies investigating the relationship between VLS use and vocabulary size were undertaken at specific proficiency levels, while the present study attempts to research not only the relationship itself but also how it evolves as the students move from one proficiency level to the other. Thus, the growth patterns in terms of VLS use, vocabulary size, as well as the correlation between the two variables are being investigated from the time the Algerian students join the EFL undergraduate course until the last few weeks before final graduation. The results of this study might also provide insights about the effect of the three-year LMD curriculum on the development of vocabulary learning of the students from year one to year three.

Even though the relationship between vocabulary size and the use of VLS was investigated by a number of researchers in different contexts including some Arabic speakers of English, little research seems to have been undertaken with regard to multilingual speakers (of Arabic, Tamazight, French) learning English as a foreign language as they progress through different proficiency levels in Algeria. In this respect, the present study is an attempt to shed light on the

possible correlation between these two constructs among a group of Algerian EFL students, with all the linguistic richness that this context offers. Indeed, in Algeria, all students speak and write Arabic, many of them speak Tamazight, and also speak and write French as a first foreign language, a language used in large cities mainly. English is taught as a second foreign language at middle school level in public schools, and at primary school level in many private schools. However, it is worth mentioning that the French language has a major influence on the linguistic background of almost all Algerians and therefore on their lexical repertoire, while English is present only in the classroom, although more and more people use English, on the various internet resources such as websites and social media, or code-switch between Arabic and English in everyday encounters. Thus, it is believed that the present study will demonstrate how this linguistic richness can have an impact on the growth of the English vocabulary size of the students as well as on their use of vocabulary learning strategies, and other aspects of their vocabulary learning at different proficiency levels at university.

Conclusion

It is commonly agreed that when learning a foreign language, the vocabulary component has a vital role, and acknowledgement of this role has led to a great number of researches in this field. However, even though this aspect of language learning has been recognized as crucial, many learners consider vocabulary as the most challenging part and a major source of difficulties in their language learning process.

In this chapter, some important studies investigating the relationship between VLS use and language proficiency in general and vocabulary size in particular have been discussed. Moreover, the contribution of multimedia resources in reinforcing both strategy use and vocabulary development has been addressed given that it is one of the major aspects that need to be accounted for nowadays when dealing with current language learning and instruction. Throughout this

chapter, a special focus has been put on studies involving Arabic speaking EFL learners including Algerian learners, whenever possible.

Even though the importance of vocabulary knowledge and vocabulary learning strategies has been widely advocated worldwide, in light of the studies mentioned in this chapter, it is clear that there is still need for more research investigating how these two constructs correlate for Arabic speaking EFL learners in general and Algerian university students in particular. As such, the present study attempts to contribute to the body of research in this field as it aims to analyse both the vocabulary size and VLS use of Algerian university students, how these two constructs evolve throughout the three years of the undergraduate course, as well as to what extent they are correlated. The methodology used in the present study is explained in detail in the next chapter.

PART TWO

Empirical Study

CHAPTER FOUR:

Research Methodology

Introduction 112
4.1 Research Design 113
4.2 Setting and Participants 113
4.3 Research instruments 116
4.3.1 Demographic Information Questionnaire (DIQ) 117
4.3.2 Vocabulary Size Test (VST) 118
4.3.3 Vocabulary Learning Strategies Questionnaire (VLSQ).....121
4.3.4 Vocabulary Learning Open Questions (VLOQ) 126
4.4 Data Collection Procedure 127
Conclusion 131

Introduction

The present chapter aims at explaining and detailing the research methodology used to gather qualitative and quantitative data to deal with the research subject in hand. The chapter starts with an explanation of the scope of the study, what it tries to demonstrate, and the research questions it attempts to provide answers to. A description of the setting and the characteristics of the participants are then presented, as one of the main purposes of the present study is to investigate the developmental process of the students' written receptive vocabulary size, growth and their VLS at various levels of their learning. The different research instruments are then described and their administration procedure explained.

In light of the literature review presented in the previous chapters, it appears that many scholars widely agree that vocabulary is one of the most prominent aspects of language competence as a whole (Nation 1990, Meara 1996, Schmitt 1997, Read 2000, Nation 2001) and that the main focus of foreign language instruction should be vocabulary learning. Thus, after many years of neglect, vocabulary learning is now viewed as a crucial link in the chain of FL/SL learning process and consequently an important element to take into consideration in language instruction. This is particularly true of EFL students who are supposed to master a sufficient amount of vocabulary to be able to communicate appropriately and autonomously in any context.

Effective vocabulary learning and acquisition also owe much to vocabulary learning strategies which allow learners to be actively involved in their own language learning process, and as such become autonomous.

This chapter includes four sections. The first one is devoted to the research design and the second one to the setting and participants; section three deals with the research tools and includes a description of the three questionnaires used in this study: the VST, the VLSQ, the VLOQ, as well as the initial background information sheet (the DIQ). Finally, the last section of the chapter is devoted to the procedure of data analysis.

4.1 Research Design

To answer the research questions addressed in the present work, a cross-sectional and mixed research design was used for a total number of 184 EFL Algerian university students. The first stage of the design is a separate assessment of the written receptive vocabulary size and the VLS use of the students which allowed us to establish a picture of their vocabulary knowledge at each degree year of study. A comparison between the results made it possible to establish the progressive growth pattern from Year 1 to Year 3 of the degree course. The second stage enabled us to investigate the relationship between the receptive vocabulary size and the students' preferences in terms of VLS.

4.2 Setting and Participants

The present study was undertaken during 2013/2014 academic year with an overall group of 184 university students enrolled in the English Department of the University of Algiers 2. In this university, English is taught through a 3-year LMD program (LMD standing for Licence-Master-Doctorat). The present study is centered on the first cycle of the Licence undergraduate curriculum, covered by the first three academic years, while the second cycle extends over the last two years of the Master's degree curriculum. The study includes participants from each of the three years of the Licence degree course, each sample group representing around 10% of the whole population of each proficiency level during that academic year.

The official English degree curriculum does not include a specific course on vocabulary learning or on VLS; however, reading strategies are explicitly taught in the Reading & Writing course (Year 1), and include vocabulary learning. Besides, vocabulary is usually taught indirectly/implicitly throughout the various language skills courses in year 1, 2 and 3, and in other content courses such as literature, civilization, linguistics or media studies.

As the purpose of the research is to investigate the growth of vocabulary knowledge in relation to VLS use throughout the three years of the degree cycle, participants were selected from each degree year, that is, from year 1 (1LMD), to

year 2 (2LMD), to year 3 (3LMD), and the data were collected by the end of the academic year (May 2014).

For the sake of validity, and in order to give a more complete picture of the process of vocabulary learning and VLS use, a fourth group of freshly-enrolled participants was added to the research sample. This group consists of 30 students - referred to in the present study as 1 LMD Freshers (as opposed to the 1LMD group), who had just enrolled in the first year of the degree course. Even though this last sample consisted of first year students as the 1LMD group mentioned above, the difference between the 1LMD Freshers and the 1LMD is that the first sample had no prior experience with university studies at the time of the data collection, while the second sample had its data collected at the end of the first academic year. The data collection for the 1LMD Freshers took place at the very beginning of the academic year 2014/2015, before any teaching had started (September 2014). The purpose of including this final sample was to provide a complementary vision of what students come with from high school in terms of vocabulary knowledge. In this perspective, the results of the three other groups (1LMD/ 2LMD/ 3LMD) were expected to demonstrate the extent to which university instruction had an impact on the written receptive vocabulary size growth and VLS use of these undergraduate students.

The participants' experience as EFL learners before entering the university ranged from 6 to 8 years of English language school instruction, as most profiles implied at least four years at middle school and three years at high school.

The four samples of the study were assumed to have different English proficiency levels and vocabulary knowledge between the time they enroll at university and when they are about to complete the degree course.

As shown on the Table 4.1 below, the number of participants for each group represents approximately 10% of the whole population per year of study; we believe that this proportion is representative enough of the overall performance level. As such, the population was selected as follows:

- N= 30 freshly enrolled students (1LMD Freshers)

- N= 81 First year LMD students (1LMD)

- N= 37 Second year LMD students (2LMD)

- N= 36 Third year LMD students (3LMD) i.e. 16 Linguistics students and 20 Literature students. In the third year of the degree course, there is a distinction between the Anglo-Saxon Studies stream and the Linguistics stream. At the end of the second year, students have to choose between these two specialized fields; their orientation to one field or the other is also dependent on their average marks obtained in the courses specialized in the field. As such, during the academic year of the present study, there were 8 groups in the third year in both streams (4 groups of Linguistics and 4 groups of Anglo-Saxon Studies) from which an overall sample of 36 students took part in the study.

For administrative reasons, a longitudinal study would have been difficult to carry out as it would have been quite impossible to follow the same sample/subjects over the three degree years as students change groups, classrooms and teachers each year. Furthermore, some students may not pass the exams and therefore repeat the year; following these repeat students while they would still be in the same year of study would have distorted the overall results.

As such, we opted for a cross-sectional study instead of a longitudinal one. The selection of the sample groups for this study was random and the testing was done during six days altogether, thus the results do not reflect the evolution of the same subjects over time, but rather the evolution of random students at different stages of the degree course.

Table 4.1 below summarizes the number and the proficiency level of the participants:

Year of study	1LMD Freshers	1 LMD	2 LMD	3 LMD	Total number
Approx Overall Dept population (academic year 2013/2014)	350	900	550	360	Of enrolled students:2160
The research sample (approx 10%)	30	81	37	36 20 Literature 16 Linguistics	Of participants: 184
Gender Categorization	Male: 5 Female:25	Male: 17 Female:64	Male: 6 Female:31	Male: 1 Female: 35	184

Table 4.1 Number of participants in present study

4.3 Research instruments

After administering an introductory Demographic Information Questionnaire aiming at collecting background information about the participants' profile and experience in EFL learning, three research instruments were selected and designed to investigate each construct individually as a first step; the results obtained were triangulated for possible correlations. For the sake of validity, we used the same instruments for each sample of the study because the aim of the study was to identify the vocabulary knowledge level of participants at specific stages of their learning process using standardized tests. However, the difference in the proficiency level of the participants was taken into consideration while analyzing the results, in order to show the progression they went through in terms of vocabulary development from the time they joined the university until their final stage just before graduation.

The introductory information questionnaire as well as the three instruments were produced and presented to the participants in the foreign language, i.e., English. These are described in detail in the following sections.

4.3.1 Demographic Information Questionnaire (DIQ)

Before handing out the tests on vocabulary size and vocabulary learning strategies, the first page handed to the participants was a questionnaire aiming at gathering useful background information about them in order to have an overall picture of their profile and experience with EFL (Appendix 1).

Thus, prior to the three research tools described below, each of the 184 participants had first to provide basic information such as name, age, gender, native language, and current year of study. Such details allowed us to categorize the test results and to analyse them separately, dividing them into four distinct groups: 1LMD Freshers, 1LMD, 2LMD, 3LMD. Age and gender also allowed us to draw a picture of the demographic profile of the participants, which we believe was fairly representative of the overall population of the English Department of the University of Algiers 2. As for the native language, a selection of three languages was proposed to the participants to choose from (Arabic, Berber/ Tamazight and French); however, they also had the possibility to mention any other language they have learned or are learning. The aim of questioning them on their mother or other native language(s) was to find out about their linguistic background and its/their possible influence on EFL learning, acknowledging from the literature that L1or other Ls' lexical cognates can have a direct impact on the way words are understood and remembered in a foreign language.

The participants were asked about their linguistic background answering questions on their past experience with learning English as a foreign language before taking the test of the present study, i.e., in the primary school, middle school, high school, until university. The purpose of these questions was to find out about the participants' amount of EFL instruction before taking the test, and to see if there were differences that might have influenced their vocabulary knowledge. Their possible experience with EFL in other contexts such as private language schools in Algeria, overseas educational institutions, or a second language environment, was also questioned. One of the aims of the present study being to demonstrate the impact of university EFL instruction on the growth of vocabulary size and VLS use from Year 1 to Year 3, it was felt important to

identify any other EFL contexts that some participants might have been exposed to outside the English Department.

Besides the classroom context, the questionnaire also attempted to draw a picture of the participants' overall exposure to English outside the classroom, in a foreign language environment like Algiers where English is rarely used outside educational institutions. The subjects were thus questioned about their access and use of English-speaking media such as television channels and internet.

Acknowledging the impact motivation can have on language learning in general, the questionnaire finally included a question about the participants' choice to study English as a foreign language at university level, in an attempt to understand whether this choice was driven by a love and desire to learn a FL or by other considerations.

4.3.2 Research instrument 1: Vocabulary Size Test (VST)

One of the goals of this study being to collect data to answer RQ1, and therefore to measure the written receptive vocabulary knowledge and growth of EFL students over time, the first research tool used for that purpose is the Vocabulary Size Test designed by Nation (2007). There are a few different formats to this test, but the one used to meet the needs of the current research is the 14000-item version A.

As shown in Appendix 2, the VST comprises 140 multiple-choice questions related to lexical items taken from the British National Corpus (Bauer & Nation 1993). This version of the test is believed to assess the knowledge of the first 14,000 words, graded from the high-frequently to the low-frequently used words in English. As testing subjects on all 14,000 words of this corpus was practically impossible, Nation's VST seemed more convenient because it tests knowledge of only 10 lexical items from each 1000 word family level; these 10 words reliably represent most of the other words contained in each family level. As such, to obtain the overall receptive vocabulary size of the participants, the scores of the VST need to be multiplied by 100.

As mentioned and explained at the very beginning of the VST handed to the participants (Appendix 2), for each lexical item, the students have to choose the definition of the word that seems the best to them from a list of four choices. The tested words appear in short simple sentences that do not provide a lot of context. Nation's purpose of de-contextualizing the lexical items is to ensure that the VST assesses exclusively knowledge of the word itself without the influence of contextual clues. However, the short sentence containing the tested word does provide the participants with information about the part of speech of the target word. The stems in which the tested words appear contain vocabulary that is within the first 500 words of English, i.e., words that are much easier than the tested word itself.

The 140 items of the test are presented in order of frequency, starting from the most frequently used words in English (1K) - the first 1000 word families - until the least frequently ones (14K) - meaning 14,000 word families. Despite the difference in the proficiency level of the participants across the three years, all of them took the same VST testing on knowledge of all 14,000 word families, i.e., 14K. Unlike other vocabulary measurement tools, such as the Vocabulary Levels Test (Nation 1983) which selects only a few word bands of frequencies to adjust to the proficiency levels of the test-takers, the VST assesses participants knowledge of all frequency bands, including the ones that can be considered beyond their knowledge level. The reason behind this choice is the belief that participants can possibly know vocabulary that is higher than their expected proficiency level if the word resembles a mother tongue cognate, or if the word belongs to an area that is of special interest to the participant or relates to one of his hobbies (Nation 2007). Moreover, the high frequency word bands such as 1K and 2K were also taken into consideration in this study, even though they might be considered too easy for the participants' proficiency level. Some scholars such as Ozturk (2012), when testing the vocabulary size of the participants decided to omit the 1K band as knowledge of the words in this level was taken for granted and its score automatically added to the overall score of the test. However, in the present study, it was felt important to include even the first bands of the test in

order to give the participants the benefit of doubt and assess their real vocabulary size score instead of just assuming what they might know.

Even if the participants were required to answer all 140 lexical items, the scores of each band are expected to decrease gradually as they got to the low-frequency words. The overall calculated score of the test is thus assumed to reflect the written receptive vocabulary size of the test-taker.

In the Algerian context, the diversity and richness of the linguistic background of these participants, expected to share knowledge of Arabic, French and Berber, was thought to provide them with the possibility of knowing words beyond their proficiency level. For instance, French is a language that is fairly well-known and spoken in many places of Algeria due to the long French colonization and the strong influence of French culture on many fields of everyday life in Algeria (administration, school structures, military structures, gastronomy, media...etc). Thus, whatever the level of the participants, they were assumed to have a minimum knowledge of French vocabulary. The French and English languages also have many cognates that are alike in both languages in their written form. This aspect was also reflected in the present VST, as many written forms of words, even in the low frequency levels, looked like their French equivalents. Here are a few examples:

"gauche","limpid" (14K)

"atoll", "communique", "jovial" (13K)

"caffeine", "refectory" (12K)

"aperitif" (11K)

"authentic", “cabaret”, “eclipse”, “palette” (8K)

"olives", "demography" (7K)

"cavalier" (6K)

"cube", "fracture" (5K)

Such words would be easy to guess for someone knowing French, even though they belong to low frequency bands that only very advanced learners of English are expected to know. There are also words in the VST that are borrowed from Arabic, such as "emir" (11K), even though it is also a noun used in French.

Nation advised against the removal of any lexical items for which the test-takers might have equivalent L1 cognates, as such removal would certainly change the overall measurement tool. He explains that "loanwords" are natural parts of any linguistic profile, arguing that the VST aims at measuring "words known rather than words learnt" (Nation 2007).

The overall score of the test was calculated by allocating one point for each correct answer; having 140 questions altogether the score was then multiplied by 100 to obtain the size of the participants' written receptive vocabulary knowledge.

In an attempt to assess the validity of the VST, Belglar (2010) demonstrated that this vocabulary measurement tool, thanks to its clear and unambiguous format, assesses exclusively written receptive vocabulary knowledge with minor influence of other factors. Indeed, except for a minimum of reading skills because the test is written, sitting the test does not require other competences apart from vocabulary knowledge. The fact that there is no option for an "I don't know" answer to the test items, the test does encourage informed guesses of word meaning. In other words, the participants have a choice of four possible answers to each question; and even though they might have never encountered the tested words before, they can still draw on their partial or subconscious knowledge to make intuitive guesses.

4.3.3 Research instrument 2: Vocabulary Learning Strategies Questionnaire (VLSQ)

In addition to the measurement of the written receptive vocabulary size of the participants, another major goal of the present study is to determine the profile of the students in terms of vocabulary learning strategies use and awareness from Year 1 to Year 3 of the degree course. For that purpose, a second research tool was administered to the participants; it was a VLS questionnaire based on Schmitt's taxonomy (Schmitt 1997).

The questionnaire (see Appendix 3) is divided into three parts: A, B, and C. However, only parts A and B are concerned with the VLS; while part C

constitutes the third research tool of this study and it includes an open-ended questionnaire (VLOQ) described in a separate section below.

Since the VLS questionnaire is based on Schmitt's taxonomy, the questions follow the same categorization and order of strategies. Thus, the participants are first asked about what they do when they do not know or understand a word, i.e., about discovery strategies (Part A). Part B is about what they do to reinforce the word and retain it after discovering its meaning, which are consolidation strategies.

The questions are organized in a table, and the participants must indicate the frequency of use of each specific strategy by simply ticking the appropriate box on a four-point Likert scale. The frequency scale is as follows:

Always - Sometimes - Rarely - Never

For both parts A & B, the participants are encouraged, through the written instructions, to indicate how often they think they use the strategies mentioned in the table, regardless of the language skills and the learning settings.

As they are mentioned in Schmitt's taxonomy, the vocabulary learning strategies seem comprehensible enough for anyone with knowledge of language learning and teaching terminology. This might also be the case for third year students (Linguistics branch), who are familiar with terms that relate to didactics and applied linguistics. However, for the majority of the other participants, some terms employed by Schmitt are believed to be quite confusing and not explicit enough. Thus, to make sure all the participants of the present study understood what each strategy in the VLSQ means, the wording of some items was reviewed and adapted to make it more comprehensible, and examples were provided by the researcher for any items that might have been too abstract or confusing for the participants (See Appendix 5). For instance, terms like "cognate", "flash cards", or "pictorial representation" were explained with easier language to ensure good understanding. Moreover, concrete examples were created by the researcher and provided for specialized terminology like "semantic maps", "Peg method", "Loci method", or "key word method".

Apart from the strategies mentioned in Schmitt's taxonomy, a few items were added by the researcher in order to meet the Algerian EFL context of the present study (see Appendix 6). The added items and the justification for their creation are explained below:

a) Item 6*: I look for the word's meaning in a bilingual dictionary (e.g.: English – Arabic dictionary)

Item 6 :I look for the word's meaning in a bilingual dictionary (e.g.: English – French dictionary)

Item 6 in Schmitt's taxonomy is about the use of a bilingual dictionary to discover the meaning of a new word, without any specification of the mother tongue. However, in the Algerian context, apart from the mother tongue (Arabic or Berber), most students have a fairly good knowledge of the French language as well. This linguistic variety gives them the possibility to use either English-Arabic (item 6*****) or English-French (item 6**)** versions of bilingual dictionaries. As such, we think it is important to distinguish between these two types of dictionaries in the VLS questionnaire in order to avoid any possible confusion.

b) Item 15*: I study and practice meaning in pairs/groups outside class

Item 15: I study and practice meaning in pairs/groups in class

Item 15 of the taxonomy is concerned with the social strategy that helps the consolidation of word meaning through group work. For the sake of clarity, we wanted to add the notion of pair work as well to the same strategy item. Moreover, the major distinction that was created for this item is about the setting of this social strategy. Indeed, we decided to produce two items instead of one; each of them specifying a distinct setting, namely "in the classroom" or "outside the classroom". The reason for adding this detail is our belief that in a foreign language environment like Algeria, in which EFL is usually used only within the classroom, the students have to create their own opportunities to use it even outside the classroom with their classmates, teachers, or any other person speaking English in their environment. Moreover, we have recently noticed a "new" phenomenon consisting of students using English outside the classroom,

and even outside the university campus to interact with their friends for instance. The emergence of this phenomenon might be a way of avoiding the use of French which is no longer regarded as a "prestigious" or "useful" language among young Algerians, as it used to (Bensemmane & Boukedimi 2017). These students are more and more interacting in English with either other Algerian students or non-Algerian people.

c) Item 17*: I try to use the new word in interactions with non- native speakers of English

Item 17: I try to use the new word in interactions with native speakers of English

This strategy as it appears in Schmitt's list, deals with the consolidation of new words' meaning through interaction with native speakers of English only. In order to adapt this strategy to the Algerian EFL context, we decided to add a more contextulized version of this strategy to account for interaction with non-native speakers as well. It is true that some Algerian students sometimes have the opportunity to interact with native speakers of English to improve their vocabulary; however, they certainly have much more chance to interact with non-native speakers of English such as their teachers, classmates, or any other Algerians who speak English online (forums of discussion, chats, social media, etc).

d) Item 54*: I use English internet regularly to search for information using English language

Item 54:** I use English internet regularly to communicate with friends using English language (ex: emails, social networks)

Item 54: I use English-language media (songs, movies, newscasts, etc.)

When Schmitt used “English language media” as a means of improving and consolidating vocabulary knowledge, he meant songs, movies, newscast, etc. However, one has to note that this taxonomy was set up in 1997, a period during

which the high-technological devices that we all know and have access to nowadays such as internet were quite unknown or simply not accessible to all. Therefore, besides keeping the strategy item as mentioned by Schmitt (item 54), we decided to add two more variations to this item: one acknowledging the use of internet as a research engine to improve vocabulary (item 54*), and another one about the use of internet to communicate with others using English language (item 54**). We believe that making this modification in this item will make the questionnaire more realistic to the participants of the present study, as all of them are young people and more and more dependent on internet even for everyday tasks. Indeed, in a survey undertaken with 114 Master students enrolled in different foreign language departments (including the English department) at the university of Algiers 2 (Bensemmane & Boukhedimi 2017), many students confirmed using English to communicate in social networks (Facebook, Twitter, What's App...etc), to chat with friends and non-Algerian people around the world, as well as to write emails.

e) Item 55*: I learn words from tests/exams (I learn from my mistakes)

Item 55: I test myself with word tests

Item 55 of the VLSQ is about the metacognitive strategy that implies self-testing as a way to consolidate word meanings (item 55). On the basis of the teaching experience that we had, we decided to add another test-related item that is more focused on self-awareness and learning from the mistakes that participants make during tests and exams in terms of vocabulary knowledge. The reason behind this addition is based on our assumption that sitting for a test or exam and attending test/exam corrections done by the teacher is in a sense a way for the student to test himself on his vocabulary knowledge and consequently to learn from his own mistakes.

Overall, the VLS questionnaire used for the present study comprises 64 items: 58 from Schmitt's taxonomy and 6 adapted and/or added by the researcher to meet the objectives of the topic under study. A detailed description of each category of the VLS in Schmitt's taxonomy is provided in the review of the

literature (Chapter 2) of the present work. The wording of strategies and the number of questions related to each of them is shown in Table 4.2 below:

Strategy Category	Questionnaire items	Number of items
Discovery Strategies		
Determination Strategies (DET)	1 to 9	10
Social Strategies (SOC)	10 to 14	5
Consolidation Strategies		
Social Strategies (SOC)	15 to 17*	5
Memory Strategies (MEM)	18 to 44	27
Cognitive Strategies (COG)	45 to 53	9
Metacognitive Strategies (MET)	54 to 58	8

Table 4.2 Categories and number of questions of the VLS Questionnaire

4.3.4 Research instrument 3: Vocabulary Learning Open Questions (VLOQ)

As the second research tool explained above (VLSQ) is a close-ended questionnaire requiring the participants only to tick the box that reflects their frequency of use of the different vocabulary strategies, we think it is important to allow the participants to express their thoughts if needed; this is why the third tool (VLOQ) has been added to allow the students to share their ideas in an open questionnaire format. In the test paper handed out to the participants, this VLOQ is labeled as Part C (see Part C in Appendix 3).

Apart from the 64 strategies mentioned in the VLS questionnaire, the participants are encouraged, in the VLOQ, to mention any other vocabulary learning strategies that they can think of and that are not included in the table.

They are then asked to express their preferences in terms of language skills, courses and personal practice which they feel important in their vocabulary learning and acquisition (questions 2, 3 and 4). These questions are meant to identify the sources that students consider the most conducive to vocabulary learning in the English degree course.

The participants are also asked in this questionnaire about their preferences in terms of vocabulary instruction. In the degree curriculum of the English Department, there is no course that specifically focuses on vocabulary learning; the students are rather used to having the vocabulary element integrated within

the language and skills courses, and even the content courses. The purpose of asking this question is to try to find out whether the students feel comfortable enough with the place of vocabulary instruction in the English degree curriculum, or if they prefer to have more focused lexical input and vocabulary strategy training. In other words, the purpose is to determine if the students feel autonomous enough to provoke their own vocabulary learning indirectly, or if they feel they need more teacher-monitored vocabulary input instead.

Item 5 of the questionnaire asks the participants to mention any vocabulary learning difficulties they encounter during their language learning process and to explain what they try to do in order to overcome these difficulties. Enough space is given in this question to allow the participants to express themselves using their own words. The purpose of asking them this question is to see whether they are aware of their own vocabulary difficulties and how they describe these difficulties. Analyzing their accounts would also allow us to determine whether they are proactive or not in their vocabulary learning process.

4.4 Data Collection Procedure

The data collection from the 184 participants enrolled in 1LMD, 2LMD and 3LMD took place in May 2014, just before the final examination. As one of the purposes of the present study was to investigate the growth of the written receptive vocabulary size of students from Year 1 to Year 2 and from Year 2 to Year 3 of the degree course, we decided to collect the data just before the end of the academic year in order to take into account the possible influence of instruction (two semesters) on the students' results. However, for the group of newly enrolled students (1LMD Freshers), the data were collected at the beginning of the next academic year, i.e., in September 2015, before any teaching had started. By collecting information at the beginning of the academic year, we wanted the results of this group to shed light on what the students come with from high school in terms of vocabulary knowledge. The results of the four groups altogether were expected to demonstrate the progressive pattern of

vocabulary knowledge building from the time students enroll in the English degree course until the last few weeks before graduation.

For the sake of validity, the research study groups were selected randomly, instead of using the groups taught by the researcher. The reason for this selection was to avoid any possible conscious or unconscious influence on the part of the teacher and to keep the data collection procedure as neutral as possible. The choice of the different groups was made on the basis of the personal relations of the researcher; that is to say, we asked the cooperation of some of our closest colleagues to "lend" us their students. Using personal contacts was important as the data collection procedure was going to take a minimum of one hour and a half for each group, at a time of the year that is usually quite demanding and tight in terms of availability; it was just before the final examinations of the academic year.

The data collection schedule therefore took place as follows:

May 2014: Day 1→ First Year = 81 participants

Day 2 → Second Year = 37 participants

Day 3 → Third Year (Linguistics) = 16 participants

Day 4 → Third Year (Anglo-Saxon Studies) = 20 participants

September 2015: Day 1 → Newly enrolled students (group 1) = 15 participants

Day 2 → Newly enrolled students (group 2) = 15 participants

For the sake of maintaining the participants' interest in the questions for about 90 minutes, the tasks were divided time wise as follows:

- The demographic information sheet was straightforward and did not require any particular efforts or thinking, so we thought that ten minutes would be enough to fill it in and to read the written instructions of the following parts of the test.

- The 14,000-item version of the Vocabulary Size Test was believed to take about forty minutes to be completed (Nation 2007).

- For the VLS questionnaire, the participants were requested to read the different strategies and simply tick one of the boxes of the Likert scale, so we believed that filling in the table would take the participants about 20-25 minutes.

- The final part of the test required the participants to answer a few questions using their own words. There were only seven questions which did not need long answers. As such, it was believed that allocating twenty minutes for this VLOQ would be sufficient.

Even though the 184 participants in this study were all "borrowed" from other colleagues, we thought it would be important for the researcher to be present and invigilate all the groups to ensure sameness of test conditions, time allocation, and explanation of instructions. The three parts of the data collection test as well as the demographic information sheet were all handed to the participants at the same time, at the beginning of the test. The overall package consisted of 14 pages, including the detailed written instructions. Predicting that some participants might panic by seeing the length of the test, we reassured the participants at the beginning of each session explaining to them that most pages of the test were going to be straightforward as they required simply ticking boxes. We felt it was important to reassure them right from the beginning to avoid any needless anxiety.

Despite the length of the data collection package in terms of timing and number of pages, it was decided to implement all four parts of the test in one session instead of dividing them in two sessions. We wanted to maximize the validity of the results by minimizing the possible influence of external factors. Thus, we did not want to split the test in two parts and ask the same participants to come back for another session because logistically speaking, it would have been complicated. Indeed, the overall number of participants was quite high (n= 184), divided in seven groups: 2 groups of 1LMD Freshers (30) , 2 groups of 1LMD (81), 1 group of 2LMD (37), and 2 groups of 3LMD (36), and each group had a

different teacher. Thus, during the period of the test (end of academic year), it would have been difficult to ensure availability of the same participants for two distinct sessions. Moreover, we wanted the participants to answer the questions in the three tools simultaneously in order to give them the opportunity to reflect on their vocabulary learning in its different forms without interruption. Besides, having the participants sitting for the test for a period of ninety minutes was not believed to be excessive, as this is the standard duration of exams in the English Department.

Having noticed during classes over the past few years that a lot of students are driven by test marks more than by learning pleasure, we decided to tell the participants of the present study that the test would be marked and would contribute to their final marks of the academic year. It is true that test anxiety can sometimes be a hindrance for some students; however, we wanted the students to take the test seriously in order to increase their concentration as well as their motivation. The test, of course, was not going to be taken into consideration by the teachers of the groups; however, given the relative length of the test package (14 pages) and the overall duration, it was very important to keep the interest of the participants high and make them feel that there is something there for them to make sure they answer the questions as truly as possible.

Moreover, according to Nation (2007), there is a close causal relationship between the degree of commitment of the VST test-takers and the validity of the results. Nation himself considers that the results of low proficiency learners can possibly be underestimated by the VST if they are not motivated enough to "perform to the best of their ability".

Doing research on the cognitive processes involved in vocabulary learning is quite sensitive, as the only way to assess this knowledge is through the use of other language skills; in the present study the reading and writing skills were used. Thus, if the participants were not motivated and interested enough to complete the test as honestly as possible, the results would certainly not be valid. Thus, using marks as "a carrot" (Schmitt 2000) was believed to maintain sufficient motivation interest for the ninety minutes of the test. The teachers of

the chosen groups were of course informed about our intentions, and had kindly accepted to play the game and tell their students that the test was going to be marked. To make this scenario credible, we asked the participants to write down their names on the test sheets; however, the data collected were then treated anonymously as each participant was given a number instead. For the sake of honesty and for ethical reasons, the participants were informed at the end of the data collection that the real objective of the test was to undertake research and that the papers would not be marked but only analysed; they were also encouraged to come individually at a later stage and see the researcher for any feedback about their performance in the vocabulary or the VLS tests. Even though the participants were not taught by the researcher at the time of the study, surprisingly none of them was curious enough to come and inquire about his own results, even weeks and months after the tests took place. This observation reinforced our assumption and decision mentioned above to use marks as "a carrot".

Conclusion

This chapter presented and described the research design used to collect data to investigate the relationship between the growth of the written receptive vocabulary size as well as the use of vocabulary learning strategies of 184 students from their enrolment at the English Department (University of Algiers 2) until the last month before their graduation. The setting, participants and the different research instruments were explained in detail, and the procedure was thoroughly described.

The quantitative and qualitative results obtained with this methodology are presented in the following chapter.

CHAPTER FIVE

Presentation and Analysis of Results: Background information, Vocabulary Size and VLS use

Introduction 133
Section One:
5.1 Analysis of the Demographic Information Questionnaire (DIQ) 134
5.1.1 Gender and Age 134
5.1.2 Native Language 135
5.1.3 Previous EFL Instruction 137
5.1.4 Exposure to EFL 139
5.1.5 Choice of English Degree Course 140
Section Two:
5.2 Analysis of the Vocabulary Size Test (VST) 142
5.2.1 VST results of the LMD 1 Freshers 142
5.2.2 VST results of the LMD 1 group 146
5.2.3 VST results of the LMD 2 group 150
5.2.4 VST results of the LMD 3 group 152
5.2.5 Comparison of VST results of all groups 155
Section Three:
5.3 Analysis of the Vocabulary Learning Strategies questionnaire (VLSQ) 158
5.3.1 VLSQ results of the LMD 1 Freshers 164
5.3.2 VLSQ results of the LMD 1 group 170
5.3.3 VLSQ results of the LMD 2 group 171
5.3.4 VLSQ results of the LMD 3 group 172
5.3.5 Comparison of VLSQ results of all groups 174
Conclusion 180

Introduction

This chapter reports the results related to the participants' vocabulary size growth and VLS use at different stages of the degree course, through the analysis of the first two research instruments of the present study.

To allow for an exhaustive study of tests and questionnaires results and elicit insights about learners' vocabulary size and VLS use, the data collected from the first two research instruments - as well as from the demographic information sheet - were transformed into quantitative data, to make statistical analysis possible.

The 184 answer sheets collected from the participants involved in the study were carefully read and analysed in order to identify categories of responses, and classified to allow for a quantitative coding displayed as numbers and percentages in tables and graphs. Data were also analysed on the basis of comparisons and statistical frequencies of answers.

Results gathered from the two first research instruments are presented and analysed in this chapter following the design of the overall test and the order of questions presented to the participants. The chapter thus begins with a study of the background information drawn from the demographic information sheet. It then examines results of the Vocabulary Size Test (VST) and presents the scores of the participants at the different stages of the degree course to show the extent of vocabulary growth from one year to the other. The scores of the VST at each stage of the degree (Freshers, 1LMD, 2LMD, 3LMD) are then compared to demonstrate the extent to which vocabulary knowledge grows between the time the students enrol at university and their final year of the undergraduate course.

Data from the Vocabulary Learning Strategies Questionnaire (VLSQ) are then analysed to establish the participants' preferences in relation to vocabulary learning strategy use and vocabulary item retention. Their use of the different categories of VLS at each year of study is also compared to allow for an understanding of the progression patterns of strategies awareness and use.

This Chapter is therefore divided into three sections. The first section presents the results of the Demographic Information Questionnaire (DIQ). Sections two

and three, deal with the findings of the two first research tools, i.e., the Vocabulary Size Test (VST) and the Vocabulary Learning Strategies Questionnaire (VLSQ)

Section One:

5.1. Analysis of the Demographic Information Questionnaire (DIQ)

The purpose of this first step is to identify the background of the EFL participants in terms of origin, age, gender, EFL instruction received and exposure to the foreign language outside the classroom. The information gathered from this questionnaire is believed to provide a large picture of what the participants come with in terms of EFL experience before they take the VST and the VLSQ, and thus to set up if this background could have influenced in a way or another their vocabulary knowledge and development or strategy use.

The answers to the DIQ are presented following the order of questions given to the participants (Appendix 1). A comparison between the four samples of the present study (LMD1 Freshers, LMD1, LMD2, LMD3) is set up at the same time.

5.1.1 Gender and Age

The gender discrepancy is fairly obvious at the University of Algiers 2 where females seem to have taken the lead in most human sciences and foreign language studies. In the English Department, it is observed that the rate of females in classes is much more important than the rate of males. This difference is confirmed by the results of the present study. Among the total number of participants who took part in the research (n=184), 155 were females (84.2%) while there were only 29 males (15.7%). As shown in table 5.1 below, gender categorization is nearly the same in the four sample groups of the study.

As for the age of the participants, the mean ranged from 18.8 when they enrol at the university to 21.9 when they are about to graduate. Starting the undergraduate course at around 18 years is the standard as it implies starting school around six, spending five years at primary school, four years at middle school, and three

years at high school. Thus, the average age for a student who completes all the stages of his education without interruption and passes the BAC is usually 18.
Table 5.1 below summarizes the background information of the overall sample of the study, including age and gender classification as well as the other elements included in the DIQ and described individually below.

5.1.2 Native Language

Algeria is a country in which standard Arabic is the first official language (since independence in 1962) and Tamazight (Berber) is the second official language (since 2010). Despite the official discourse, there has always been the social and cultural influence of other languages. If standard Arabic is the formal language used in the economic, social, political, and educational fields, Algerians do not use it in their everyday exchanges. Indeed, Algerian Arabic (also called Daridja or dialectal Arabic) is what most people use; it contains some Berber and French words as well as other languages that have influenced Algerian society over the past centuries such as some Turkish, Spanish, Italian, and Maltese words.

Moreover, French is present and used in many official fields such as education, administration and management. An important rate of media uses the French language (radios and TV programs, magazines) and about half of the press is printed in French and is widely distributed. In fact, without being a member of the International Organisation of Francophone Countries, Algeria is considered as having one of the highest rates of French speakers in the world, after France. The strong presence of the French language is not applicable to the official fields only, but it is also used in everyday life by many Algerians of different ages, living mostly in large cities; this is also reflected in the presence of many French words in Algerian Arabic.
In the educational system, the French language was established as the first foreign language of the country in 2004, and as such this language started to be taught as early as the third year of the public primary school. School children

carry on having French classes during all the years of middle and high school. However, in the last few years, the French language has received much more focus in the educational system particularly in private schools where pupils develop a good mastery of the language from a very young age. In higher education, many scientific and technical fields are still being taught in French, even though all the students arrive from high school with a heavy Arabic educational background.

Thus, within the linguistic melting-pot that most Algerians live in, it is clear that there is more than one linguistic influence when it comes to vocabulary learning. In the present study, when asked to identify their mother tongue(s), most participants mentioned Arabic as their first language. However, as shown in Table 5.1 below, they also stated French and Berber as being part of their linguistic background, with lower rates though. Even though Arabic is consciously considered as the L1 for most participants, we assume that the influence of French in their subconscious is much higher than what they declared. This assumption would possibly be checked in the results of the vocabulary size test below, in which many low frequency words have the same stems as their French equivalents.

Year of study	1LMD Freshers	1 LMD	2 LMD	3 LMD	Total number of participants
Number of Participants	**30**	**81**	**37**	**36** 20 Literature 16 Linguistics	184
Gender Categorization	Male: 5 Female:25	Male: 17 Female:64	Male: 6 Female:31	Male: 1 Female: 35	184
Average Age	**18.8** (From 18 to 21)	**19.8** (From 18 to 29)	**20.5** (From 19 to 27)	**21.9** (From 20 to 31)	
Native Language	Arabic: **90%** French: 13% Berber: 3%	Arabic: **79%** French: 8% Berber: 19%	Arabic: **94%** French: 5% Berber: 2%	Arabic: **97%** French: 5% Berber: 8%	
Previous EFL instruction	7 Years	7.4 Years	8.9 Years	9.4 Years	

Table 5.1: Demographic Information Summary of all participants

5.1.3 Previous EFL instruction

In the sixth question of the Demographic Information Questionnaire, the participants were required to indicate the number of years they studied English from the Middle school till the time they took the test of the present study. The primary school was not mentioned in this question because the standard public schooling pattern involves English instruction from the middle school only. However, to account for the participants who possibly did not follow the standard system, a sub-question related to English in the primary school was also asked.

As shown in Table 5.1 above, the participants' answers reflect the standard number of years of English instruction; i.e., an average of seven years before

enrolling at the university (four years in the middle school plus three years in the high school). This number increases by more or less one point for the participants of the upper levels: 7.4 for 1LMD, 8.9 for 2LMD, and 9.4 for 3LMD, which was quite logical as the degree years were added systematically.

Another sub-question given to the participants was about the English language instruction they might have received outside the university context, such as in private language schools, or even outside Algeria. The purpose of these questions was to determine whether the participants rely on university instruction, or attempt to gain support from other sources. The participants' answers are summarized in the Table 5.2 below.

	Studied English in Private schools	Studied English/Lived in Foreign countries
1LMD Freshers	N=0 **0%**	N=1 (10 years in USA)
1LMD	N=14 **17%**	N=2 (1→ 4 years in Leeds UK) (1→ 19 years in Saudi Arabia)
2LMD	N=8 **21%**	N=1 (18 years in Saudi Arabia)
3LMD	N= 7 **19%**	N=1 (4years in Ethiopia)

Table 5.2: Participants' previous EFL Learning outside University/Algeria

As shown on Table 5.2, the percentage of participants who received English instruction outside university is quite low, ranging from 0 to 21%. We also notice that, with the exception of the participant who had spent most of his life in the USA prior to joining the English Department, all the freshly enrolled participants (1LMD Freshers group) declared having received no English language instruction in private schools during their middle or high schooling. This can be explained by the fact there was probably no point for them to have extra tuition in English as this foreign language was only one element of their overall curriculum in high school with a few hours allotted to English weekly. However, when enrolling at the English Department for an EFL degree, this foreign language becomes a specialisation that they need to study more seriously. The results in the table though show that a minority of participants of the first, second

and third years LMD used the private schools besides their English language instruction at the English Department, while the majority seem to rely only on the instruction provided at the university.

5.1.4 Exposure to EFL

After determining the extent to which participants received EFL instruction outside university in the question above, we also wanted to identify the degree of EFL exposure they got in general. Thus, they were asked to indicate whether they had ever lived in any English-speaking countries, and if they usually have access to English language media such as TV and internet in their daily life. The purpose of these questions was to have a larger picture of the FL environment of most participants, by identifying the ones who had more exposure to EFL than the standard pattern of most Algerian students. The degree of exposure to English has been taken into account while analysing the results of the Vocabulary Size Test below.

As shown on Table 5.2, only two participants declared having lived in an English-speaking country: one Fresher participant spent 10 years in the USA, while a first year LMD participant said she lived 4 years in Leeds (UK). These two exceptions actually confirm the general rule that most Algerian students are EFL classroom learners and have limited exposure to the target language.

However, when asked about the degree of access to English speaking media, most participants indicated that they watch English speaking TV channels regularly and have a significantly high access to internet outside the classroom. As shown in Table 5.3 below, over 76% of the participants declared watching English speaking TV channels such as:

- US channels: MTV, CNN, Fox, National Geographic
- British Channels: BBC, Eurosport
- Middle eastern channels: MBC, Dubai 1, El Djazeera

Moreover, between 66% and 80% stated that they have internet at home, while the others get access from cybercafés. Thus, most of the participants could easily

use internet as a supporting tool for their English language learning in general, and possibly their vocabulary learning as well.

	Internet Access at Home		Internet Access outside Home		Access to Eng TV	
1LMD Freshers	N= 24	**80%**	N= 2	**6%**	N= 23	**76%**
1LMD	N= 66	**81%**	N= 8	**9%**	N= 72	**88%**
2LMD	N= 29	**78%**	N= 6	**16%**	N= 32	**86%**
3LMD	N= 24	**66 %**	N= 10	**27%**	N= 31	**86%**

Table 5.3: Participants' exposure to English speaking media

5.1.5 Choice of English Degree course

In the past few years, the English language has started to be seen as the key to success in many professional fields, and more emphasis has been given to its instruction, starting from the middle school in the public sector but from primary school in the private sector. This enthusiasm for the English language is also reflected in the huge number of students who choose to enrol for an English degree course after the Baccalaureate. Every year, the English Department of the University of Algiers 2 is overwhelmed with the rate of newly enrolled students who come from various streams in high school. The demand for this degree course has become so high that the University is obliged to limit access to pedagogical places, basing the admission process on the score of the baccalaureate exam and the score obtained in the English exam paper. As such, most of the students that join the Department are supposed to be those who have capacities to study English and have chosen this field of study, instead of being simply sent for availability considerations.

In the present study, we wanted to check the motivation of the participants in studying English, and the possible impact this might have on vocabulary learning. Thus, we asked them to say whether choosing the English degree course was their number one choice on the list of choices they submit after passing the Baccalaureate, or not. Their answers are summarized in Table 5.4 below:

Choice to study English	YES		NO
1LMD Freshers	N= 29	**97%**	N=1
1LMD	N=76	**94%**	N=4
2LMD	N=36	**97%**	N=0
3LMD	N=31	**86%**	N=5

Table 5.4: Participants' deliberate choice of enrolling in the English degree course

It is clear from this table that most participants have deliberately chosen to engage in an English degree course and consequently to embrace an English language related profession. No less than 86% declared having decided about their higher education specialisation, instead of someone else deciding for them. This high rate is supposed to reflect a strong motivation and commitment in the EFL learning process including vocabulary proactive learning, an aspect that would be assessed later in the analysis of the results of the VST as well as the VLSQ.

The purpose behind starting the data collection with a general demographic information survey was to identify the participants' profile in terms of English language in general and English vocabulary in particular. From the results shown above, it appears that a significant majority of participants share some characteristics of age, gender, native language, and previous EFL instruction, and most of them have evolved in a typically foreign language environment. At this stage of the study, it is interesting to have a neutral and equal basis to start from in order to investigate how participants with a similar profile evolve differently in terms of vocabulary size growth and vocabulary strategies use, and whether the LMD curriculum of English is actually playing a role in this evolution. The possible impact of the English degree instruction would be checked through a comparison between the results obtained from the 1LMD Freshers group, i.e., the newly enrolled learners before any instruction started, and the results of the three other sample groups of the study.

Section Two:

5.2. Analysis of the Vocabulary Size Test (VST)

One of the purposes of the present study being to identify the size of the written receptive vocabulary of the 184 participants, this was researched using the 14,000 version of the Vocabulary Size Test (Nation 2007).

After completing the Demographic Information Questionnaire, all the participants were required to fill in the Vocabulary Size Test which was presented in the form of multiple-choice questions. There were 140 vocabulary items altogether, each of them presented in a very short sentence, with four possible suggested meanings to choose from. It was clearly explained to the participants in the written instructions to choose only one answer for each item. Each correct answer was allocated one point, while incorrect or no answers were given a zero. Thus, the total VST score was supposed to be between 0 and 140. As shown in Appendix 2, the overall test was organized in 7 pages, each of them containing 2 columns of 10 items each; each column covered one of the 14 frequency levels set up by Nation (2007). The scoring did not take into account the frequency band to which the words belong, as all the answers were allocated one point if correct. Having 140 questions altogether, the total score was then multiplied by 100 to obtain the size of the participants' written receptive vocabulary knowledge.

In this section of the chapter, the results of the VST are presented separately for each of the four sample groups. The scores are then compared to demonstrate the growth of the written receptive vocabulary size from the enrolment in the English Department until the final year of the degree course.

5.2.1 Results of the VST obtained by the 1LMD Freshers group

As shown in Table 5.5 below, the VST results were organized in terms of 14 frequency bands; the score of each frequency level indicated on the table is out of 10. As explained in the methodology part in the previous chapter, each participant was allocated an anonymous number, and the column on the left-hand

side of Table 5.5 below shows these numbers. The total scores of the VST on this table have been ordered from the highest to the lowest. Thus, the scores of the freshly enrolled participants range from 108 to 16. One has to mention that the highest score of 108 was obtained by participant 15 (P15) who declared having spent ten years in the USA before entering university in Algeria; thus he can be considered as a native speaker of English since he lived in a SL environment for the largest period of his childhood and followed a standard instruction in the USA through the medium of English. Though his VST score would be interesting to analyze in relation to his background as well as the vocabulary learning strategies he mentioned in the VLSQ later in this chapter, at this stage this participant could only be considered as an exception.

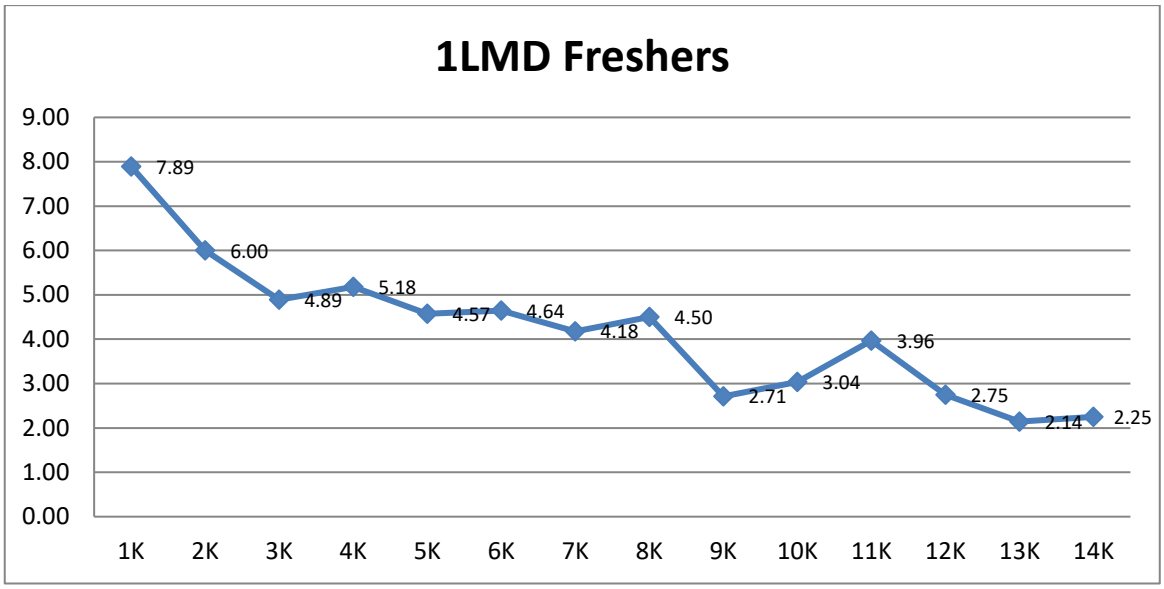
Besides, the last participant (P 9) scoring a zero at the VST was in fact someone who had sit for the test but submitted an answer sheet that was nearly void. Apart from the demographic information questionnaire, this participant did not answer the questions on the VST, the VLSQ, or even the VLOQ. In fact, she answered only the questions related to the first two frequency bands, while ignoring the rest and not even attempting to guess the meaning of the items. As a result, the researcher disregarded the VST score of this participant as it was thought to be unreliable.

Thus, one can say that, apart from participant 15, the real highest VST score of this group is in fact 89 (a vocabulary size of 8900 word families), with two participants obtaining this score (P12 and P18), while the lowest was 16 (a vocabulary size of 1600) obtained by P11.

1LMD Freshers Students	Vocabulary Frequency Level														Total Score
	1K	2K	3K	4K	5K	6K	7K	8K	9K	10 K	11 K	12 K	13 K	14 K	
P 15	10	9	9	9	10	9	8	8	6	7	6	7	5	5	108
P 12	10	8	4	8	7	8	6	6	7	4	8	4	3	6	89
P 18	10	9	9	7	8	7	7	6	3	5	7	7	2	2	89
P 3	9	8	7	5	8	7	5	7	5	4	7	4	3	6	85
P 14	8	8	7	7	8	7	5	7	4	3	6	5	5	2	82
P 1	9	7	6	6	8	5	6	6	3	6	7	4	4	3	80
P 4	9	8	5	8	7	5	5	6	2	6	6	6	3	4	80
P 6	9	6	6	8	8	6	6	7	6	2	4	5	1	3	77
P 29	8	7	5	6	9	6	4	7	4	6	5	3	2	2	74
P 19	9	8	7	7	7	7	4	5	4	1	5	1	2	2	69
P 27	9	7	6	8	6	4	5	6	2	1	4	4	5	1	68
P 23	9	4	5	7	6	6	3	5	3	3	4	5	3	3	66
P 2	7	5	4	8	7	6	4	5	3	1	3	2	4	2	61
P 16	7	7	6	7	7	7	3	5	1	5	2	1	2	1	61
P 24	7	7	5	6	2	3	4	2	2	7	3	3	2	3	56
P 26	8	8	4	6	4	2	4	5	2	3	3	1	3	3	56
P 28	6	3	5	3	3	4	5	3	2	4	6	3	4	5	56
P 7	8	7	6	5	3	5	3	4	2	3	2	2	1	1	52
P 10	9	7	7	5	4	5	3	7	2	0	2	1	0	0	52
P 13	6	5	4	4	3	3	5	5	2	4	5	2	0	3	51
P 5	8	7	4	3	3	4	3	4	2	2	4	1	2	3	50
P 25	9	7	3	3	2	4	3	1	3	5	2	1	2	1	46
P 21	6	2	2	4	2	0	5	2	5	3	3	3	3	0	40
P 30	6	3	3	2	2	3	4	5	1	2	3	2	1	3	40
P 17	8	3	3	3	1	5	2	2	2	1	1	0	0	0	31
P 22	6	4	4	1	1	1	1	3	1	2	3	2	0	1	30
P 20	7	6	3	1	0	3	3	3	0	1	2	0	0	0	29
P 8	6	3	2	3	1	2	3	1	0	0	2	1	0	0	24
P 11	6	2	1	1	0	2	2	0	1	0	1	0	0	0	16
P 9															0
Average	7,90	6,03	4,90	5,21	4,72	4,69	4,17	4,59	2,76	3,14	4.00	2,76	2,14	2,24	59,24

Table 5.5: VST results for the 1LMD Freshers group

As for the influence of the frequency levels on the total VST scores, the least and most difficult frequency bands as perceived by the participants are shown on Graph 5.1 below:



Graph 5.1: VST scores for the 14 frequency bands (1LMD Freshers)

As shown on this graph, the average scores decrease gradually as the participants go from the highest to the lowest frequency bands, with an average of 7.89 out of ten for 1K items as the highest score, to an average of 2.14 out of 10 for 13K as the lowest score. However, throughout this decreasing pattern, we notice a few peaks even in the low frequency levels: For instance, the average score for the 8K is 4.5, and 3.96 for 11K. Despite the fact that the words in these two bands are low frequency items that participants at this level are not expected to know, the 1LMD Freshers of the present study are still able to get the meaning of some of these items. A possible explanation of this phenomenon might be the fact that there are many words in these two bands that have resembling written forms with their French equivalents. Indeed, words like *palette* (8K), *eclipse* (8K), *authentic* (8K), *cabaret* (8K), *yoga* (11K), *puma* (11K), *aperitif* (11K) could possibly be guessed by the participants because they have similar orthographic form and thus similar cognates in the French language. Moreover, they could also guess the meaning of a word like *Emir* (11K) maybe due to the fact that it is borrowed from Arabic, the native language of all the participants of the present study.

5.2.2 Results of the VST obtained by the 1LMD group

Table 5.6 presents the results of the VST scores for the 81 participants of first year LMD, who received many months of English instruction at the English Department prior to sitting the research test. Their results thus are expected to demonstrate somehow university instruction influence on vocabulary size, unlike the previous freshly enrolled participants. As shown on Table 5.6, the VST results range from a maximum of 106 (vocabulary size 10,600 words) to a minimum of 34 (vocabulary size 3400).

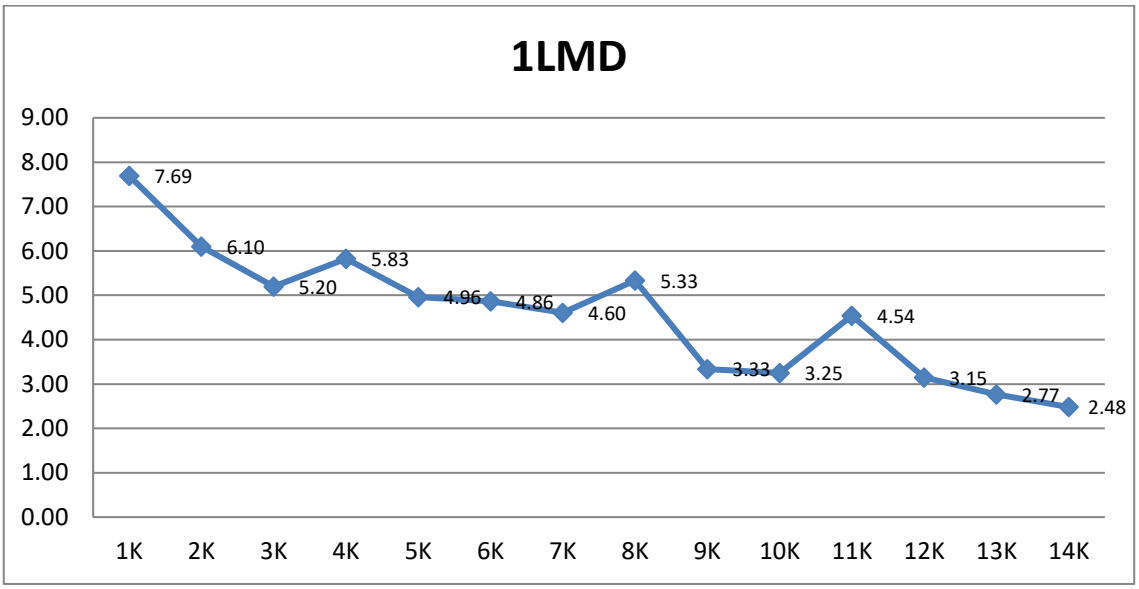
When we look at the average VST score of the whole group, we notice that there is a slight increase in comparison to the 1LMD Freshers group. After nearly one year of instruction at the English Department, the participants moved from an average size of 5871 words when they joined the University, to an average of 6410 words just before the end of Year 1. This slight increase would certainly be considered as insufficient, especially when we know that during the first year of the LMD program, most of the courses focus on language form (grammar, vocabulary, pronunciation). In fact, the first year gives more credit to language and skills, with the largest amount of time allocated to reading/writing, speaking/listening, and grammar. As there is no special course on vocabulary learning or vocabulary learning strategies, English vocabulary is supposed to be indirectly taught throughout the various language and skills courses during year 1.

1LMD Students	Vocabulary Frequency Level														Total Score
	1K	2K	3K	4K	5K	6K	7K	8K	9K	10K	11K	12K	13K	14K	
P 4	9	10	8	7	10	7	6	7	7	7	8	8	6	6	106
P 45	10	9	10	8	8	8	7	10	4	6	8	6	1	5	100
P 30	6	8	8	8	10	5	6	8	5	6	7	6	6	6	95
P 33	10	10	9	8	8	7	6	8	4	6	6	4	6	2	94
P 13	9	9	10	8	7	7	8	8	7	6	8	3	0	0	90
P 61	9	8	8	8	8	6	5	8	5	4	6	8	2	3	88
P 17	9	9	8	7	7	7	7	10	6	5	5	3	1	2	86
P 23	8	7	8	7	8	6	5	5	4	5	8	5	3	2	81
P 39	9	6	5	7	5	5	5	8	8	4	6	5	5	3	81
P 8	8	5	6	7	6	7	2	7	5	3	5	5	6	7	79
P 31	10	9	8	7	5	5	3	7	3	3	5	4	3	6	78
P 62	7	7	6	8	7	6	4	7	5	2	6	5	1	7	78
P 70	8	7	3	7	7	7	6	6	3	4	7	4	5	4	78
P 12	9	8	4	8	5	6	6	5	4	6	5	4	4	2	76
P 80	9	10	6	9	8	7	5	7	3	4	4	3	0	1	76
P 26	8	5	10	9	7	7	3	5	2	5	3	3	5	3	75
P 72	9	7	6	4	7	6	5	7	2	5	5	6	4	2	75
P 18	7	7	5	7	6	7	4	8	4	4	6	5	3	1	74
P 75	9	8	6	7	5	8	4	5	5	3	3	5	1	5	74
P 28	9	7	6	7	5	6	4	7	2	4	6	3	6	1	73
P 60	7	7	5	6	6	8	4	7	4	3	4	5	2	5	73
P 27	7	9	2	7	7	6	4	4	5	5	7	4	2	3	72
P 53	9	6	7	5	5	5	5	5	2	3	8	6	3	3	72
P 37	9	9	7	6	6	3	6	5	5	3	5	2	2	3	71
P 68	8	8	5	8	5	6	4	5	2	5	5	4	3	3	71
P 6	8	6	6	7	6	5	3	8	2	3	3	6	4	2	69
P 29	9	5	6	9	3	4	6	3	3	5	7	2	4	3	69
P 77	9	6	6	7	8	7	3	5	1	3	5	3	2	4	69
P 10	9	5	6	7	3	7	2	6	3	6	6	1	2	5	68
P 81	8	8	6	6	6	4	5	8	0	4	4	4	3	2	68
P 51	8	6	5	5	5	5	7	6	5	3	5	3	1	3	67
P 52	8	6	5	6	4	4	5	5	4	2	8	4	4	2	67
P 58	7	5	5	7	4	4	6	6	3	4	8	2	4	2	67
P 64	8	6	5	7	5	5	5	4	2	3	6	3	4	4	67
P 16	8	7	5	7	6	6	4	6	4	2	3	4	0	3	65
P 40	9	6	6	5	4	6	5	3	2	3	6	2	5	3	65
P 57	8	8	5	6	5	4	8	5	1	3	5	3	3	1	65
P 32	9	6	3	6	3	5	6	5	3	5	5	1	4	3	64
P 56	9	7	5	6	4	6	4	4	4	4	4	1	1	5	64
P 73	9	8	6	8	7	6	6	5	3	3	1	1	1	0	64
P 24	8	3	3	7	4	4	5	8	6	2	3	5	4	1	63
P 25	5	5	5	3	4	3	8	5	4	2	7	5	3	3	62

P 43	6	7	4	5	7	6	4	3	2	5	5	4	2	2	**62**
P 63	5	4	6	5	4	4	6	6	5	2	5	5	2	3	**62**
P 67	7	5	4	5	5	5	4	6	5	3	5	4	2	2	**62**
P 79	7	6	4	4	6	4	5	5	5	4	4	4	3	1	**62**
P 5	9	8	5	2	4	4	3	4	4	2	6	1	3	6	**61**
P 11	9	5	5	6	2	3	4	4	4	5	3	2	4	4	**60**
P 1	7	5	3	6	5	4	4	4	2	3	6	3	5	2	**59**
P 3	7	6	4	9	5	5	4	3	1	2	5	2	6	0	**59**
P 21	7	7	4	4	2	4	5	6	1	3	5	6	2	3	**59**
P 35	8	4	2	6	2	5	5	7	1	5	1	2	5	5	**58**
P 38	7	6	5	6	3	5	3	5	4	1	4	2	3	2	**56**
P 44	9	5	6	4	2	4	2	4	3	2	3	7	2	3	**56**
P 69	9	5	4	5	3	4	6	6	3	2	5	1	2	1	**56**
P 78	8	6	5	4	5	3	4	6	4	2	3	6	0	0	**56**
P 22	7	5	5	4	1	5	5	5	7	3	3	1	4	0	**55**
P 47	8	7	6	3	4	2	4	4	3	3	3	2	3	3	**55**
P 59	8	7	5	5	3	4	3	5	2	3	3	3	2	2	**55**
P 65	8	4	6	5	5	4	2	4	3	2	4	0	3	5	**55**
P 50	8	4	3	5	2	4	6	3	6	3	2	2	6	0	**54**
P 2	8	7	4	6	7	4	2	4	2	1	3	2	1	2	**53**
P 46	7	7	5	4	5	3	5	5	0	3	4	1	2	2	**53**
P 9	8	7	3	5	4	1	6	5	5	1	2	2	1	2	**52**
P 19	9	7	3	4	6	6	4	3	2	2	3	0	0	2	**51**
P 34	7	3	3	6	5	4	3	6	3	3	3	1	3	1	**51**
P 54	7	4	6	4	4	7	4	3	4	2	2	2	2	0	**51**
P 76	7	5	4	6	5	4	4	4	3	2	4	2	0	1	**51**
P 15	7	6	7	5	6	5	5	4	1	3	1	0	0	0	**50**
P 48	5	4	5	8	6	5	4	7	1	0	2	1	2	0	**50**
P 55	8	7	1	2	3	1	6	3	3	3	4	3	3	3	**50**
P 71	5	1	5	3	2	4	5	2	3	2	6	5	2	3	**48**
P 42	6	5	6	3	6	4	4	5	0	0	3	4	0	1	**47**
P 7	5	3	2	5	3	2	3	4	5	4	3	1	5	1	**46**
P 41	8	6	4	5	3	2	4	4	1	2	5	0	1	1	**46**
P 36	6	5	5	4	2	4	4	4	1	0	2	2	5	1	**45**
P 66	7	4	4	4	2	7	3	5	1	3	2	1	0	2	**45**
P 14	1	2	3	4	3	1	5	3	4	3	4	2	6	3	**44**
P 74	6	3	3	4	4	4	3	6	3	3	4	1	0	0	**44**
P 49	3	1	3	3	4	2	5	3	6	3	2	2	3	0	**40**
P 20	8	3	5	5	3	2	3	1	1	0	2	0	0	1	**34**
Average	**7,69**	**6,10**	**5,20**	**5,83**	**4,96**	**4,86**	**4,60**	**5,33**	**3,33**	**3,25**	**4,54**	**3,15**	**2,77**	**2,48**	**64,10**

Table 5.6: VST results for the 1LMD group

The pattern of results based on the frequency bands for this group is shown on Graph 5.2 below.



Graph 5.2: VST scores for the 14 frequency bands (1LMD participants)

In this first year group of subjects, the decrease of scores from 1K to 14K is also obvious, as the participants moved from an average of 7.69 out of 10 in the 1K to an average of 2.48 in 14K. Moreover, the same peaks in 8K and 11K can be observed, but the scores on these two peaks are slightly higher than the 1LMD Freshers group. For instance, in the 11th frequency band (11K) that contains low frequency vocabulary items that could have been difficult to know for this pre-intermediate group, the participants scored on average no less than 4.54 out of 10, and 5.33 for the 8K. The relative success in these two low frequency bands may have the same explanation as the one provided above for the BAC group. In other words, the parallel that the participants might have made between these words and their French cognates could explain why they were able to guess the meaning of words beyond their knowledge level.

5.2.3 Results of the VST obtained by the 2LMD group

The VST scores for the group of second year participants ranges from 91 to 51, with the average score of the whole group being 72.43. When looking at the highest scores, one can notice that there are some 1LMD participants who performed better than the best 2LMD subjects. Indeed, four 1LMD participants scored between 106 and 94, while the highest score for the second year is 91. However, this second-year group seems more balanced and homogeneous as there are no participants who scored less than 51, while the discrepancy was larger for the 1LMD group.

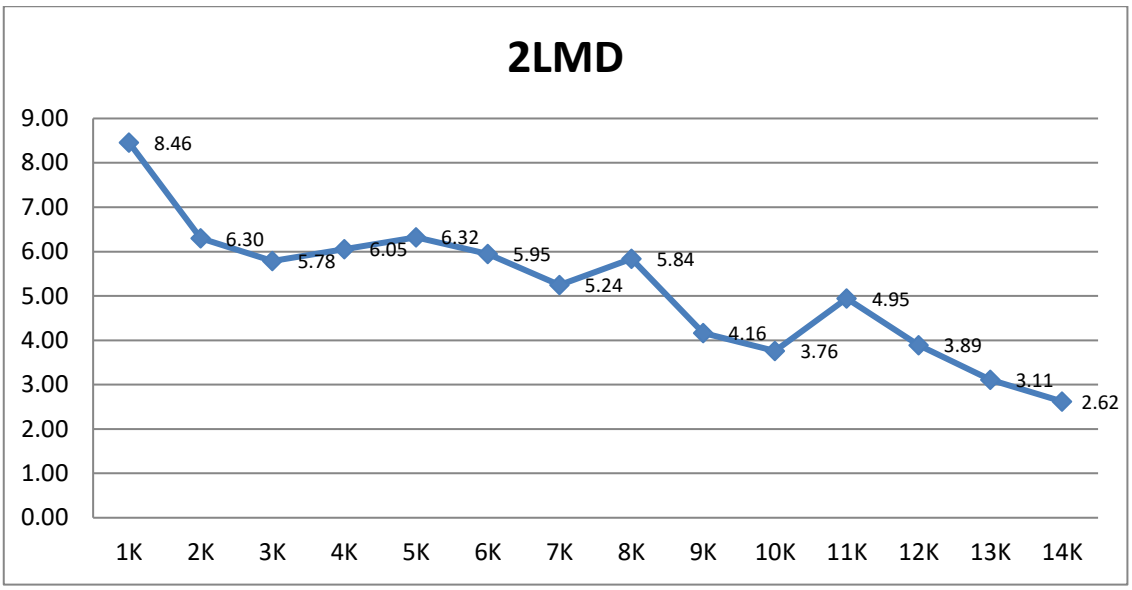
With an average total score of 72.43 for the whole 2LMD group, there seems to be a significant jump in their written receptive vocabulary size in comparison to the first-year group. More content-focused courses provided in the second year (such as literature or civilisation courses) might have helped some participants to expand their vocabulary size.

Another possible reason for this increase in vocabulary knowledge might be the fact that the participants have gained some autonomy as a consequence of the combination of language and content input during that year, and to the study skills courses taught during the first and second year of the degree course. In these courses students are encouraged to develop their language learning autonomously and to identify the learning strategies that fit with their learning style; an emphasis is also put on the need for being proactive in the learning process, including vocabulary development.

2LMD Students	Vocabulary Frequency Level														Total Score
	1K	2K	3K	4K	5K	6K	7K	8K	9K	10K	11K	12K	13K	14K	
P 7	9	9	6	7	8	6	6	9	6	5	7	5	4	4	91
P 11	10	9	9	8	8	8	8	6	5	5	4	5	3	2	90
P 20	7	8	7	6	9	7	7	7	4	5	7	7	5	3	89
P 29	9	4	5	7	9	8	7	7	5	5	6	4	7	4	87
P 22	9	9	7	8	7	8	5	7	5	3	7	4	3	2	84
P 5	9	6	7	8	8	6	5	6	4	5	6	5	4	4	83
P 19	9	8	6	8	8	7	6	8	5	5	5	4	2	2	83
P 33	8	8	6	7	10	7	6	5	5	4	5	4	4	2	81
P 9	10	7	6	8	7	7	6	6	3	2	6	5	3	4	80
P 6	9	8	7	6	7	8	5	5	2	5	6	6	3	2	79
P 18	8	6	6	7	7	6	3	6	5	2	5	6	6	4	77
P 28	9	7	6	8	9	7	3	6	1	3	4	4	7	3	77
P 30	8	7	7	6	8	8	2	5	4	4	5	8	3	2	77
P 36	9	6	5	6	8	7	7	7	2	3	5	6	2	4	77
P 14	9	7	7	8	6	6	4	6	4	4	7	3	3	2	76
P 21	9	7	6	6	7	6	5	8	6	2	3	3	3	5	76
P 8	8	7	4	6	9	5	7	6	5	5	4	2	4	3	75
P 23	9	9	6	7	8	7	5	5	4	6	6	2	0	1	75
P 2	9	6	5	7	7	7	7	5	4	4	5	2	4	2	74
P 3	9	7	5	6	8	3	6	7	7	4	5	3	3	1	74
P 31	9	4	5	6	6	6	4	5	5	7	6	4	4	3	74
P 10	9	6	6	7	7	7	4	5	3	2	5	5	2	4	72
P 26	8	7	3	5	5	6	4	6	5	1	6	5	7	2	70
P 12	9	6	7	4	4	6	4	5	5	5	2	3	3	5	68
P 1	9	7	7	5	7	8	7	4	5	3	4	0	0	0	66
P 15	9	6	6	4	4	6	6	6	4	3	3	2	4	3	66
P 27	8	4	5	7	4	4	5	6	3	4	6	2	6	2	66
P 24	9	6	6	6	6	4	3	6	5	2	5	4	1	2	65
P 25	8	5	4	4	5	5	6	6	3	3	7	3	2	3	64
P 17	7	4	6	6	3	2	7	5	6	4	4	2	3	3	62
P 35	9	7	4	5	3	7	4	6	3	5	5	3	0	1	62
P 37	6	4	8	5	1	4	7	3	5	5	3	4	1	3	59
P 4	5	5	5	3	5	4	5	7	4	4	4	4	1	2	58
P 13	8	5	4	5	3	3	4	5	3	2	7	5	2	2	58
P 16	8	4	5	3	7	3	6	4	3	2	3	4	3	2	57
P 34	9	6	4	6	4	5	4	5	2	3	4	3	1	1	57
P 32	7	2	6	3	2	6	4	5	4	3	1	3	2	3	51
Average	8,46	6,30	5,78	6,05	6,32	5,95	5,24	5,84	4,16	3,76	4,95	3,89	3,11	2,62	72,43

Table 5.7: VST results for the 2LMD group

As shown on Graph 5.3, the frequency pattern for the 2LMD group follows the same decreasing scheme as the two previous groups, with slightly higher average scores in the frequency bands, though. The same two peaks are also observed at the levels of 8K and 11K.



Graph 5.3: VST scores for the 14 frequency bands (2LMD participants)

5.2.4 Results of the VST obtained by the 3LMD group

The final sample of the present study consists of 36 participants (3LMD) who were about to take their final examination and complete their English degree course. In the third year of the English program, the students have to choose a specialized field from the two branches taught at the Department: Linguistics or Anglo-Saxon Studies. The enrolment in one branch or the other is also dependent on the marks they obtain in year 1 and year 2, which are the foundation years of the English degree course. For instance, a student with good marks in subjects like linguistics, language skills, and phonetics would be directed to the Linguistics branch, while a student with better marks in the literature and civilization courses would join the Anglo-Saxon studies specialism. In the present study, we tried to ensure that the 3LMD group would be representative of the whole cohort of third year students. Thus, 20 participants were selected from

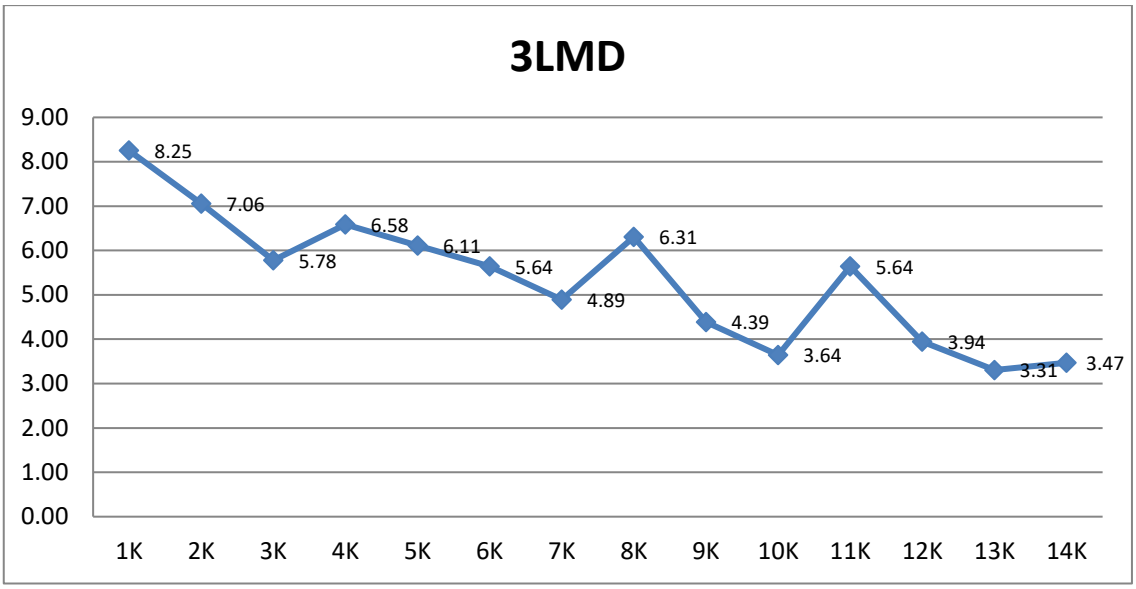
the Anglo-Saxon branch (from P1 to P20), and 16 others were also randomly chosen from the Linguistics group (from P21 to P36). In Table 5.8 below the numbers allocated to the participants are shown on the left-hand column, with the mention of either Lit (Literature) or Ling (Linguistics) added to make the distinction between the two branches clearer.

The total VST score of the group ranges from 95 to 46, with an average written receptive vocabulary size of 7500 words. Compared to the average size of the second-year group (7243 words), the third year of the English degree course does not seem to have led to significant growth in vocabulary size. During this degree year, the students must attend content courses related to their branch over two semesters, as well as write a research paper to be submitted after the final examination. Given the intensive content knowledge the participants are exposed to during this final year and the amount of reading they are supposed to do for the preparation of their research papers, one would have expected a much higher jump in vocabulary size by the end of this year.

Comparing the scores of the two branches, there seemed to be better VST scores among the Lit group than the Ling group. Indeed, among the top-15 VST scores of this group, only 3 participants belong to the Linguistics branch, while a majority of 12 are from the Anglo-Saxon specialism. This discrepancy is quite intriguing as both branches receive an advanced level of input in the various content courses. At this final stage of the degree, and whatever the branch chosen, the focus is no longer on language modules but rather on specialised content knowledge that is aimed to prepare the students for either a linguistics related or a literature related profession. Moreover, the fact that the VST scores of the Linguistics participants is lower than the others, is even more surprising when one knows that these students are being prepared to embrace a teaching career focusing on subjects like syllabus design, didactics, and psycho-pedagogy.

3LMD Students	Vocabulary Frequency Levels														Total Score
	1K	2K	3K	4K	5K	6K	7K	8K	9K	10K	11K	12K	13K	14K	
P 8 Lit	9	8	7	8	9	7	5	10	6	6	8	6	2	4	95
P 31 Ling	10	9	6	8	9	7	5	7	4	7	6	5	5	5	93
P 7 Lit	8	9	8	7	7	8	6	7	6	4	7	6	3	6	92
P 17 Lit	9	8	6	6	9	5	6	8	5	5	7	4	6	5	89
P 18 Lit	9	9	5	6	9	8	4	5	4	5	8	3	7	6	88
P 20 Lit	10	7	6	5	9	5	8	9	6	3	8	5	4	3	88
P 2 Lit	9	10	7	6	7	7	6	6	6	5	7	6	1	2	85
P 19 Lit	8	8	6	7	9	8	6	9	4	4	6	3	5	2	85
P 10 Lit	8	7	6	7	6	5	6	10	6	3	7	4	4	5	84
P 22 Ling	9	8	8	8	7	4	6	7	4	4	6	5	4	4	84
P 9 Lit	9	8	6	7	6	7	5	6	3	5	6	4	4	6	82
P 11 Lit	9	8	7	6	7	7	5	7	3	4	7	4	5	3	82
P 5 Lit	8	8	7	7	6	6	5	4	6	6	7	3	2	6	81
P 16 Lit	9	7	4	6	8	6	6	7	5	4	7	5	4	2	80
P 27 Ling	9	7	7	8	5	6	5	6	5	3	6	5	4	4	80
P 36 Ling	9	9	6	8	7	6	5	6	5	3	6	7	2	1	80
P 32 Ling	9	7	6	6	7	6	4	8	5	5	7	2	2	4	78
P 1 Lit	9	9	7	7	7	8	3	7	1	4	6	6	2	0	76
P 30 Ling	6	8	5	6	8	6	3	7	3	3	7	4	4	6	76
P 14 Lit	9	7	7	8	8	4	5	7	3	4	4	3	3	2	74
P 21 Ling	7	8	5	6	5	5	6	7	6	3	7	4	2	2	73
P 29 Ling	7	7	6	9	7	6	5	6	5	1	4	5	2	3	73
P 34 Ling	7	6	6	8	7	6	3	8	4	4	5	3	4	2	73
P 13 Lit	9	6	7	6	5	5	5	7	4	3	5	3	2	4	71
P 23 Ling	9	6	6	5	5	5	7	6	3	5	6	1	4	3	71
P 25 Ling	9	8	5	9	4	6	4	4	3	6	4	4	2	1	69
P 4 Lit	9	6	7	5	4	3	6	5	5	3	3	5	3	4	68
P 26 Ling	8	5	5	5	6	5	3	6	3	4	7	6	1	2	66
P 35 Ling	8	8	3	7	6	7	3	5	4	1	2	3	5	4	66
P 3 Lit	9	6	5	8	2	5	4	5	5	3	2	2	1	7	64
P 15 Lit	7	6	6	5	4	4	6	3	4	2	3	5	3	3	61
P 24 Ling	8	7	3	6	2	3	7	6	5	2	5	2	4	1	61
P 28 Ling	6	2	5	7	5	5	5	3	6	0	5	2	4	4	59
P 33 Ling	8	3	6	5	2	6	2	5	4	2	4	2	4	3	56
P 12 Lit	8	5	5	6	2	4	3	2	2	2	3	4	2	3	51
P 6 Lit	3	4	1	3	4	2	3	6	5	3	5	1	3	3	46
Average	8,25	7,06	5,78	6,58	6,11	5,64	4,89	6,31	4,39	3,64	5,64	3,94	3,31	3,47	75,00

Table 5.8: VST results for the 3LMD group



Graph 5.4: VST scores for the 14 frequency bands (3LMD participants)

As shown on Graph 5.4, the participants seem to have obtained similar decreasing scores from 1K to 14K. Besides, the peaks in 8K and 11K are the same as with other groups, with slightly higher scores though.

5.2.5 Comparison between VST results of all groups

After identifying the receptive written vocabulary size of the participants at each English degree year level of their university instruction, it is important to analyse the vocabulary growth pattern of these students from the time they enrol in the English department until their final year of graduation. The purpose of analysing this growth pattern is to be able to investigate its correlation with the growth pattern of VLS use later in this chapter. As such, the results of the VST for the four sample groups are superposed and compared. The comparative analysis is shown in Table 5.9 as well as graph 5.5 below.

As shown on the table, the average overall vocabulary size of the participants jumped from 5924 words by the time they joined the university to 7500 words just before they graduated. With a difference of 1576 words over three years of study, one can deduce that the average gains in vocabulary knowledge are about 525 words per year. However, when looking at the gains from one proficiency

level to the other, one can notice that the growth varies considerably. Indeed, the gains that the participants achieved from the time they joined the university - before any university instruction took place - and the time they were about to finish their first year is of 486 words; this might reflect the impact of the first-year instruction of the LMD curriculum. During this first year, teaching is mainly based on language and skills courses such as Reading/Writing, Listening/Speaking, Phonetics, Grammar, etc. The purpose of the first year is generally to provide the students with the appropriate language tools that would serve as basis for the following years of the course. Nevertheless, the difference in vocabulary size between Year 1 and Year 2 is significantly higher, with a gain of 833 words. Given that the data collection took place at the end of the academic year, just before the final examinations, this gain of 833 words is supposed to reflect the influence of the second-year teaching that the participants had on their vocabulary size. The content of the second year is a mix between language skills and content courses, with a majority of content courses which aim to broaden students' knowledge and provide them with a variety of sources of input. The participants, however, seemed to have gained much less vocabulary during their final year of instruction, with a difference of only 257 words from Year 2 to Year 3. The last year of the degree course is exclusively content based and the students at that stage are supposed to have developed autonomy to enable them to acquire knowledge - including lexical knowledge - independently and much more effectively than in the previous years especially that many of them would become future EFL instructors. Thus, this drop in lexical gains is quite surprising at this last stage of the degree course.

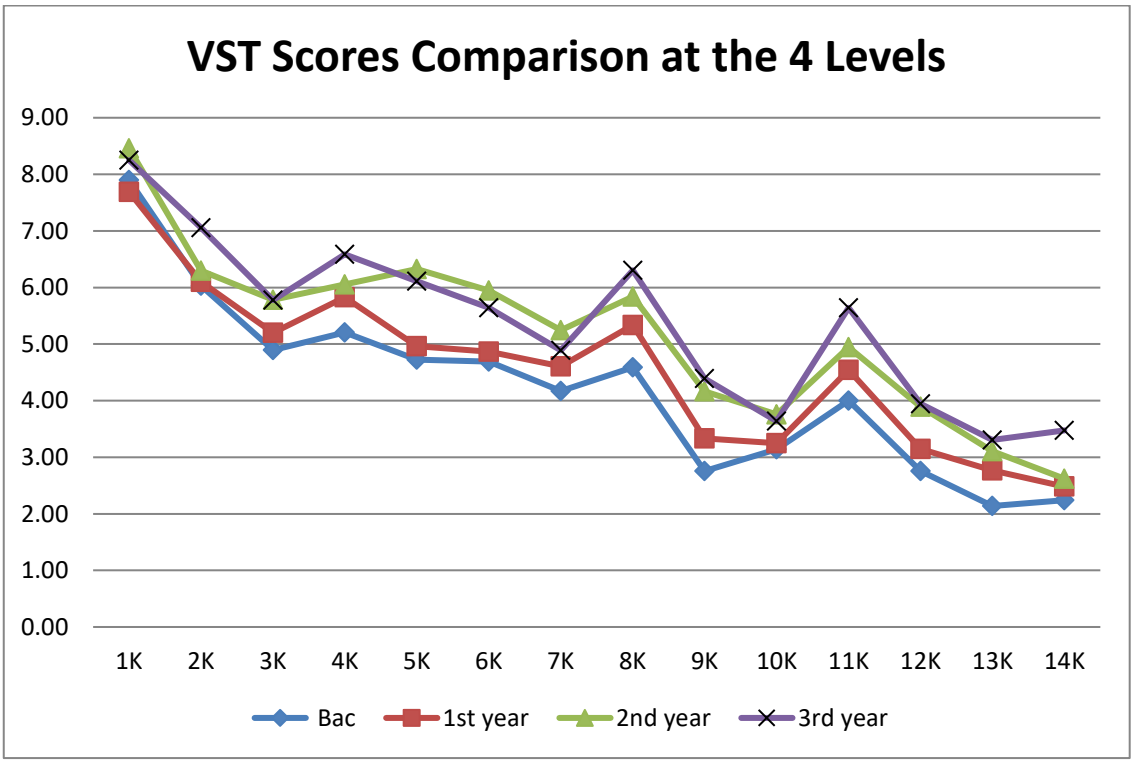
In Table 5.9 and Graph 5.5 below, a comparison of the variation in vocabulary size and the frequency bands is done among the four sample groups of the study. Looking at the results per frequency levels on Table 5.9, one can notice that the second year participants performed slightly better than the third year participants in 5 frequency bands (1K, 5K, 6K, 7K, 10K) out of the 14 bands of the VST.

However, apart from this exception, the results as far as the frequency bands are concerned follow a logical but moderate increase as the participants moved from one year to the other.

Moreover, the decreasing pattern from 1K to 14K is more or less identical in the four sample groups, and this is particularly obvious in graph 5.5 below.

	Vocabulary Frequency Level														Total Average Score	Gains per year
	1K	2K	3K	4K	5K	6K	7K	8K	9K	10K	11K	12K	13K	14K		
1LMD Freshers	7,90	6,03	4,90	5,21	4,72	4,69	4,17	4,59	2,76	3,14	4.00	2,76	2,14	2,24	59,24	-----
1LMD	7,69	6,10	5,20	5,83	4,96	4,86	4,60	5,33	3,33	3,25	4,54	3,15	2,77	2,48	64,10	486
2 LMD	8,46	6,30	5,78	6,05	6,32	5,95	5,24	5,84	4,16	3,76	4,95	3,89	3,11	2,62	72,43	833
3 LMD	8,25	7,06	5,78	6,58	6,11	5,64	4,89	6,31	4,39	3,64	5,64	3,94	3,31	3,47	75,00	257

Table 5.9: Comparison of the VST results for the four sample groups



Graph 5.5: VST scores for the 14 frequency bands (Comparison)

Given the gradual but modest growth of the receptive written vocabulary size of the participants in the present study, one wonders what aspects of the EFL learning process can either help boost this size growth or hinder it. A key element of the vocabulary learning process is the use of vocabulary learning strategies to cope with lack of sufficient vocabulary knowledge, as well as to reinforce existing lexical knowledge and expand it. As such, the causal relationship between the growth of vocabulary size and the use of VLS is the main purpose of the present study which attempts to investigate the correlation between these two variables and to identify what Vocabulary learning strategies can be viewed as conducive to a larger vocabulary repertoire throughout the different stages of the EFL degree course.

In order to study this correlation and complement the findings from the VST presented above, the participants' preferences in terms of VLS use were analysed throughout the Vocabulary Learning Strategies Questionnaire (VLSQ); results are displayed in the following section of this chapter.

Section Three:

5.3 Analysis of the vocabulary Learning Strategies Questionnaire (VLSQ)

Having analysed the first variable of vocabulary size growth of the participants, it is also important to find out their growth pattern in relation to their vocabulary learning strategies use in order to shed light on the possible correlation between the two.

Thus, after completing the VST aimed to measure the receptive written vocabulary size, the participants were required to fill in a Vocabulary Learning Strategies Questionnaire to complement the results of the present study. This questionnaire is based on Schmitt's taxonomy of VLS (1997), with some amendments to fit the Algerian context and profile, and its purpose is to identify the VLS used by the participants to discover as well as to consolidate the meaning of vocabulary items. The questions were presented to the participants in a table following the same categorization and order of strategies of Schmitt's

taxonomy; the amendments provided by the researcher were also incorporated within the same order (Appendix 5).

The participants were asked to indicate how often they thought they used the strategies mentioned in the table, regardless of the language skills or learning settings, starting with the discovery strategies that help them identify and understand new words (Part A), moving to indicating their preferences in terms of consolidation strategies to reinforce and retain word knowledge (Part B). The frequency of use of the different strategies was presented in the form of a four-point Likert scale from which the participants had to choose: Always - Sometimes - Rarely – Never, by ticking the corresponding box.

The results of the questionnaire were categorized according to the frequency of use mentioned by the participants, and were believed to demonstrate the strategies' preferences from the most to the least frequently used.

In the present section, the results of each sample group are presented to shed light on the strategies use and preferences of each proficiency group separately. The overall results are then superposed to allow for a comparison between the four groups and demonstrate whether strategy use was the same or different for the low-intermediate, pre-intermediate, intermediate, and advanced students. These results will be discussed, later in this chapter, in relation to the vocabulary size growth of the same participants from Year 1 to Year 3 of the degree course.

As a first step, and in order to find out the overall number of VLS used by each of the sample groups, the results of the VLSQ were transformed into numeral data. Thus, the answers to the Likert scale were allocated marks based on the VLS frequency of use mentioned by the participants: 4 points for "Always", 3 points for "Sometimes", 2 points for "Rarely", and 1 point for "Never". The average mark for each strategy was then calculated. The strategies obtaining an average of 2.5 or more were considered as the ones commonly used by the participants with a frequency use of either "Always" or "Sometimes"; while the strategies scoring an average of less than 2.5 were classified as not used given

that their average frequency was “Rarely” or “Never”. The purpose behind this calculation is to see whether there is any difference in terms of number of VLS used at the four degree stages, and therefore to analyse the quantity of VLS used before looking at the nature of these strategies later in this section.
The results are shown in Table 5.10 below.

	1LMD Freshers	1LMD	2LMD	3LMD
Number of VLS used	28	43	44	39

Table 5.10: Number of VLS used by each proficiency group (Comparison)

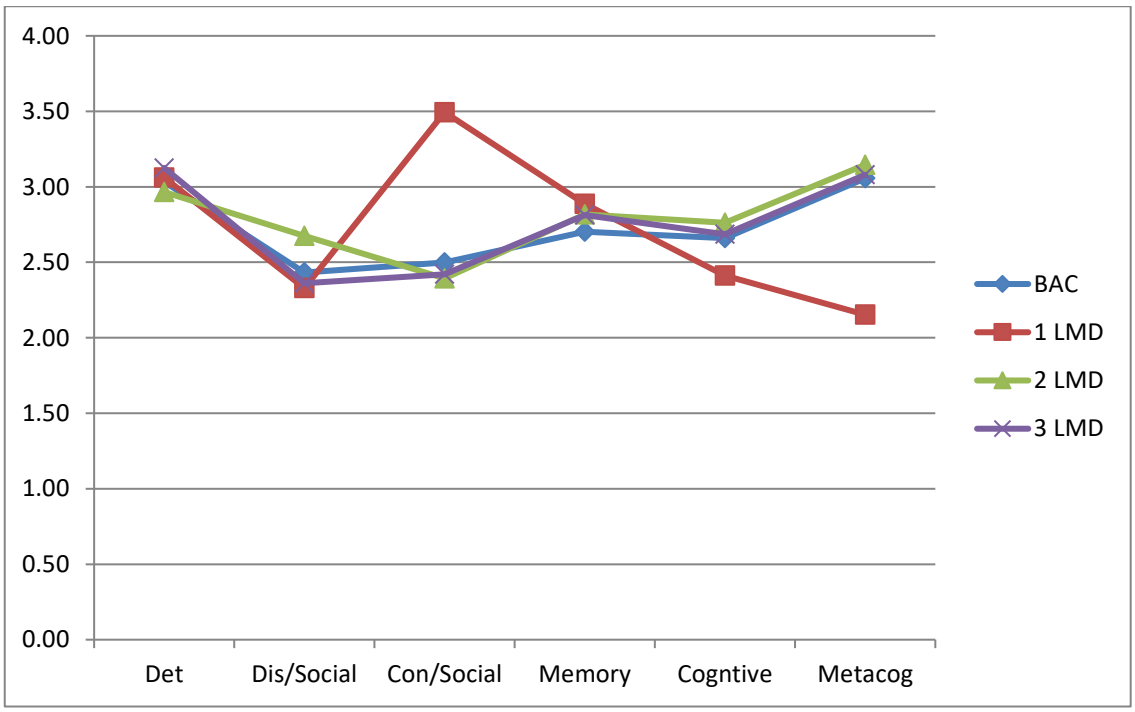
As shown on the table above, the overall number of VLS that the participants reported to use vary considerably from Year 1 to Year 3. Indeed, out of the 64 VLS included in the questionnaire, the freshly enrolled students coming from high school scored 28 strategies, while first year participants reported 43, the second-year group mentioned 44 and the final third year students declared using 39 vocabulary strategies. One can notice a significant jump in the number of VLS used between the time the students join the department of English and when they are about to finish their first undergraduate year. The increase from 28 to 43 strategies might be due to the fact that the concept of learning strategies itself is new to most students coming from high school as these techniques are not usually explicitly taught or even referred to in the high school syllabus. However, during the first year of the LMD program, there is a clear focus on the teaching of language skills and language dynamics, including introduction to the concept of strategies. In the Reading/Writing course and the Study Skills course for instance, the teaching of various reading strategies is a key element of the course; therefore, students get used to the idea that there are some explicit and implicit techniques that can be used to improve language learning, the thing which was probably unknown to them before.

For the 2 LMD group, 44 strategies were reported to be used, which differs only with 1 strategy from the 1LMD group. This shows that the second-year experience did not seem to change the participants' knowledge about learning strategies in general and that they possibly kept the same behaviour in terms of strategy use. This aspect will be checked later in this section when looking at the nature of the VLS used. However, the fact that the number of strategies was almost the same between 1LMD and 2LMD students and that they probably had more or less the same understanding of strategy use is certainly true given that the syllabus of the second year is a sort of extension of the first-year syllabus. As a matter-of-fact, both Year 1 and Year 2 are described as foundation years in the LMD curriculum, and the courses of the Fundamental and Methodology Units in the syllabus (language skills and study skills) are virtually the same, with a slight degree of complexity from Year 1 to Year 2. It is also worth mentioning that the number of VLS used slightly decreases to 39 for the 3LMD participants who are about to finish their undergraduate studies.

The differences in number of strategies used accounted for in this section provide only an initial reference to start analysing the participants' behaviour in terms of VLS use; it does certainly have no incidence on the quality or effectiveness of the strategies that were used. Indeed, the fact that one group scored more or less than another does not mean that one group was more effective in the selection of VLS than another. However, the fact that there was a gradual increase in number from the low-intermediate level to the advanced level might demonstrate an increase in awareness of the concept of learning strategies use. This increase in awareness was mainly observed during the first year of English instruction, while the number of strategies used remained relatively identical during the last two years of the degree course. In order to determine whether the participants' behaviour in terms of VLS use evolved or remained static, it is important to go beyond the number of VLS and analyse the type or nature of these strategies used at each proficiency level and to compare them.

Having looked at the number of VLS used at the different stages of the English degree course and how this number changed from one stage to another, it is then important to analyse the participants' preferences in terms of nature and category of these strategies. For this purpose, the responses to the VLSQ were analysed taking into consideration the distinction between Discovery and Consolidation strategies set up by Schmitt (1997).

The participants' responses to the Likert scale were again transformed into numerical data as explained above, ranging from 4 points for Always to 1 point for Never. For each of the six categories of VLS, a mean was calculated to demonstrate the preference tendency of each participant in terms of the six categories. As the purpose at this stage was to determine a classification of the VLS categories for each proficiency level, a mean figure was then calculated; results of the four sample groups of the present study are displayed in Table 5.20 and Graph 5.14 below:



Graph 5.14: Comparing Classification of the six VLS categories by each proficiency group

Year	Discovery Determination	Discovery Social	Consolidation Social	Consolidation Memory	Consolidation Cognitive	Consolidation Metacognitive
1LMD Freshers	3.03	2.43	2.50	2.70	2.66	3.06
1LMD	3.06	2.33	3.49	2.89	2.41	2.15
2LMD	2.97	2.67	2.39	2.82	2.76	3.15
3LMD	3.13	2.36	2.42	2.81	2.69	3.08

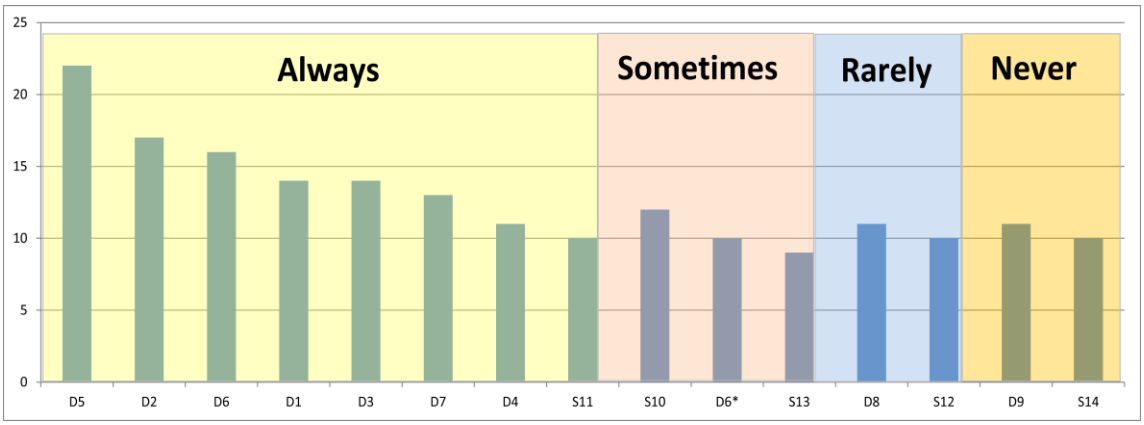
Table 5.20: Classification of the six VLS categories by each proficiency group (Comparison)

As shown on the graph above, the tendency in terms of category preference is almost the same for the 1LMD Freshers, 2LMD and 3LMD groups, while the 1LMD group has a different curve. For the low-intermediate, intermediate and advanced levels, the most frequently used VLS are the Determination and Metacognitive strategies, while the Memory and Cognitive strategies are moderately used, and the Social categories the least frequently used. However, the first-year group has a preference mainly for Consolidation social strategies, and unlike the other groups, the Metacognitive strategies are at the bottom place of the six categories. Apart from these two categories, the other four categories seem to follow more or less the same classification as the other samples.

After determining the behaviour of the participants in terms of the six categories of VLS, the purpose of the next section of this chapter is to have a more qualitative analysis of their preferences in regard to their individual strategies. As such, the VLSQ results were analysed for each proficiency level trying to classify the individual strategies use.

5.3.1 Results of the VLSQ obtained by the 1LMD Freshers group:

As the VLSQ was based on and adapted from Schmitt (1997)'s taxonomy of VLS, it used exactly the same classification of the different strategies, and therefore the same distinction between Discovery and Consolidation strategies. Given that the purpose of this sub-section is to analyse in detail the participants' preferences in terms of VLS use, it is important to keep the distinction between the strategies used when they do not know or understand a word (Discovery Strategies) and the ones they use to reinforce the word and retain it after discovering its meaning (Consolidation Strategies). The presentation of the results shown in Graph 5.6 below follows the same distinction for each group.

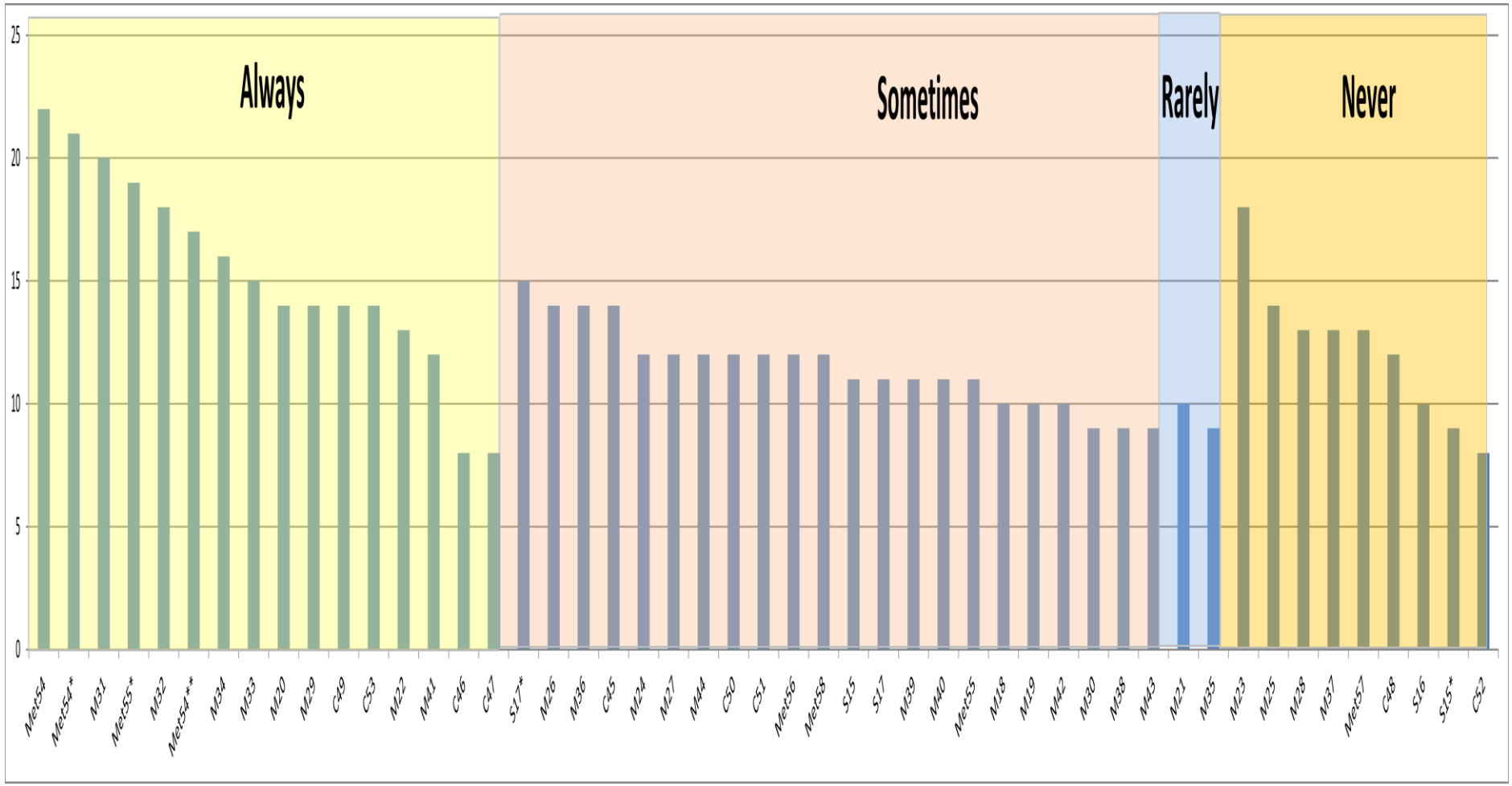


Graph 5.6: Classification of Discovery Strategies based on students' preference (1LMD Freshers)

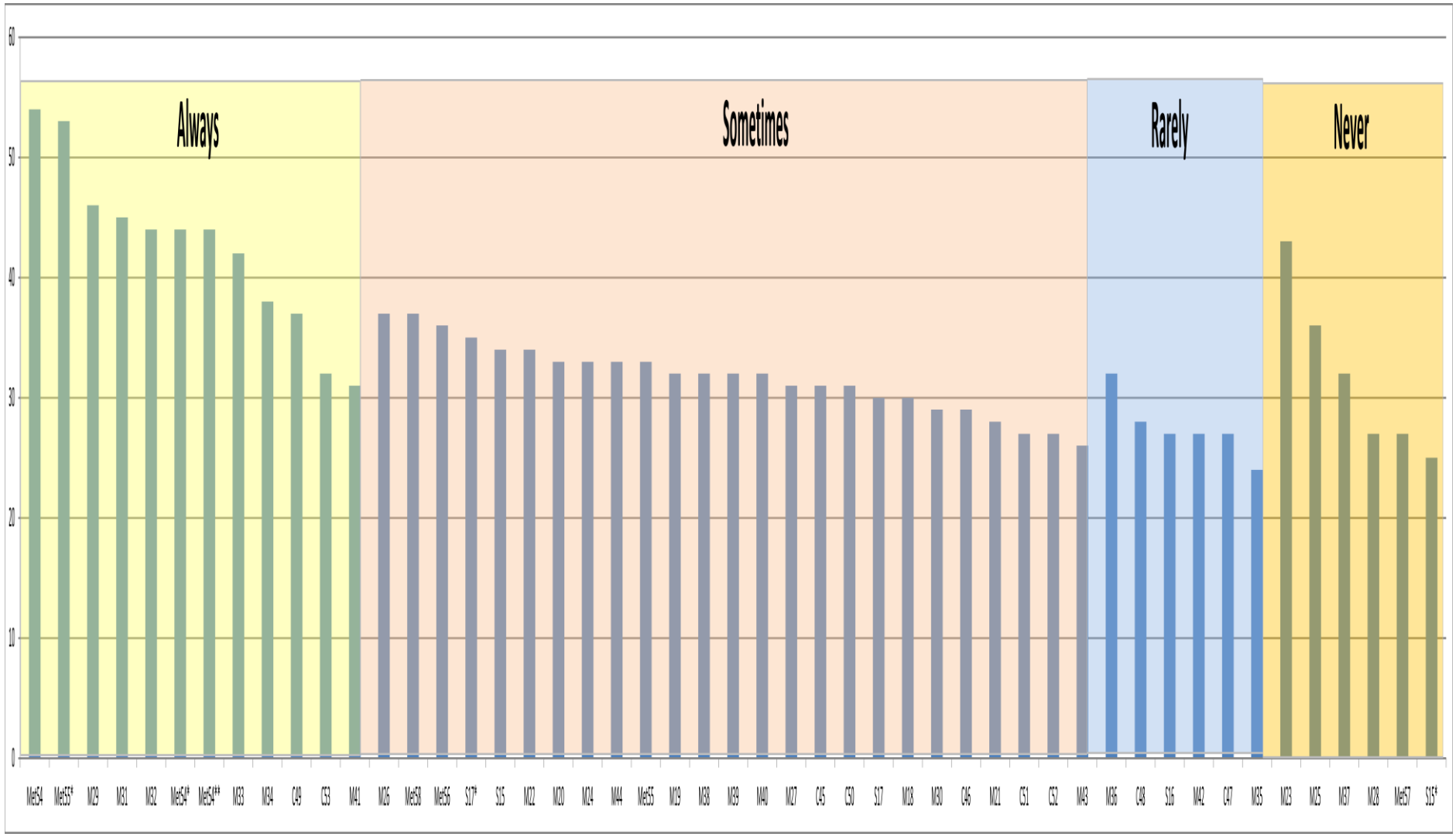
As shown on the graph above, the most frequently used discovery strategies are in majority determination strategies, while only a couple of them are social. The strategy that was reported to be used the most often by the majority of participants is the determination strategy involving guessing the meaning of

unknown words from the context they appear in (D5). Other strategies involving using contextual clues are also among the most preferred ones, such as analysis of parts of speech (D1) or taking into consideration pictures or gestures to guess meaning of words (D4). Besides, determination strategies counting on translation are also reported to be often used by the participants; they include the use of dictionaries (D6 and D7) as well as checking L1 cognate (D3). The strong reliance on translation as a source to discover the meaning of unknown words is also reflected in the use of the social strategies implying asking the teacher for synonyms (S11) or for translation into L1 (S10).

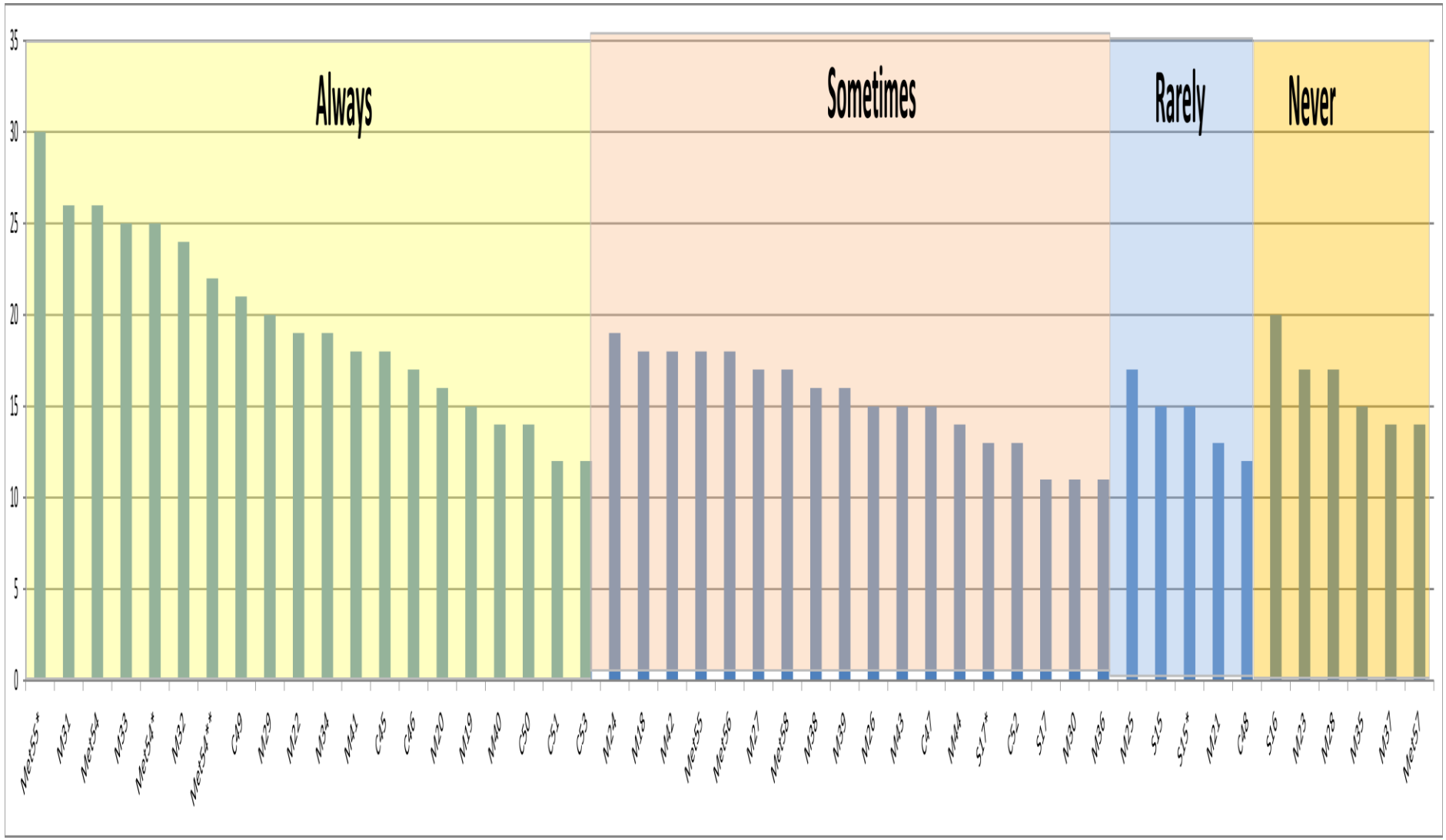
As shown on graph 5.10 below (on the next page), concerning consolidation strategies, the first two most frequently used strategies are both related to multimedia. Indeed, no less than 21 participants out of 30 mentioned using language media in general (Met 54) and using internet in particular to search for information related to vocabulary (Met 54*). The use of the internet to communicate in English via emails or social networks also appears in a good position in the order of preferred VLS (Met 54**). Given that the average age range of the participants in this group is around 19, the use of these metacognitive strategies confirms the general assumption that young adults heavily rely on multimedia tools to improve and reinforce their learning. Moreover, strategies involving the memorization of the form of a word (spelling, sound, image) were reported to be frequently used (M31, M32, and M34). Other memory strategies were also often used, especially the ones involving connecting the word to memorize with personal experience (M20), to synonyms (M22), or to a French cognate (M41). Among the strategies reported to be “always” used by the participants, the vast majority are memory strategies. The only two cognitive strategies that appear in this ranking are both related to the use of vocabulary notebooks to consolidate lexical knowledge (C49, C53).



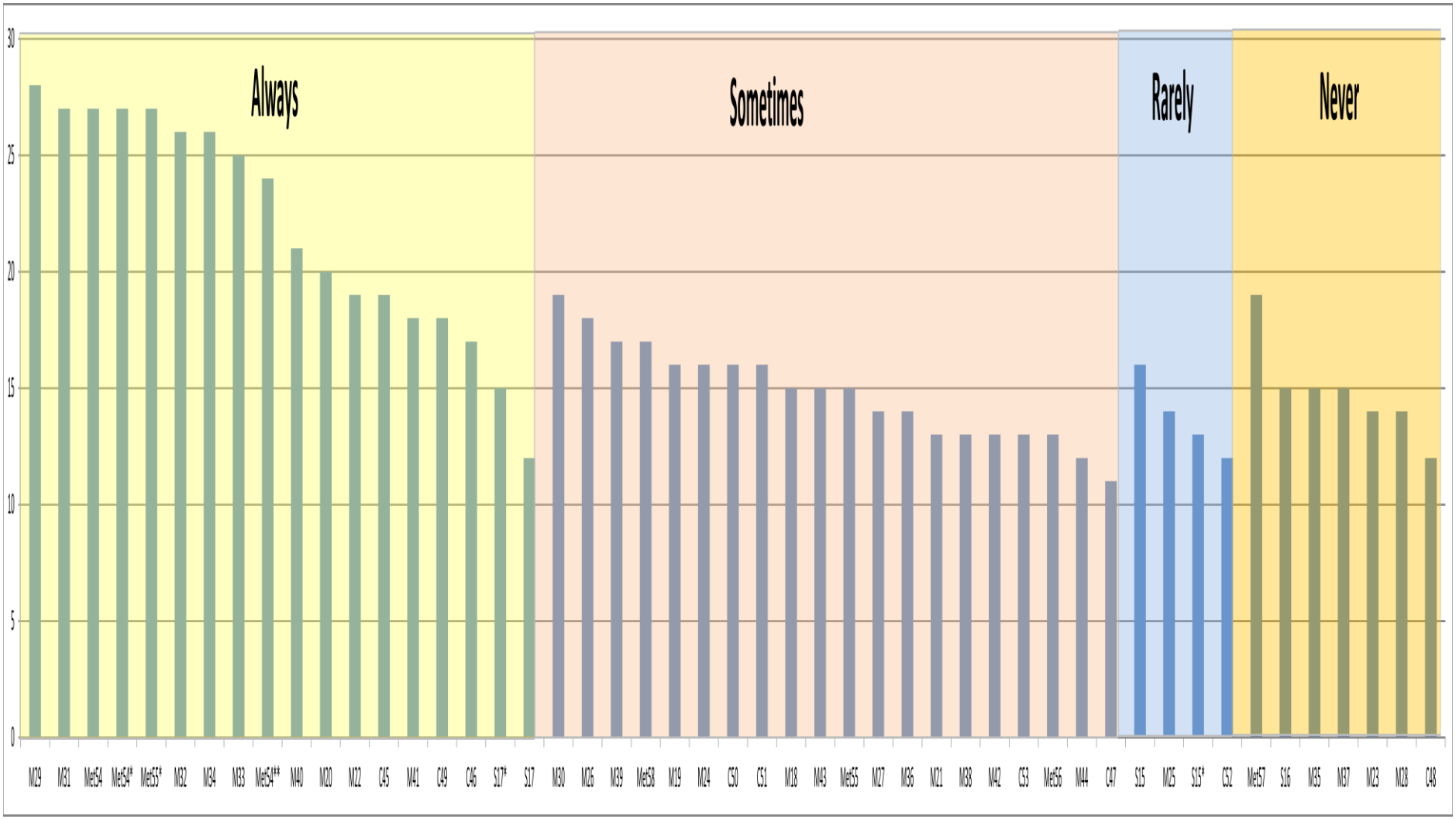
Graph 5.10: Classification of Consolidation Strategies based on students' preference (1LMD Freshers group)



Graph 5.11: Classification of Consolidation Strategies based on students' preference (1LMD group)



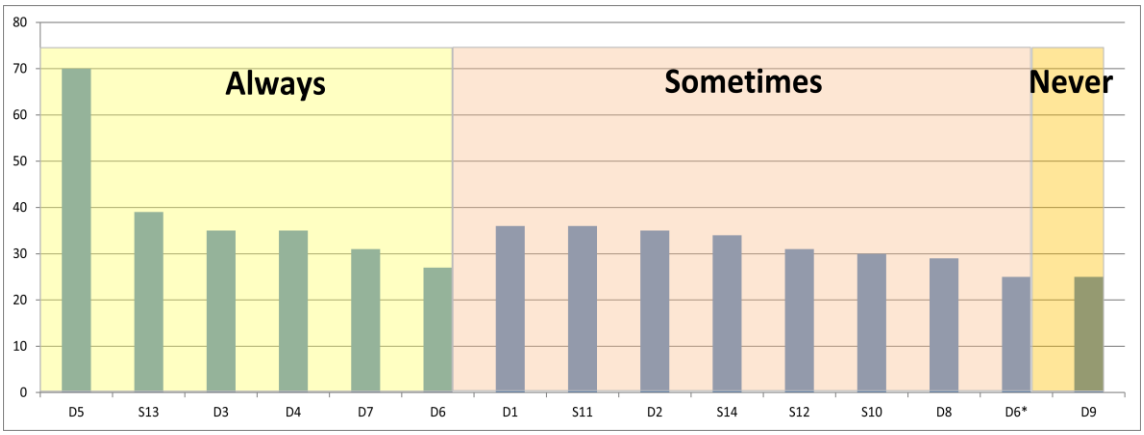
Graph 5.12: Classification of Consolidation Strategies based on students' preference (2LMD group)



Graph 5.13: Classification of Consolidation Strategies based on students' preference (3LMD group)

5.3.2 Results of the VLSQ obtained by the 1LMD group

Out of the 81 participants included in the first-year group, no less than 70 declared “always” using the determination strategy of guessing from context to discover the meaning of unknown words. Looking at Graph 5.7 below, the discrepancy between the first position of this strategy (D5), and the ranking of the next strategies is quite significant; also compared to the 1LMD Freshers group for whom the use of the D5 strategy was more or less equivalent to other determination strategies on graph 5.6. The significant preference of this guessing strategy among the 1LMD group might be explained by the fact that the Reading/Writing module during this first year of the program heavily focuses on the teaching of reading strategies, and most students are usually encouraged by the teachers to use guessing from context to overcome lexical difficulties and develop autonomous reading comprehension skills. Besides, the social strategies involving asking help of classmates (S13) or asking the teacher to paraphrase unknown words also appear in good position. However, for this group again, the vast majority of the preferred discovery strategies were from the determination type. The use of translation techniques to understand unknown words was also frequently used, as many participants mentioned checking L1 cognate (D3) or using a dictionary (D6) as a technique for comprehension.



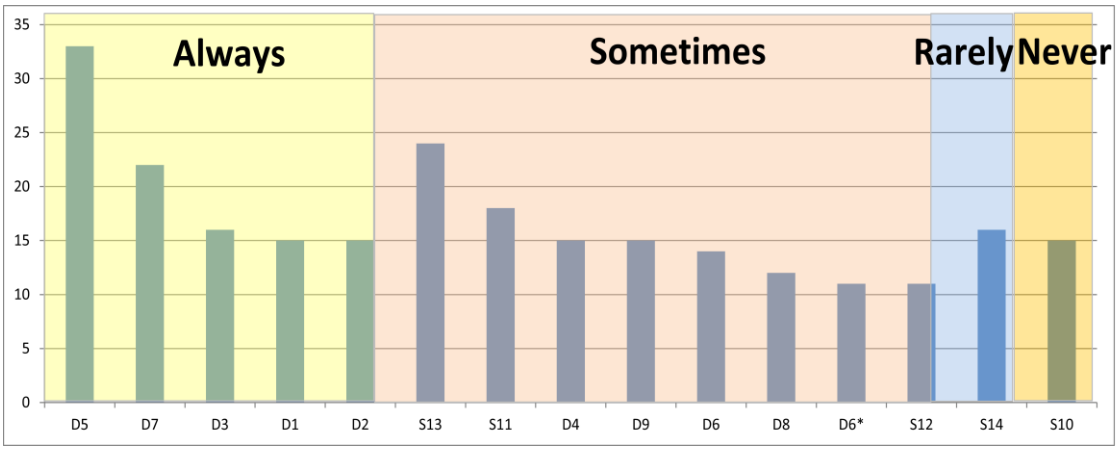
Graph 5.7: Classification of Discovery Strategies based on students’ preference (1LMDgroup)

As for the consolidation strategies, Graph 5.11 above shows again that this 1LMD group also count on multimedia tools such as songs, movies, and most importantly internet to consolidate the meaning of words (Met54, Met 54*, Met54**).

Besides, learning words from mistakes made in test and exams is also a metacognitive strategy that is placed in the second most preferred position (Met 55*). The fact that most students in the English department are heavily test and exam-driven is certainly something most teachers would agree on. Thus, the correction of mistakes, including vocabulary mistakes, given after exams seems to be a successful strategy frequently used by the students to reinforce their lexical knowledge. There are also many memory strategies reported by the participants of this group, such as the ones involving studying the written, aural or visual form of the word (M31, M32, M34), or even using these forms to remember the word through saying it aloud (M33) or using it in a sentence (M29). For this group, the only two cognitive strategies that are reported to be frequently used are the ones implying taking notes in a notebook during the class (C49), and keeping a record of learned words (C53).

5.3.3 Results of the VLSQ obtained by the 2LMD group

The students enrolled in the second year of the LMD program have access to a large amount of content information, as the focus in this year is no longer on language mechanics but rather on developing autonomy and critical thinking, as well as on consolidating acquired knowledge. When facing new vocabulary, almost all the participants in this group (33 out of 37) state using guessing from context as their most frequently used discovery strategy. This is no surprise though, since it is the case also for the BAC and 1LMD samples. Other determination strategies involving guessing were also used, such an analyzing part of speech (D1), and studying affixes and roots (D2). For this group too, translation had a good place in the ranking, together with the determination strategies of dictionary and L1 cognate use, as well as the social strategy of asking the teacher for synonym.



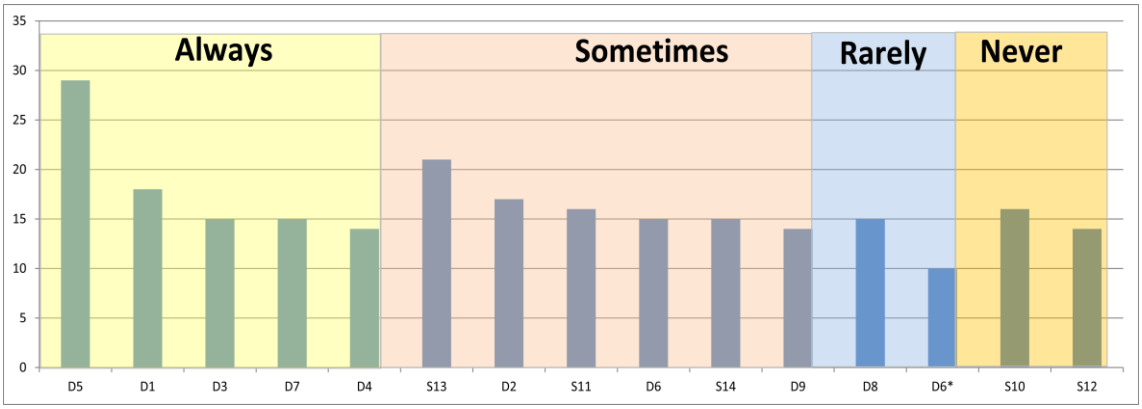
Graph 5.8: Classification of Discovery Strategies based on students' preference (2LMD group)

The consolidation strategy profile (Graph 5.12) of the participants of this 2LMD group have many similarities with the profile of the 1LMD group, as the first most preferred strategy is the metacognitive technique implying learning from lexical mistakes made in previous tests and exams. Besides, the same preference of multimedia-related strategies is observed, as well as the use of memory strategies involving the analysis of the different written and aural forms of the words (M31, M32, M33, M24). However, there are a couple of cognitive strategies that appear in the ranking of this group but not in the previous two samples. These cognitive strategies are both related to the use of repetition – verbal or written – to reinforce lexical knowledge (C45, C46).

5.3.4 Results of the VLSQ obtained by the 3LMD group

Even though the distinction between the two streams of the 3LMD sample (Linguistics/Anglo-Saxon Studies) was made regarding the results of the Vocabulary Size Test, this distinction was not accounted in this section dealing with VLS use. In fact, while the VST scores showed a difference among Linguistics and Anglo-Saxon Studies students, it appeared from the preliminary analysis of the results of the VLS used by 3LMD that there were no significant differences between the two streams. Thus, it was decided to consider this sample as homogeneous at this stage of the analysis.

To confirm the tendency observed in the previous three proficiency levels, the 3LMD group also declared using guessing from context as the most frequent discovery strategy. Moreover, the same preference for translation-related techniques was also set up, with strategies of dictionary use and checking for resembling cognate in the mother tongue (D3, D7). Analysis of the parts of speech (D1) or the visual clues provided by pictures and body language (D4) also appeared in a good position of preferences.



Graph 5.9: Classification of Discovery Strategies based on students' preference (3LMD group)

In terms of consolidation strategies, Graph 5.13 in a previous page shows that the preferences of this 3LMD group have many similarities with the preferences of the other samples. Indeed, we find equilibrium in the top part of the students' ranking between multimedia-related metacognitive strategies and word form memorization strategies. Besides, participants of this group seem also to connect the words with their synonyms, antonyms, L1 cognates, or to personal experience to reinforce their memorization. (M20, M22, M41). Much like the 2LMD group, the advanced group of 3LMD declared using the strategies of verbal or written repetition as cognitive strategies to fix word knowledge (C45, C46). The only consolidation strategy that was mentioned as highly frequent by this group exclusively was the memory strategy of paraphrasing word meaning and putting it in their own words for a better memorization (M40). The use of this last strategy by this group, and not by the other proficiency groups, might indicate that these students have become slightly more proactive in developing their own

cognitive references instead of simply counting on direct translation for instance, especially during their final year of the degree course.

5.3.5 Comparison between the VLSQ results of the four sample groups

Having looked at the participants' preferred order of VLS at each proficiency level individually, it is then important to compare between the four sample groups to see whether there are any significant differences in VLS use that might explain variation in vocabulary size. In order to compare between the VLSQ of the four sample groups, a top-ten classification of the most frequently used VLS was set up. The ranking was based on the number of participants who chose each strategy.

As the purpose in this section is to get a global picture of the VLS use of the whole population of the present study, the distinction between discovery and consolidation strategies was not accounted for in the ranking. The top-ten classification is presented in the following tables: Table 5.11 to 5.14.

Rank	Strategy Description	Category	Item number	Frequency	Number
1	Guess from textual context	Determination	D5	Always	22
2	Use English-language media (songs, movies, newscasts, etc.)	Metacognitive	Met54	Always	22
3	Use English internet regularly to search for information using English language	Metacognitive	Met54*	Always	21
4	Study the spelling of a word	Memory	M31	Always	20
5	Learn words from tests/exams (I learn from my mistakes)	Metacognitive	Met55*	Always	19
6	Study the sound of a word	Memory	M32	Always	18
7	Analyze affixes and roots	Determination	D2	Always	17
8	Use English internet regularly to communicate with friends using English language (eg: emails, social networks…etc)	Metacognitive	Met54**	Always	17
9	Look for the word's meaning in a bilingual dictionary (eg: English – French dictionary)	Determination	D6	Always	16
10	Image word form	Memory	M34	Always	16

Table 5.11: Top-10 of the most frequently used VLS among the 1LMD Freshers

Rank	Strategy Description	Category	Item number	Frequency	Number
1	Guess from textual context	Determination	D5	Always	70
2	Use English-language media (songs, movies, newscasts, etc.)	Metacognitive	Met54	Always	54
3	Learn words from tests/exams (I learn from my mistakes)	Metacognitive	Met55*	Always	53
4	Use new word in sentences	Memory	M29	Always	46
5	Study the spelling of a word	Memory	M31	Always	45
6	Study the sound of a word	Memory	M32	Always	44
7	Use English internet regularly to search for information using English language	Metacognitive	Met54*	Always	44
8	Use English internet regularly to communicate with friends using English language (eg: emails, social networks…etc)	Metacognitive	Met54**	Always	44
9	Say new word aloud when studying	Memory	M33	Always	42
10	Ask classmates for meaning	Social	S13	Always	39

Table 5.12: Top-10 of the most frequently used VLS among the 1LMD group

Rank	Strategy Description	Category	Item number	Frequency	Number
1	Guess from textual context	Determination	D5	Always	33
2	Learn words from tests/exams (I learn from my mistakes)	Metacognitive	Met55*	Always	30
3	Study the spelling of a word	Memory	M31	Always	26
4	Use English-language media (songs, movies, newscasts, etc.)	Metacognitive	Met54	Always	26
5	Say new word aloud when studying	Memory	M33	Always	25
6	Use English internet regularly to search for information using English language	Metacognitive	Met54*	Always	25
7	Study the sound of a word	Memory	M32	Always	24
8	Use English internet regularly to communicate with friends using English language (eg: emails, social networks…etc)	Metacognitive	Met54**	Always	22
9	Monolingual dictionaries	Determination	D7	Always	22
10	Ask classmates for meaning	Social	S13	Sometimes	24

Table 5.13: Top-10 of the most frequently used VLS among the 2LMD group

Rank	Strategy Description	Category	Item number	Frequency	Number
1	Guess from textual context	Determination	D5	Always	29
2	Use new word in sentences	Memory	M29	Always	28
3	Study the spelling of a word	Memory	M31	Always	27
4	Use English-language media (songs, movies, newscasts, etc.)	Metacognitive	Met54	Always	27
5	Use English internet regularly to search for information using English language	Metacognitive	Met54*	Always	27
6	Learn words from tests/exams (I learn from my mistakes)	Metacognitive	Met55*	Always	27
7	Study the sound of a word	Memory	M32	Always	26
8	Image word form	Memory	M34	Always	26
9	Say new word aloud when studying	Memory	M33	Always	25
10	Use English internet regularly to communicate with friends using English language (eg: emails, social networks…etc)	Metacognitive	Met54**	Always	24

Table 5.14: Top-10 of the most frequently used VLS among the 3LMD group

As shown on the four tables displayed above (from Table 5.11 to Table 5.14), among the four sample groups, the similarity between the classifications is significantly noticeable. Indeed, when looking at the 10 most frequently used VLS – Discovery and Consolidation strategies together – one can notice that no less than six strategies are common to all four proficiency levels (D5, Met54, Met54*, Met54**, M31, M32). Moreover, there is also more significant resemblance in the VLS used between the 1LMD Freshers and 1LMD samples (7 strategies), between the 1LMD and 2LMD samples (9 strategies), and between the 2LMD and 3LMD samples (8 strategies). In other words, among the ten VLS reported by the participants to be the most frequently used, the 1LMD Freshers group and the 1LMD group share no less than 7 strategies. These similarities in the nature of the VLS used by these two samples is quite surprising, given that there was a clear difference in the number of strategies used as demonstrated earlier in table 10 above. Indeed, the newly enrolled BAC students declared using an average of 28 VLS out of the 68 of the questionnaire, while the 1LMD participants reported using 43 strategies. If the significant discrepancy between 28 and 43 VLS could possibly reflect an evolution in terms of awareness of strategy use from the low-intermediate to the pre-intermediate levels, the fact that these two groups had no less than seven VLS in common seems to imply that there is a very limited evolution in terms of the nature of the VLS used. The resemblance in the VLS of the top-10 classification is even higher between the 1LMD and the 2LMD samples, as they share nine strategies out of ten. This means that apart from the Memory strategy implying using a new word in a sentence (M29) mentioned by the 1LMD group, or the Determination strategy involving use of monolingual dictionaries (D7) of the 2LMD group, all the other nine strategies of the top-10 are identical. The participants of the last two years of the degree course, 2LMD and 3LMD, also share no less than eight preferred VLS.

Comparing the top-10 classification of the most frequently used VLS among the whole population of the present study implies that there was a non-significant evolution in terms of nature of vocabulary strategies use from the low-

intermediate to the advanced levels of the undergraduate course. Indeed, even if each year of the degree course was supposed to provide the students with new learning tools to evolve and improve their learning process, in terms of VLS use, most participants of the study seem to have kept the same learning behaviours and have the same preferred vocabulary learning strategies. However, as shown in section 2 of this chapter, there was a moderate difference in the vocabulary size of the same participants from Year 1 to Year 2. The main goal of the present study being to establish a possible correlation between vocabulary size growth and VLS use, one can question the degree of influence that VLS use had on the growth of vocabulary size, and whether there are other variables that might have influenced this growth.

However, before investigating this relationship, it would be interesting to look at the results of the Vocabulary Learning Open-ended Questionnaire (VLOQ) in order to complement the findings of the previous close-ended VLSQ and get a broader picture of the vocabulary learning profile of the participants as well as of other aspects that might have influenced their vocabulary size growth, besides VLS use. This aspect is presented in the next chapter, together with analysis of the correlation between all the results of the present work.

Conclusion

The purpose of this chapter was to present in detail the results obtained from the two first data collection tools of the present study. The constructs of vocabulary size and vocabulary learning strategies were analysed both quantitatively and qualitatively. The analysis of the constructs was first made at the level of each of the four sample groups individually then compared among the whole population. The data from the third tool are presented and analysed in the next chapter to complement the results described above. Moreover, as the major aim of the present study is to investigation the possible correlation between vocabulary size and VLS use at the different stages of the LMD undergraduate course, a thorough comparison is therefore set up among the four

samples of the study before a more focused investigation could be made with only high proficiency participants.

CHAPTER SIX

Presentation and Analysis of Results: Vocabulary Learning & Correlation between vocabulary size and VLS

Introduction 183

Section One:
6.1. Analysis of the Vocabulary Learning Open Questions (VLOQ) 183
6.1.1 Other VLS mentioned by the participants 184
6.1.2 Vocabulary and language skills 188
6.1.3 Vocabulary and other courses 192
6.1.4 Vocabulary instruction in the curriculum 195
6.1.5 Vocabulary Learning Difficulties 197
Section Two:
6.2. Correlation between vocabulary size growth and VLS use 201
6.2.1 Correlation between the VST and the VLSQ for the 1LMD Freshers…….....203
6.2.2 Correlation between the VST and the VLSQ for the 1LMD group..205
6.2.3 Correlation between the VST and the VLSQ for the 2LMD group..206
6.2.4 Correlation between the VST and the VLSQ for the 3LMD group..208
6.2.5 Correlation between the VST and the VLSQ for the High proficiency students among the four samples.....210

Conclusion …….217

Introduction

This chapter presents a qualitative analysis of the participants` overall vocabulary learning preferences and difficulties drawn from the third research instrument. It then describes in detail the correlation between the two constructs under study, i.e., vocabulary size and VLS use, by comparing the results obtained from the two first research instruments described in the previous chapter.

This Chapter is therefore divided into two sections. First, a presentation of the answers to the Vocabulary Learning Open Questionnaire (VLOQ) is set up, analysing the subjects' retrospective thoughts about their own vocabulary learning objectives, preferences, instruction and difficulties. Students' responses are analysed and categorised and statistical frequencies of these answers are drawn. The results of the open-ended questionnaire are believed to provide useful insights as the participants in this questionnaire were given freedom in expressing their thoughts regarding their overall vocabulary learning process. Thus, their self-reflection on their own vocabulary learning process was aimed to complement the previous quantitative results described in the previous chapter, with a more qualitative perspective.

Second, results obtained from the VST and the VLSQ are superposed and analysed in order to draw any possible causal relationship between these two constructs and identify the tendency of vocabulary strategies use as the vocabulary size of the participants grows.

Section One:

6.1 Results of the Vocabulary Learning Open-ended Questionnaire (VLOQ)

After the analysis the VST and the VLSQ in the previous chapter, the final step of the data analysis procedure consists in analysing seven open-ended questions (Appendix 3, Part C) regarding vocabulary learning in general. The participants were asked seven questions that gave them the opportunity to express their thoughts about various vocabulary-related aspects that might have not been covered in the previous instruments. Labelled as Part C in the VLSQ (Appendix

3), these questions aimed at exploring the retrospective thoughts of the participants regarding their own vocabulary learning preferences and difficulties.

The assumption of applied linguistics' researchers is that the personal beliefs of learners regarding the FL learning process can somehow influence the learning strategies they use (Horwitz 1988, Wenden 1999). Thus, these open-ended questions aimed at gathering the participants' views about a number of aspects in relation to their overall vocabulary learning, such as the techniques they use, their preferences in terms of courses and skills providing vocabulary learning opportunities, the way vocabulary is taught in the English Department, as well as their feelings about what causes them difficulties when learning new words. This open-ended questionnaire was believed to provide useful insights regarding the participants' awareness of their own vocabulary learning process and shed light on other elements, apart from the VLS, that might influence their vocabulary size growth in particular. The results in this section are presented following the order of the questions handed to the participants.

6.1.1 Other VLS mentioned by the participants

To complement the VLS questionnaire, the first question of the open-questionnaire, ie, "*I use other techniques/strategies that do not appear in the table above, for example...*", gave the participants the possibility to add any vocabulary-related strategy they could think about and that was not mentioned in Schmitt's taxonomy. The purpose was to find out whether there were any other techniques that the participants used to improve their understanding and retention of vocabulary items and therefore to increase their vocabulary size. Moreover, the aim was to check whether their added suggestions concord with the preferred strategies they reported to use in the VLS questionnaire in the previous section of the chapter. Their various answers were categorized by the researcher to fit into Schmitt's categorization of VLS, and are shown on Table 6.15 below.

As shown on the table, the strategies that some participants added fit within Schmitt's taxonomy, and they have been categorised by the researcher according to the characteristics of the different categories of the taxonomy.

VLS category	Participants examples
Determination Strategies	- Use dictionary on cell phone - Search for new words' meaning on Google - Search meaning of words heard in movies and videos or read in books - Make a list and record new words on the cell phone - Read a novel, make a list of unknown words then translate them
Memory Strategies	- Remember English words which have a near meaning or form to French - Remember new words of the day just before going to sleep - 3 or 4 hours after learning a new word, try to remember it to check if it is memorized or not. - Remember where and when the word was said - Talk to mirror aloud/ utter the words aloud - Use a visual dictionary with pictures - Try to link the word to a topic and practice it orally aloud
Cognitive Strategies	- Write the new word many times on paper - Write the new word on the hand - Repeat the new word - Learn by heart
Metacognitive Strategies	- Search translation of favourite songs - Keep the computer and the cell phone in English language - Write about personal feelings - Use English learning applications on the cell phone - Watch movies with subtitles - Listen to audio books while doing domestic activities or driving

Table 6.15: Vocabulary Learning Strategies added by the subjects

The determination strategies mentioned by the participants are all close to Schmitt's description, as they mostly relate to the discovery of unknown words' meaning through L1 cognate or word lists. For instance, the use of translation as a technique to guess the meaning of words was dominant among the participants who answered this question. However, unlike in Schmitt's taxonomy, this technique reported by the participants was heavily related to technological devices such as the cell phone, internet, or multimedia supports. Given that most cell phones used by young adults are smart phones with installed dictionaries applications, the participants reported using these dictionaries quite often. The use of other multimedia devices was also reflected in the example of the use of Google as a research engine to look for meaning of new words. Moreover, some participants reported searching the meaning of words they heard in movies, videos or books. Beside the use of L1 cognates as a word determination technique, participants also mentioned making word lists and recording them on their cell phones.

These technology-related techniques confirm the results of the VLS in the previous section of the chapter, showing the participants' tendency to count on multimedia devices as important vocabulary-related aids, as well as their strong reliance on translation-related techniques to understand word meaning.

The strategies added by the participants that were categorised by the researcher as Consolidation Strategies fitted with three categories of Schmitt's taxonomy, namely Memory, Cognitive and Metacognitive strategies.

The memory strategies ranged from those involving connection of words to cognates to remember them, to those relating the words to retain to personal experience, contextual topic, or to their pictorial representation. Moreover, some participants mentioned saying the new words aloud as a technique to consolidate its meaning; giving the example of pronouncing the words in front of the mirror. In a foreign language environment where oral practice and interaction in the FL are quite limited, self-talk could be used as a strategy to practice the spoken form of words for better memorization. However, apart from those memory strategies

added by the participants and that fit with the taxonomy of Schmitt, there was also the mention of another technique not stated by Schmitt. Indeed, some participants reported using a sort of post-memorization; i.e., trying to remember the new words to retain after a while – before going to sleep, or a few hours after having learned the word – in order to test their memory of these new words.

Some strategies added by the participants where categorised as cognitive strategies as they all related to either repetition or use of mechanical techniques to consolidate the meaning of words (Schmitt 1997). Both verbal and written repetitions of words were stated by the participants, with a special example mentioning writing the new word to remember on one's hand. Besides, rote-learning vocabulary to retain it was also added as a cognitive technique for consolidation.

Participants' suggestions relating to any control of their own learning were categorised as metacognitive strategies. Within this category, the use of multimedia devices was dominant in participants' answers. Indeed, many reported using English learning applications on their cell phones, watching movies with subtitles, translating favourite songs, or listening to audio books as techniques to control and be proactive in their vocabulary learning process. Giving the obvious common use of cell phones and computers among many young adults nowadays, some participants also reported keeping their computers or phones in English, possibly to provide another source of vocabulary input in a FL environment like Algeria in which most of these devices are usually set in French or Arabic. These answers confirm the strong reliance on multimedia devices that were noticed in the results of the VLS questionnaire mentioned in the previous chapter, as these strategies were among the most frequently used (in the top-ten) among the participants of all four proficiency levels of the present study.

When looking at the results obtained from this first open-ended question, one can say that most of the strategies that were added by the participants fit perfectly with the strategies they reported to use in the VLSQ. Indeed, the results

of the VLSQ (in previous chapter) demonstrated that the most commonly used discovery strategies were almost all determination strategies involving the use of contextual clues or translation, a tendency which can be confirmed when looking at the sort of determination techniques added in Table 6.15 above. Moreover, among the four sample groups, the VLSQ revealed that the most frequently used consolidation memory strategies reported do concord with the memory strategies in Table 15, as they relate to dictionary use, relating meaning to personal experience or L1 cognate as well as aloud repetition of the words. As can be observed in Table 15, the cognitive strategies added by the participants also fit with the ones they reported to use frequently in the VLSQ, namely the ones relating to verbal/aural repetition. Another major resemblance between the results of the VLSQ and the answers to the first open-ended question is the fact that all the metacognitive strategies added by the participants confirm their tendency to count on multimedia devices such as the computer, cell phone, movies...etc, as well as their reliance on translation as a way to consolidate meaning of words encountered in songs or movies.

The fact that most participants of the present study reported using multimedia devices as a way of improving their understanding and consolidation of vocabulary might be an indicator of another source of input that could have a role in the growth of their overall vocabulary size. In other words, being in a FL environment in which exposure to the target language is limited to the classroom, the participants seem to be keen on using multimedia resources as other sources of input to gain more vocabulary, which can also reflect some autonomy on the part of the students.

6.1.2 Vocabulary and language skills

The purpose of the second open-ended question, ie, *" Which language skill gives you better opportunities to learn vocabulary in English?"*, was to determine the participants' awareness and preferences in terms of language skills to provide better vocabulary learning opportunities. Thus, they were required to choose among the four EFL skills of Reading, Writing, Speaking and Listening, and to

explain their choice. The participants had the possibility to choose more than one skill. Their answers are categorized in Table 6.16 below.

Skills giving more vocabulary –learning opportunities	1LMD Freshers	1LMD	2LMD	3LMD	Total
Reading	N=11 **36%**	N=39 **48%**	N=19 **51%**	N=17 **47%**	N=86 **46%**
Listening	N=11 **36%**	N=30 **37%**	N=13 **35%**	N=10 **28%**	N=64 **35%**
Speaking	N=10 **33%**	N=18 **22%**	N=13 **35%**	N=12 **33%**	N=53 **28%**
Writing	N=6 **20%**	N=5 **6%**	N=4 **11%**	N=10 **28%**	N=25 **13%**

Table 6.16: Students' preference in terms of language skills leading to vocabulary learning

As shown on Table 6.16, most participants consider that the receptive skills of reading and listening provide them with much more opportunities to learn vocabulary than the productive skills of writing and speaking. Indeed, no less than 46% of the whole population view reading as the most resourceful language skill to provide them with vocabulary input. This trend was also reflected in the comment of a participant who stated that "there is always opportunity to learn new words in a book". The students' preference of the reading skill is possibly related to the fact that the vocabulary items in a written text are certainly more accessible than in a spoken text. Statements such as "you can deal with the text as much as you need" or "it allows me time to write new words on my note book" indicate that most participants value the fact that reading a text provides a unique

opportunity to read the words as many times as needed and to check their meanings before moving on with reading the rest. Another positive aspect that this receptive skill was believed to offer, is the fact that the unlimited accessibility of the written text also allows the participants to see and memorize the written form of the lexical items. There are a number of comments focusing on the fact that "you see how new words are spelled" and therefore “avoid written mistakes". One needs also to mention that all the research instruments of the present study were presented to the participants in written form. Thus, they were required to read the items of the VST and select the correct written definition of each vocabulary item, to read then tick the VLS used in the VLSQ, as well as to read the open-ended questions of the VLOQ before answering them. As such, the fact that the test of the study comprised written input only might also have led them to choose the reading skill as the first vocabulary input provider in this question.

Besides reading, the listening skill was also viewed as a major source of vocabulary learning, with about 35% of the whole number of participants considering it as an important vocabulary input provider. Some participants felt that learning and memorizing the spoken form of the vocabulary items was more effective; this idea is reflected in statements such as "when I hear a word I remember it". The fact that some learners might be more inclined to remember what they hear than what they read is certainly related to their personal learning styles and preferences. Given that all the participants of the present study are young adults, it seems from the results of the VLS questionnaire in the previous chapter that many of them used songs as a source of learning. Indeed, from some comments, it appears that to “listen to music and search for meaning of lyrics" is fun and a useful way to learn new vocabulary items outside the classroom setting.

Considering the whole population of the study, the productive speaking skill came in the third position in terms of preferences, with 28% of the participants overall mentioning it as an interesting source for vocabulary learning. However, when looking at the results of the four sample groups individually, we notice that

there is a slight difference between them. In fact, for the 1LMD Freshers and the 1LMD groups, the speaking skill is viewed as less resourceful than the previously mentioned receptive skills. Statements such as "When I want to say something and I don't know how to say it I go and check in dictionary" show that some of these participants may have an unrealistic conception of the speaking skill, neglecting the fact that it is usually a here-and-now skill that does not allow for time to check in a dictionary. Such comments could also be explained by the fact that 1LMD Freshers and 1LMD learners are believed to be at the beginning of their English study, and therefore do not have the sufficient language proficiency to make use of the speaking skill in an effective way that would provide vocabulary learning opportunities. However, for the groups of 2LMD and 3LMD, the speaking skill was in the same preference position as the listening skill and was even slightly above listening for the advanced group. These participants justified their choice saying that "the spoken form of language is clearer than the written form". In the second and third year of the English degree course, the students are supposed to have an adequate mastery of the spoken form of the language to enable much more aural/oral practice than the two previously mentioned groups. At this stage of the learning process, pronunciation and fluency seem to be a key element to develop for these participants, as some of them said that the speaking skill “helps pronunciation" and therefore reinforces spoken vocabulary learning.

The language skill that received the least focus and was considered as not providing a lot of vocabulary learning opportunities is the other productive skill of writing. Only 13% of the whole population sample view written expression as a source of vocabulary knowledge, and this last position is shared by all four sample groups whatever the proficiency level of the participants. In other words, most participants of the present study seem to focus highly on the receptive skills to receive vocabulary input, and do not consider written production as a way to reinforce productive vocabulary knowledge. The participants who mentioned the writing skill did not provide many comments to explain their choice, except one of them who said "I like writing paragraphs and translate them into Arabic". This

statement shows that this student seems to enjoy learning English vocabulary items through their Arabic translation.

Asking the participants to indicate the language skills that they believed provided the best vocabulary learning opportunities was aimed to shed light on their preferences in terms of input providers and possibly compare these preferences with the sort of vocabulary strategies they reported to use earlier in this chapter. When looking at this comparison, one can indeed find correlation between the skills they prefer and the strategies they use. For instance, the fact that most of them report to view the reading and listening skills as major vocabulary input providers might explain why their most frequently used discovery strategies were mainly related to guessing from context using textual clues, while the social strategies involving asking the teacher or classmates received less emphasis. Indeed, many participants indicated using multimedia devices as metacognitive aids to improve their vocabulary through the use of songs, movies, cell phone recording, etc, which confirms that they like to diversify their aural input resources when outside the classroom.

6.1.3 Vocabulary Learning and other courses

After asking them about the language skills they thought the most effective in developing their vocabulary knowledge, the participants were requested, in question 3, to choose between content and language courses as being the best vocabulary input providers. Throughout the three years of the English degree curriculum, the students are taught various language-focused courses such as grammar, phonetics, skills, etc, as well as a number of content-oriented subjects such as Literary Genres, Historical Landmarks, Linguistics, etc. If the focus during the first year of the degree curriculum is mainly on the language courses to provide the students with an appropriate foundation, both second year (consolidation year) and third year (specialisation year) comprise more content-related courses that encourage more diversified language production and analysis.

In the language courses of the first year, vocabulary is not taught directly or explicitly, but rather indirectly, and is integrated within the skills courses, i.e., Reading/Writing and Listening/Speaking. In the second and third years of the degree course, the students are expected to become more autonomous in terms of vocabulary learning as most courses in the second year, and all of them in the third year are content -oriented, which implies that vocabulary is an essential component that the students need to understand and internalize from various types of input and to learn independently. Besides, there is no direct vocabulary strategy training included in any LMD curriculum course; rather, the only strategies that are explicitly taught are reading strategies as students are exposed to this concept and its techniques in the Reading course of the first Year and are usually encouraged to use them in relation to vocabulary acquisition.

The purpose of asking the participants to express their preferences for specific courses was to determine whether they prefer explicit focus on vocabulary in the language courses, or rather implicit and context- varied sources of vocabulary that content courses can provide. As such, results were believed to provide useful insights about the possible evolution of the students' autonomy in terms of vocabulary learning and VLS development from the low intermediate level until the advanced level; it would also enable a comparison between the type of courses they prefer and the VLS strategies they reported to use in the previous section of this chapter.

Answers to question 3 are shown in Table 6.17 below:

	1LMD Freshers	1LMD	2LMD	3LMD	Total
Content Courses	N=16 **53%**	N=62 **76%**	N=27 **73%**	N=27 **75%**	N=132 **71%**
Language Courses	N=13 **43%**	N=22 **27%**	N=10 **27%**	N=9 **25%**	N=54 **29%**

Table 6.17: Students' preference in terms of courses leading to vocabulary learning

As shown on this table, the freshers who had just come from high school expressed a slightly higher preference for content courses (53%) than language courses (43%) as vocabulary providers. The EFL experience that these students get from the middle and high school is usually based on language and skills teaching, mainly reading and writing, as no content teaching is offered separately at that stage. Thus, the fact that the 1LMD Freshers in this study declared preferring content courses more than language ones while they did not receive any EFL instruction yet at university level was quite surprising. This preference might be based on other reasons, not necessarily related to EFL instruction. For instance, outside the classroom setting, most 1LMD Freshers declared in the VLSQ that they frequently use various multimedia sources of input as strategies to gain vocabulary on a variety of topics; these sources can possibly be movies or songs covering different subjects and thus providing diversified content.

For the three other sample groups of the study (1LMD/2LMD/3LMD), the percentages of preferences were almost the same. As shown on Table 6.17 above, most participants of these groups indicate preferring content courses to provide them with vocabulary learning opportunities with percentages ranging from 73 to 76%, while only 25 to 27% declared preferring language courses. Unlike the 1LMD Freshers group for whom the preference was not significant, from the first year of the degree course onward, the participants seem to have become more conscious about the richness that content courses can provide in terms of vocabulary. This consciousness can possibly also reflect a change in their autonomy as EFL learners. However, one has to recall that in the second year of the LMD course, most courses - and all of them in the third year - are content-oriented, which might explain why the participants declared content courses as their preference. Students are thus discovering new topics and learning new vocabulary in these courses.

However, when comparing the results of this open-ended question with those of the vocabulary size test and the VLS questionnaire, one can notice a difference. Indeed, on the one hand, the VLSQ revealed that the nature of VLS

used by the four sample groups is significantly identical since they all share more or less the same top-ten preferred strategies, while their preference between content and language courses differs from the low-intermediate level to the higher proficiency levels. It seems that the 1LMD Freshers have a slight preference for content instruction rather than language instruction, while this preference is much more significantly obvious for the other three sample groups but this had no real impact on the type of VLS used. On the other hand, such preference might explain the difference observed in terms of number of VLS used, as there was a significant jump from 28 VLS used for the 1LMD Freshers group, to 43, 44 then 39 VLS for the following groups, as mentioned in the previous section of this chapter (Table 5.10). This might indicate that preferring the content courses of Years 1, 2 and 3 raised the participants awareness of vocabulary strategies and led them to use a higher number, even though the nature of these strategies did not seem to evolve at all throughout these stages. Moreover, the results of the vocabulary size test showed a gradual jump in number of vocabulary items from the low-intermediate level to the advanced level. If this evolution was generally moderate, it was more significant when moving from Year 1 to Year 2, with a jump of 833 vocabulary gains, as shown on Table 5.9 in section two of this chapter. This could be explained by the fact that, as mentioned earlier, in Year 1 of the degree course, there is a heavy focus on language rather than content instruction, because it is a language foundation year. This might indicate that the 1LMD curriculum indeed contributed to the growth of vocabulary size from Year 1 to Year 2. This growth seems to be much less significant from Year 2 to Year 3 - with a jump of only 257 word items, given that the syllabuses of the last two years of the degree curriculum are content -oriented and knowledge- based.

6.1.4 Vocabulary instruction in the curriculum

As stated earlier, in the English degree program, there is no single course focusing on vocabulary learning only; rather the vocabulary component is being integrated within most of the language-related courses, especially in the Reading/Writing and Speaking/Listening classes in Year 1 and 2. In order to grasp

the participants' satisfaction and preferences in terms of vocabulary instruction, we asked them question 4 to know whether they preferred vocabulary to be taught explicitly in the curriculum, or not, one of the goals of the present study being to investigate the growth pattern of vocabulary building and VLS use of undergraduate students, , and to assess whether the English curriculum was actually helping them to enhance their lexical competence. Thus, asking them about their preferences in terms of vocabulary teaching was believed to add useful insights to the assessment of the English degree course by the students themselves; the aim was to determine their degree of satisfaction with the current curriculum content/vocabulary-wise and method/strategy-wise.

Participants' answers to this question are shown on Table 6.18 below.

Vocabulary to be taught explicitly	1LMD Freshers	1LMD	2LMD	3LMD	Total
YES	N=21 **70%**	N=57 **70%**	N=28 **75%**	N=30 **83%**	N= **136**
NO	N=2 **6%**	N=14 **17%**	N=6 **16%**	N=5 **13%**	N= **27**

Table 6.18: Students' preference in terms of vocabulary instruction

A significant majority of participants declared preferring the vocabulary component to be taught explicitly in the curriculum, with percentages ranging from 70 to 83% among the four sample groups. These results reveal that even at university level, where students are expected to be more autonomous in their EFL learning, most of them seem to believe that direct instruction of vocabulary is necessary and would rely on such method to increase their lexical repertoire.

6.1.5 Vocabulary Learning Difficulties

The aim of question 5 on vocabulary learning difficulties was to give the students an opportunity to voice their vocabulary problems in order to compare their retrospective thoughts with the vocabulary learning strategies they reported to use (VLSQ). There were many difficulties identified by the 184 participants and a number of possible solutions were suggested by them. The results are categorized and shown in Table 6.19 below, and classified from the most to the least frequently mentioned difficulty - the figure in bold on the right-hand side of the table indicating the total number of answers per difficulty.

The difficulty that was the most frequently stated by the whole sample of the present study relates to memorization of lexical items. Statements such as *"... I don't remember new words when needed"* or *"...I forget a word when another comes"* seem to demonstrate the difficulty for those participants to recall words they have already encountered possibly because the consolidation of their meaning was not done effectively. However, when looking back at the results of the VLS questionnaire, many participants from the four sample groups declared using Consolidation Memory strategies quite often. Strategies involving memorization based on the form of the word (written or aural), loud repetition, as well as link with L1 cognate, personal experience and synonyms were reported to be frequently used. The memorisation process is then viewed by many participants as a key aspect they need to develop to have better lexical knowledge. Many suggestions were proposed by the participants in this questionnaire, some of which involved the skills of reading and listening: watching TV, listening to songs, reading books; while others implied the productive skills of writing and speaking: writing poems, practice with others, internet communication.

Vocabulary Difficulty	**1LMD Freshers Frequency**	**1LMD Frequency**	**2LMD Frequency**	**3LMD Frequency**	**Total number**	**Suggested solutions**
Memory (don't remember words)	5	27	7	10	**49**	- Reading -watching TV - communicate/practice with others - Use new voc in tests and exams - Allocate weekly time to solve this problem - Have good teachers - Write poetry - Word lists/note book revision - Linking words' meanings to places and sounds - Writing practice - Listen to songs - Learn words by heart - Internet communication - Overcome stress
Words spelling mistakes	4	5	5	4	**18**	- Reading - Watch Eng movies - Internet - Writing practice - Speaking practice - Check dictionary
Semantics/ cannot guess meaning of vocabulary in text (aural or written)		10	6	1	**17**	- Check dictionary - Practice outside classroom - Read short stories - Ask teacher/classmates - Listen to songs/news - Ask teacher for translation - Translate into French - Use internet
Speaking/Pronunciation	5	6		3	**14**	- Speak Eng at home - Listen to Eng speakers and repeat. - Watch movies - Listen to music - Speak to mirror - Reading - Check dictionary
Not enough new words/no rich voc/ Lack of fluency	2	4	3	4	**13**	- Increase voc - Speaking practice - Reading/Writing - Listen to Eng TV channels - Use dictionary - Use internet

Long words/ compound words/ difficult words/ "strange" words/ "sophisticated" words	1	5	2	5	**13**	- Reading - Practice - Use dictionary - Watch Eng TV - Integrate these words in writing
Don't know when/how to use new words	2	2	1	3	**8**	- Use new word in sentence - Use new voc frequently - Ask for help - Reading/Writing - Variation in voc use while speaking/writing
Not enough vocabulary practice in class			5	2	**7**	- More practice outside classroom - Reading - Watch Eng TV - Private schools - Listen to music
Grammar difficulties	2	3	1		**6**	- Reading - Watch Eng TV - Internet
Words with several meanings/Homonyms/synonyms	2			1	**3**	- Voc note books - Check dictionary
Difference between American & British English			2	1	**3**	- Speaking practice - Check dictionary - Watching movies - Listen to music - Chatting with native speakers
Laziness to learn new words		2			**2**	
Self-confidence			1	1	**2**	
Teachers not explaining Voc		1			**1**	- Revise/practice in groups
Confuse between English and French words (Remember word in French instead of English)		1			**1**	- Speaking practice
Phrasal verbs/Idioms				1	**1**	- Listen to native speakers
No Difficulties	3	5		1	**9**	

Table 6.19: Vocabulary difficulties as mentioned by the participants and their suggested solutions

Other difficulties reported by the participants were related to non-recognition of the spelling of word items (n=18) as well as to problems in guessing the meaning of unknown words in an aural or written text (n=17). Such difficulties might reflect an inability to go beyond the word level to extract meaning from contextual clues, as expressed by a student who said "when I can't find meaning of word I surrender". The fact is a minority of participants (17 and 18 out of 184) mentioned this problem, while the results of the VLS questionnaire demonstrated that a significant majority of participants declared that the determination strategy of guessing from context (D5) was their most frequently used strategy among all others. Thus, despite the popularity of this strategy among the students, they might not know how to use it efficiently.

When looking at Table 6.19 above, one can notice that most difficulties stated by the participants mainly reflect an inappropriate use of vocabulary strategies, while only some are linked to external factors such as lack of vocabulary practice, self-confidence, teachers' assistance, and laziness to learn words. Statements such as "*when the teacher talks quickly, I can't understand" or "...can't find the words quickly when I speak"*, seem to reflect a lack of strategies to decode an aural text or to go beyond word level to achieve appropriate understanding. Moreover, statements like *"I have ideas and words but can't express them..."* might show that this participant has difficulties in terms of transforming receptive vocabulary into productive one.

Besides, only a non-significant number of students (13 out of 184) mentioned lack of vocabulary size as a difficulty in their lexical learning process; this might suggest that the most problematic aspect of this process is the insufficient or ineffective use of VLS, and that the key for a larger vocabulary size certainly lies in strategy use.

As such, in order to determine the extent to which the two constructs of vocabulary size and VLS use are related, it is important to investigate the correlation between them. The next section of this chapter aims at comparing the results obtained from the three research instruments in order to set up this relationship.

Section Two:

6.2 Correlation between vocabulary size growth and VLS use

The previous chapter was devoted to the presentation of the results of the VST reflecting the vocabulary size growth from Year 1 to Year 3, and the results of the VLSQ demonstrating the participants' preferences in terms of VLS use, while the first section of the current chapter presents the results of the VLOQ regarding the participants` preferences in terms of vocabulary learning in general. In this section, the overall findings are triangulated to find out whether there is any relationship between the two variables. In other words, the purpose is to examine whether or not the vocabulary size of participants has grown as a result of the VLS they used between the time they come from high school and when they are about to graduate. This relationship was researched for each of the four sample groups individually, before a global comparison of the whole population could be set up.

As explained in the part dedicated to VLS use in the previous chapter, the participants were required to indicate with a tick (√) whether they use each strategy Always, Sometimes, Rarely or Never, using a 4-point Likert scale. For the quantitative analysis of the results, each answer was given decreasing points from 4 to 1 following the frequency of use. Thus, *Always* was marked with 4 points, *Sometimes* with 3 points, *Rarely* with 2, and *Never* with 1 point.

For the VST, a simple scoring method was used in order to measure the overall receptive written vocabulary size of each participant: out of the 140 test items, each correct answer was allocated 1 point while incorrect or no answers were given a zero. As such, the vocabulary size of participants ranged from 0 to 140.

In order to determine whether there is a relationship between the vocabulary size of the participants and their use of a particular category of vocabulary learning strategies, a Pearson's correlation was calculated between the two constructs, in which the participants' VST score was the dependent variable while the mean value of each of the 6 vocabulary strategies in the VLSQ was the independent variable. For that purpose, the results of both

the VST and the VLSQ were incorporated into an Excel sheet for each of the four sample groups of the present study. The results are shown in Table 6.21 below:

Sample Group	**Strategy category used by participants**	**Correlation with vocabulary size**	**Correlation level**
1LMD Freshers	Consolidation/Metacognitive	0.364	Average [0.2 - 0.4[
1LMD	Consolidation/Social	0.1	Weak [0.1 - 0.2[
2LMD	Discovery/Determination	0.06	No correlation [0 - 0.1[
3LMD	Discovery/Determination	0.356	Average [0.2 - 0.4[

Table 6.21: Pearson's Correlation between Vocabulary size and VLS categories

The purpose behind using a Pearson correlation coefficient was to determine the intensity of the linear relationship between the two quantitative constructs and to predict, if possible, to what extent one variable is dependent on the other. When the figure of the correlation is null (0), it means that there is no linear relationship between the two constructs. This figure of correlation varies between (-1) and (+1), so the intensity of the relationship is stronger when the coefficient approaches (+1), while it becomes weaker when it approaches (-1). In the table above, only the positive correlations were reported for each sample group, as the main concern of this analysis was to determine the strategies that were the most frequently used as a result of higher vocabulary size, instead of the ones that were the least frequently used.

As shown on Table 6.21 above, apart from an average correlation for the 1LMD Freshers and the 3LMD samples, there is no significant correlation between the vocabulary size of the participants and the categories of VLS used. Indeed, the linear analysis of the constructs has yielded a relatively moderate relationship between the use of metacognitive strategies and the vocabulary size of the newly enrolled participants (1LMD Freshers), and also the same degree of connection between the use of determination strategies and vocabulary size of the advanced 3LMD sample. On the other hand, the two middle groups of pre-intermediate and intermediate participants seem to have very low or null correlation between the two constructs under study.

Metacognitive and determination strategies being the most frequently used strategies among the 1LMD Freshers, 2LMD and 3LMD - as demonstrated in the previous chapter, this may moderately explain the variation in vocabulary size for the Freshers and the advanced groups (3LMD), while no correlation was observed between these two strategies and the 2LMD sample. Besides, despite the fact that the consolidation social category was the most frequently used among the 1LMD participants, a very weak correlation with vocabulary size was attested.

Considering the VLS in terms of the six categories suggested by Schmitt, it seems that there was little significant correlation with the vocabulary size of the participants, whatever their proficiency level. Thus, it was important to analyse this correlation in terms of individual strategies in order to have a qualitative measure of the relationship between vocabulary size and the different strategies. As such, a Pearson analysis was calculated for each sample group; the results are displayed in the following tables (Table 6.22 and Table 6.23)

6.2.1 Correlation between the VST and the VLSQ for the 1LMD Freshers:

As illustrated in table 6.22 below, the correlation between some individual strategies and the vocabulary size of the 1LMD Freshers seems to be slightly more accurate than the correlation shown earlier in Table 6.21. Taken as a global category, the metacognitive

strategies show only an average correlation with vocabulary size; however, when taken separately, some metacognitive strategies emerge as having a high correlation and thus explaining significantly the growth of vocabulary size of these participants. Indeed, the strategies involving the use of internet to search for information or to communicate with others using English seems to have a significant impact on the vocabulary size growth of the participants who had just joined the university. These results corroborate the findings in Section Three of the present chapter, demonstrating that these two strategies (Met 54* /Met 54**) are among the most frequently used consolidation strategies, along with other multimedia-related devices. However, despite the fact that the determination strategy of guessing from context (D5) and the metacognitive strategy involving the use of English language media (Met 54) were largely the most frequently used strategies among all the population samples of the study, they showed only a low correlation with the vocabulary size of the Freshers group.

Level of Correlation	VLS showing correlation with Voc size
Low correlation [0.1 – 0.2[	D5: Guess from textual context Met54: Use English language media (songs, movies, newscast)
Average correlation [0.2 – 0.4[	M29: Use new word in sentences
High correlation [0.4 – 0.6[	Met54*: use internet to search for info using English language Met54**: use internet to communicate with friends using English language (ex: emails, social networks…etc)

Table 6. 22: Pearson's correlation between vocabulary size and individual VLS (1LMD Freshers)

Through the analysis of correlation set up in this section, it appears that some strategies showed strong correlations with other strategies. In other words, the Excel sheet used for this analysis put in light some positive coefficients between some strategies that seemed to indicate they were usually used together by these participants. Only the positive coefficients that are very high, i.e., [0.6 - 0.9], are noted here as they are the ones which are significant enough to be mentioned. For instance, there is a strong relationship between the use of the social strategies involving discovery and practice of word meaning in pairs and group work (S13,S14, S15, S15*). Moreover, there seems to be a high connection in the use of different memory strategies, as using one of them frequently means using others within the same category (M18, M19, M20, M25, M28, M27, M40, M31, M33, M39, M42, M44). The same sort of correlation was also identified among some cognitive techniques that tended to be used together (C47, C51, C49, C50) involving note taking and use of word lists to consolidate word meaning.

6.2.2 Correlation between the VST and the VLSQ for the 1LMD group

For the pre-intermediate sample group, there was no particular strategy that emerged as highly accounting for the vocabulary size growth of the participants. Instead, there was the cognitive strategy of keeping a vocabulary note book (C53) that had an average correlation, while it was among the most frequently used strategies for this group. Besides, the determination strategy implying analysis of visual contextual clues (D4) and the memory strategies involving analysis of the form of a word, had only a low correlation with the vocabulary size of this sample group.

Level of Correlation	VLS showing correlation with Voc size
Low correlation [0.1 – 0.2[	D4: Analyze any available pictures or gestures S17: Interact with native speakers M35: Underline initial letter of the word M38: try to remember word affixes and roots M40: Paraphrase the word's meaning
Average correlation [0.2 – 0.4[	C53: Keep a vocabulary note book

Table 6.23: Pearson's correlation between vocabulary size and individual VLS (1LMD group)

Unlike the 1LMD Freshers` sample for which many strategies showed strong correlations with other strategies of the same category, only two high correlations emerged from the analysis of the 1LMD group. Apart from the expected connection between the two memory strategies involving the use of images of word meaning to consolidate vocabulary knowledge (M18, M19), there is a third correlation between the cognitive strategy using word lists (C47) and the metacognitive technique using English language media for consolidation.

6.2.3 Correlation between the VST and the VLSQ for the 2LMD group

The vocabulary size of the 2LMD sample jumped considerably at this stage of instruction, with a gain of 833 words compared to the 1LMD group (see Table 5.9).

The aim of doing a Pearson Correlation Analysis was therefore to determine whether the VLS behaviour of these participants had any impact on the growth of their vocabulary size.

As shown on Table 6.24 below, at this stage again, there is no strategy that has a high correlation coefficient with vocabulary size. Instead, the determination strategies D3, D4 and D5 show a moderate relationship with vocabulary size, knowing that these discovery strategies were reported to be among the most frequently used by these participants. Moreover, the memory strategies involving learning through idioms and use of physical action also show an average correlation, while they do not even appear on the top-ten VLS classification that this intermediate group reported to use (see Table 5.13).

The multimedia-related strategy Met54 which was among the most frequently used consolidation strategies, had however only a low correlation with vocabulary size, along with the bilingual dictionary-related determination strategies.

Level of Correlation	VLS showing correlation with Voc size
Low correlation [0.1 – 0.2[	D6: use a bilingual dictionary (eg: English – French dictionary) D6*: use a bilingual dictionary (eg: English – Arabic dictionary) Met54: Use English language media (songs, movies, newscast)
Average correlation [0.2 – 0.4[	D3: Check for L1 cognate D4: Analyze any available pictures or gestures D5: Guess from textual context M42: Learn the words of idioms together M43: Use physical action when learning a word

Table 6.24: Pearson's correlation between vocabulary size and individual VLS (2LMD group)

For this 2LMD group, the main high correlations noted between the different strategies are the ones implying strategies within the same category. Thus, there is a relationship between the use of a group of cognitive strategies related to the use of note books and word lists in different ways to consolidate word meaning (C47, C51, C53, C50). This connection within the cognitive category can also be observed among the 1LMD Freshers group. Besides, there is also a strong relation between the two metacognitive strategies related to the use of internet tools to search for meaning or for communication in English (Met54*, Met54**); this can be considered logical and quite expected.

6.2.4 Correlation between the VST and the VLSQ for the 3LMD group

Compared to the other sample groups, the advanced third year participants of both streams have a larger number of strategies that show correlation with vocabulary size; this correlation is either low or average, though. All the strategies that have an average correlation are among the top-ten VLS classification (see Table 5.14), i.e.; they are among the most frequently used by this group. These include determination and memory strategies based on analysis of word form, L1 cognate and guessing from context, as well as the metacognitive strategy involving internet use to search for information.

Besides, the three strategies M31, Met54 and Met54** which appeared on the top-ten classification of VLS show only a low correlation with vocabulary size for these students. Other memory strategies that were not reported to be frequently used (M37, M38, M42) also show a low correlation.

Level of Correlation	VLS showing correlation with Voc size
Low correlation [0.1 – 0.2[	M31 : Study the spelling of a word M37 : Use Key Word Method M38: try to remember word affixes and roots M42: Learn the words of idioms together C49 : Take notes in class Met54: Use English language media (songs, movies, newscast) Met54**: use internet to communicate with friends using English language (eg: emails, social networks…etc)
Average correlation [0.2 – 0.4[	D1: Analyze part of speech D2: Analyze affixes and roots D3: Check for L1 cognate D5: Guess from textual context M32: Study the sound of a word M41: Use cognates in study Met54*: use internet to search for info using English language

Table 6.25: Pearson's correlation between vocabulary size and individual VLS (3LMD group)

For this advanced sample group, this result is not surprising as these participants also showed connections between some strategies of the same type. For instance, students

discovering the meaning of unknown words through the use of a monolingual dictionary also seemed to use the word list determination technique (D7, D8). Moreover, some social strategies seemed to work together, such as the ones involving asking the teacher for a paraphrase or a sentence to discover meaning of a word (S11, S12), or the ones using practice in pair and group work to consolidate meaning (S15, S15*). The memory strategies using imaging were also used together (M18, M19), as was the case with both the 1LMD Freshers and 1LMD sample groups.

6.2.5 Correlation between vocabulary size and VLS use for the high proficiency students among the 4 samples

As observed through the results of the vocabulary size test in the previous chapter, there was a moderate growth of the receptive written vocabulary size of the participants from the level they started with at the university (1LMD Freshers), until the proficiency level they were expected to reach by the end of their final year (3LMD). Moving from a vocabulary size of 5924 to 7500 words reflects a somehow acceptable growth pattern; however, for university students studying English and preparing for an English language teaching degree course, such growth can be viewed as insufficient.

Besides, the results obtained from the Vocabulary Learning Strategies Questionnaire along with the open-ended questionnaire, demonstrated that the participants' behaviour in terms of VLS use did not considerably evolve from one proficiency level to the next. It is true that there was an evolution in the number of strategies used between the Freshers group - before any university instruction took place - and the three consecutive years of the course; this phenomenon might reflect a positive impact that the English programme instruction could have had on raising the students' awareness of the existence of strategies and techniques of various kinds to help them cope with insufficient vocabulary knowledge. However, the results mainly showed that, in terms of the type of VLS used, there was no significant evolution between the time the participants joined the university and the time

they were about to leave it after graduation; this was displayed in the almost identical top-ten VLS classification (see Tables 5.11, 5.12, 5.13 and 5.14).

Moreover, analysing the correlation between the vocabulary size and the VLS use of the participants at the different proficiency levels did not demonstrate any significant relationship between the two variables, apart from a high correlation between the metacognitive strategies involving use of internet to search for information and communicate and the vocabulary size of the 1LMD Freshers. These two strategies (Met54* and Met54**) appeared among the most frequently used strategies by the whole population sample of the present study. However, their strong correlation with vocabulary size was shown only with the low-intermediate sample group. No other VLS used by the participants had, on the other hand, a degree of correlation that was significant enough to conclude that it played a role in the growth of vocabulary size.

The analysis of the correlation between the vocabulary size and the VLS was done at the level of each proficiency level individually, and all the participants of each of the four groups were included in the analysis, i.e., 184 students. Given that there was no major relationship that emerged from this analysis, it was then important to narrow down the population sample of the study and concentrate only on a small group of high achievers. The aim was to try to shed light on any possible correlation between high vocabulary size and any VLS. Thus, this aspect was investigated with the participants who could be considered as high proficiency EFL students among the whole population of the study. But the difficulty at that stage of the study was to identify the “high proficiency student". Given that the present study deals essentially with vocabulary knowledge, the procedure was to select only the participants with a good vocabulary size, based on the results of the VST. On the one hand, Nation (2006) considered that non-native speakers at university level would need a vocabulary size of about 5000-6000 to be successful in their studies, and on the other hand, he also viewed the threshold of 8000 word families as a goal that EFL learners should aim to reach in order to be able to comprehend a variety of authentic spoken and written texts. Moreover, he estimated the vocabulary size of EFL PhD students to be

around 9000 word families. On the basis of Nation's scoring, it was thus decided to select, for the purpose of this correlation analysis, all the participants with a VST score of 7000 and above. Given that the population of the present study was made of undergraduate students preparing a three-year degree course in English Language Teaching (and Anglo-Saxon Studies), it was believed that these students should target a large size vocabulary as many of them were supposed to be, by the end of the course, proficient enough to work as EFL teachers in primary, middle or high schools. The 3-year undergraduate course being the first step of the English program (possibly to be followed by a 2-year Master course then a 3-year Doctorate), the size of 7000 word families was assumed to be reasonable and ambitious at the same time to meet the needs of these undergraduate students.

To summarize, it was decided to select the highly proficient students on the basis of their scores in the VST of this study, but not of their marks obtained on the tests/exams arranged by the department. This sample was selected among all the four groups (1LMD Freshers, 1LMD, 2LMD, 3LMD). The idea behind this selection was to consider all the participants as having the same potential in terms of vocabulary knowledge, and this was confirmed through the results of the VST in section 5.2 of the previous chapter, as some participants performed better than others who were in higher proficiency groups.

Moreover, despite the difference in the proficiency level of the participants, all of them took the same VST comprising the 14K word families, as it was believed that participants could possibly know vocabulary that is higher than their expected proficiency level if for instance the word resembled an L1 cognate, or if the word belonged to an area of knowledge that is of special interest to the participant or related to one of his hobbies. As such, the selected population was as follows:

Samples of the study	Total number of participants of the study	Number of participants with a score of ≥7000 Word families	
1LMD Freshers	30	**9**	30%
1LMD	81	**25**	30%
2LMD	37	**23**	62.1%
3LMD	36	**25**	69.4%
	184	**82**	

Table 6.26: Selection of high proficiency participants based on VST scores

A Pearson's correlation was therefore set up between the vocabulary size of 7000 word families and above, and vocabulary learning strategies individually in order to demonstrate whether there was any particular correlation that was significant enough to explain a causal effect of VLS use on vocabulary size.

Results showed that there was no significant correlation that emerged from this analysis. Indeed, there was no particular strategy that emerged as being conducive to high vocabulary size as all the positive coefficients were below [0.2[, i.e., reflecting either a null or a very low correlation. Moreover, when taking the strategies in terms of the six categories of Schmitt (Determination, Social, Memory, Cognitive, Social, and Metacognitive), there was no significant relationship between any of these categories and the high vocabulary size of the participants; all the positive coefficients were below [0.09[. However, it was noticed that there were some positive coefficients that were very high [0.6 - 0.9[between some strategies. Table 6.27 below illustrates the strategies that seemed to be significantly related to one another.

Strategies	S15	S15*	M19	M29	M32	Met54	Met54**	Met55*
S16	0.71	-----	-----	-----	-----	-----	-----	-----
M18	0.64	0.64	0.73	-----	-----	-----	-----	-----
M33	-----	-----	-----	-----	0.61	-----	-----	-----
Met54*	-----	-----	-----	0.60	-----	0.65	0.71	0.63
Met55*	-----	-----	-----	0.65	-----	-----	-----	-----

Table 6.27: Pearson's correlation between vocabulary learning strategies of high proficiency participants

For reference, and to make the strategies labelled in Table 6.27 above more readable, here is the exact wording as mentioned in the VLS questionnaire used in this study:

Strategy label	Wording
S16	I keep a word list/card and my teacher checks for learning
M18	I study the new word with a pictorial representation of its meaning: through images, photographs or drawings
M33	I say the new word aloud when studying
Met 54*	I use English internet regularly to search for information using English language
Met 55*	I learn words from tests/exams (I learn from my mistakes)
S15	I study and practice meaning in pairs/groups in class
S15*	I study and practice meaning in pairs/groups outside class
M19	I study the word by forming an image of it
M29	I learn the new word in an English sentence
M32	I study the sound of the word carefully
Met54	I use English-language media (songs, movies, newscasts, etc.)

Met54**	I use English internet regularly to communicate with friends using English language (eg: emails, social networks…etc)
Met55*	I learn words from tests/exams (I learn from my mistakes)

As shown on Table 6.27, most of the correlations emerging from this analysis are expectable as many relationships between strategies were already observed when the four sample groups were analysed separately in section 6.2 of this chapter. Indeed, most connections were noticed among strategies of the same category which reflected a certain rationale. For instance, the fact that there was a strong correlation between the three metacognitive strategies involving internet and multimedia tools for consolidation was not a surprise (Met54, Met54*, Met54**). Moreover, there was also a connection between the two memory strategies using imaging (M18, M19), which was largely observed previously among most members of the overall population of the study.

The analysis of the correlation between various strategies used by high proficiency participants thus seems to show that there is no significant behaviour in terms of VLS use that can explain the high vocabulary size of these participants.

In an attempt to analyse the high proficiency group thoroughly and investigate its characteristics in terms of VLS use, a top-ten classification of the most frequently used strategies reported to be used by these 82 participants was set up. The purpose was to compare it with a previously set classification among the whole population of the study (Tables 5.11, 5.12, 5.13, and 5.14), and therefore to identify any particularities that might emerge and explain a vocabulary learning behaviour unique to these participants.

As shown on Table 5.28 below, there are many similarities between the preferred strategies of this particular group and the top-10 classification of the four sample groups of the study when taken individually.

Rank	Strategy Description	Category	Item number
1	Guess from textual context	Determination	D5
2	Study the spelling of a word	Memory	M31
3	Analyse the part of speech (eg: is it a noun, verb, adjective, adverb,etc)	Determination	D1
4	Use English-language media (songs, movies, newcasts....)	Metacognitive	Met54
5	Say the new word aloud when studying	Memory	M33
6	Connect the word to cognates (words of similar form and meaning in French, for instance: internal/interne, history/histoire, tomato/tomate)	Memory	M41
7	Learn words from tests/exams (I learn from my mistakes)	Metacognitive	Met55*
8	Connect the word to its synonyms and antonyms	Memory	M22
9	Connect the word meaning to a personal experience in order to remember it.	Memory	M20
10	Image word form	Memory	M34

Table 6.28: Top-10 of the most frequently used VLS by the high proficiency participants

Among the ten strategies of this table, six strategies already appeared in Tables 5.11, 5.12, 5.13, 5.14 (see Section 3 of the previous chapter), which seems to imply that these strategies were not necessarily conducive to higher vocabulary size. However, there were four strategies specific to the high proficiency participants that did not emerge when analysing the preferences of the whole population of the study. For instance, the determination strategy counting on analysis of parts of speech while trying to discover the meaning of unknown words seemed to be frequently used by the participants with high vocabulary size. Besides, the memory strategy involving connection of a new word with an existing cognate seemed also to be popular. The fact that many words included in the vocabulary size test used in the present study have resembling forms with their equivalent in French might explain why the high proficiency participants were able to identify their meaning even when they were in the low frequency bands. Other memory strategies

through which the participants relate the new words with their synonyms, antonyms or to personal experiences were also among the most frequently used.

Conclusion

The purpose of this chapter was to present in detail the results obtained from the third data collection tool of the present study, thus the overall preferences of participants in terms of various aspects of lexical learning were analysed both quantitatively and qualitatively. The major aim of the present study being the investigation of a possible correlation between vocabulary size and VLS use at the different stages of the LMD undergraduate course, a thorough comparison was also set up among the four samples of the study before a more focused investigation could be made with only high proficiency participants.

The next chapter will attempt to interpret and discuss more qualitatively the overall results in light of the different findings of prominent researchers and scholars in the field of EFL vocabulary learning, in order to answer the various research questions addressed in this work.

CHAPTER SEVEN

Discussion and Interpretation of Results

Introduction 219
7.1 Vocabulary Size Growth across the three years of the English degree course 219
7.2 Vocabulary Learning strategies across the three years of the English degree course 229
7.3 Relationship between vocabulary size growth and VLS use 240
7.4 VLS use among high proficiency learners with large vocabulary size 247
Conclusion 250

Introduction:

The previous chapters have attempted to present a theoretical and a practical basis upon which we could rely to answer the main concerns of the present study. Thus, after the literature review, the explanation of the methodology used, as well as the presentation of the results obtained, the present chapter aims at discussing and interpreting the results, with a particular attempt to answer the research questions addressed at the beginning of this research study. The organisation of this chapter follows the order of the four RQs, each section attempting to answer one RQ from both theoretical and empirical perspectives.

A number of studies have attempted to research the possible relationship between vocabulary size and vocabulary learning strategies among ESL/EFL learners in different contexts and at various proficiency levels; however, we are not aware of a similar study undertaken with Algerian university students learning English as a FL. As such, this chapter aims at comparing the results of the present study with the findings of other researchers around the world in order to shed light on the possible similarities or specificities of the Algerian EFL students undertaking a specialised undergraduate course in English.

7.1 Vocabulary Size Growth across the three years of the English degree course:

This section aims to answer the first research question of the study:

RQ1: How does the students' vocabulary size grow as they move from year 1 through year 3 of the English degree course?

One of the main goals of the present study was to investigate the receptive written vocabulary size of the students enrolled in an EFL undergraduate course at the University of Algiers 2, and to assess the growth of this size from the time they enter university until their final year of graduation.

Results obtained from the various research tools have demonstrated that the vocabulary size did grow from the time the freshers join the university (1LMD Freshers) until they are about to graduate (3LMD), but this growth was moderate as it went from an average size of 5924 words for the 1LMD Freshers group, 6410 words for the 1LMD, 7243 for the 2LMD, and 7500 words for the final 3LMD sample. In other words, the overall difference was of 1576 words, representing an average gain of 525 words per year over the three years of the English course. If this evolution was relatively moderate, it was more significant when moving from Year 1 to Year 2, with a jump of 833 vocabulary gains, which might reflect the impact that the second-year instruction had on vocabulary development, knowing that the data collection took place at the end of each academic year. The content-focused instruction provided in the second year of the English curriculum seems to have helped some participants to expand their vocabulary size. Another possible reason for this increase in vocabulary knowledge might be the fact that the participants had gained some language learning autonomy as a consequence of the combination of language and content input during that year.

This size growth seemed to be much less significant though from Year 2 to Year 3 - with a jump of only 257 word items, considering that the curriculum of the last year of the course is largely content -based. Indeed, the final year of the LMD is a specialisation year during which the students focus on either linguistics studies or Anglo-Saxon literary studies, which means that the content that students are exposed to is quite rich and diversified, and one would think that such input would contribute to building a larger vocabulary repertoire.

Comparing the scores of the two streams within the final year sample group, there seemed to be better VST scores among the Anglo-Saxon Studies group than the Linguistics group. This discrepancy is quite intriguing as both specialisms receive an advanced level of input in the various content courses. At this final stage of the degree course, and whatever the branch chosen, the focus is no longer on language courses but rather on specialised content knowledge that is aimed to prepare the students for either a linguistic or a literary profile.

Moreover, the fact that the VST scores of the Linguistics participants was lower than the others, is even more surprising when one knows that these students are being prepared to embrace a teaching career and receive an instruction focusing on subjects like syllabus design, language learning and assessment. One possible explanation for the drop in lexical gains of the students in year 3 is that at this level there is no longer explicit teaching of reading comprehension and written expression, and many students may have not developed autonomy to read and understand texts or to learn new vocabulary by themselves without the help of the teacher. Moreover, it is largely agreed among the teachers of the department that most of the research papers that the students have to submit at the end of the third year are "copy-and-paste" productions which reflect their lack of autonomy and independent study skills.

When comparing the average size growth of 525 words per year for the participants of the present study with the estimated growth of 1000-2000 new words for the native speakers (Nation 1990), one might say that this growth is slow. However, in the literature related to vocabulary learning in foreign language environments, receptive vocabulary is believed to grow with an average of 400-500 words per year in FL mainstream school learning environments (Richards, Malvern & Graham 2008; Milton 2009), while at university level the uptake was found in some contexts to be as low as 200-330 words per year (Schmitt & Meara 1997; Cobb & Horst 2000; Ozturk 2012). Besides, a yearly objective of 500 word families for EFL learners is considered by Webb & Nation (2017) to be reasonable enough.

Most of the studies mentioned above were undertaken with the VLT as instrument in which only four frequency bands out of 14 were included. However, in the present study, the vocabulary size of the university participants was measured with the VST and the findings are a little higher than previous studies which used VLT, with an average uptake of 525 words per year over a three-year course, and a total gain of 1576 words from Year 1 to Year 3 of the undergraduate course. The difference in measuring the vocabulary breadth with the VST is that the students' possible knowledge of lower frequency levels is

taken into consideration, and indeed in the present study this knowledge has been observed, as discussed later in this section. These findings concord with results of a study undertaken with Vietnamese learners by Nguyen and Nation (2011) during which knowledge of some words in lower frequency bands was also noted with the use of VST as a measurement tool.

In the Algerian context being studied, the results supplement those of Arab & Benaissa-Bouhass (2020) who also used the VST. The average score of 7794 word families obtained by the Master students (1st and 2nd year) seem to follow the same logic when compared to the average of 7500 word families scored by the third year undergraduate students in the present work. Moreover, despite an average of 9950 among the doctorate and teacher participants in Arab & Benaissa-Bouhass study, many Master students had better scores than some teachers with extensive teaching experience; and the lexical gains between year 1 and year 2 of the Master was not significant enough (only 255 word families). Thus, both studies undertaken with Algerian university EFL students seem to suggest that despite the gradual increase in vocabulary size from one proficiency level to the other, this increase is not always significant enough, especially at advanced levels. Moreover, the amount of exposure to the target language does not seem to suffice to increase vocabulary growth; the most important aspect to focus on is probably the quality of this exposure.

In the present study, the average vocabulary size of the participants ranged from 5924 just before enrolment in Year 1, to 7500 just before graduation. Superposing these figures with Nation's findings (Nation 2006), one can say that the Algerian participants of this study were within the standards. In fact, in Nation's view, non-native speakers enrolled in undergraduate studies in EFL environments were thought to need knowledge between 5000 and 6000 to succeed in their university studies. However, Nation considered that knowledge of 7000 word families was required for appropriate spoken English, while the average obtained by the participants of the present study moderately met this objective. Moreover, even the advanced group (3LMD) did not meet the threshold of 8000 for reading newspapers or for optimal comprehension of any

academic non-simplified text, and 9000 for reading novels. (Nation 2006, Laufer and Ravenhorst-Kalovski 2010). Taking into account the fact that most students of the English Department are prone to embrace an EFL teaching career after graduating, one might question the adequacy of the vocabulary size of these participants in relation with their actual needs and the demands of the teaching profession.

After looking at the overall vocabulary size of the participants, vocabulary growth pattern was also analysed in terms of the gradual frequency bands contained in the VST. Results demonstrated that the four sample groups of the study followed more or less the same decreasing pattern from the 1K - the most frequent words in English - to the 14K - the least frequent words, sustaining the assumption that the acquisition of vocabulary by EFL students is gradual and follows the frequency pattern of words (Schmitt 1994, Read 1988, Schmitt & Clapham 2001, Milton 2009). The normal vocabulary knowledge profile of EFL learners is seen as gradually decreasing from high-frequency to low-frequency levels.

However, throughout the decreasing curve, there were two peaks of 8K and 11K, during which the participants seemed to have performed better than previous frequency bands. The 8K and 11K bands contain words that are not frequently encountered and used in the English language. However, the participants in the experiment were able to identify the meaning of some of these lexical items even though the latter were expected to be beyond their proficiency level. These peaks were particularly unexpected for the 1LMD Freshers sample who scored no less than 4.5 out of 10 in 8K and 3.96 in 11K. These scores increased slightly among the other proficiency levels until the 3LMD group who scored 6.31 (8K) and 5.64 (11K).

A possible explanation of this phenomenon might be the fact that there were many words in these two bands that had similar morphological forms with their French equivalents. Indeed, words like *palette* (8K), *eclipse* (8K), *authentic* (8K), *cabaret* (8K), *yoga* (11K), *puma* (11K), *aperitif* (11K) could possibly be guessed

by the participants because they have similar cognates in the French language. Knowing that French is widely used in Algeria, and that it is the first foreign language taught in the educational system from primary school (to university, in many faculties), it is not surprising to find the high influence of this language on the VST scores of the participants of the present study. Moreover, they could also guess the meaning of a word like *Emir* (11K) maybe due to the fact that it is used in the French language as well as borrowed from Arabic, the native language of almost all the participants; between 79% and 97% of the whole population declared Arabic as their L1 while others declared Berber as their L1.

This last finding supports Schema Theory according to which concepts can be meaningful only when they are related to something the subject already knows. That is to say, when a new language experience - including vocabulary - is encountered, it is understood only if it can be related to an existing schema and simultaneously become part of it. Thus, the comprehension of a text is considered to rely much on the schematic knowledge of the reader/listener who makes assumptions about the information he is exposed to (Anderson 1980). The participants, whatever their proficiency level, who performed well at these frequency bands were probably able to understand the meaning of these French-like words because they already had the schema of these words in French or Arabic, and therefore were using their cross-linguistic knowledge to decode the meaning of these words. According to a large number of studies (Meara & Buxton 1987, Meara & Jones 1990, Manchon 2001, Odlin 2003, Murphy 2003, Jarvis & Pavlenko 2008, Jarvis 2009), having similar or resembling orthographic or semantic cognates in an already known language (L1 or L2) is likely to make the learning of these words in the TL much easier. In his study with French speaking learners of English, Fraser (1999) found out that the vocabulary retention rate of the participants was in average 50% thanks to the use of L1-related identification clues to infer the meaning of words while reading. It is clear that L1 cognates make reading comprehension more accessible and vocabulary learning easier in the target language only when the L1 and L2 of a learner belong to the same language family (Meara 1993), which is the case for English

and French as both belong to two families of the same Indo-European language. The present findings are therefore aligned with other studies that advocated the facilitative effect of language transfer in vocabulary learning and comprehension when the languages are typologically similar (Kellerman 1977/1983, Odlin 1989, Ringbom 1992/1987), and more specifically with the studies that shed light on the fact that knowledge of French facilitates learning of English (Cenoz 2003, Sikogukira 1993, Hanafi 2014, Nouioua 2018, Negadi 2015). It is true that in the context of the present study, Arabic and Berber are the L1 of most participants, but French is also an important background language of many Algerians as it is the first foreign language of the country and is widely present in many aspects of everyday life. Therefore, when considering vocabulary learning in a TL, one cannot ignore the facilitative effect of the native language or any other additional language because the possible typological similarities or differences can make a difference in terms of difficulty or ease of the vocabulary acquisition process, especially at a visual level, when these words have similar spellings.

The facilitating effect of French cognates for EFL learners in Algerian universities is therefore an area that instructors and syllabus designers can make use of in order to adjust and maximise the vocabulary learning process, as raising learners' morphological and structural awareness can facilitate cognate recognition and consequently lead to easier lexical learning (Hancin, Bhatt & Nagy 1994; Molnar 2010)

Moreover, the present findings confirm that all frequency levels of the Vocabulary Size Test should be sat (Nguyen and Nation 2011), instead of assuming that students do not know the meaning of words that are beyond their supposed proficiency level and therefore possibly underestimate their vocabulary size. In this respect, these findings confirm that the use of the VST - and not the VLT - was appropriate for the participants of the present study.

Even though the overall vocabulary size of the participants followed an increasing curve from one level to the other, in terms of the scores at the individual frequency bands, the 2LMD sample performed better than the 3LMD

group in five frequency bands (1K, 5K, 6K, 7K, 10K). It is important to mention that in Year 2 of the English course, the number of weekly teaching hours of all subjects is higher than in Year 3. In the third year of the degree course, the students' class time is much lighter as they are expected to develop more autonomy and study more independently to prepare and submit the different assignments given by the teachers. Therefore, they have less contact hours, get less direct input from the teachers, and possibly end up doing less reading, all of which might lead to less vocabulary acquisition. Thus, the instruction in the second year of the degree course seems to provide better vocabulary learning opportunities than in the third year of the course. Some vocabulary attrition may take place among the third-year advanced group because of their inability to study independently and increase their language learning outside class time. This confirms the facts reported above, namely that the vocabulary size gains during the second year were much more significant than the ones obtained from the third-year instruction (833 versus 257 words). It is quite unexpected for advanced students who are about to graduate to experience attrition at this stage of language proficiency. However, this is a phenomenon that was already observed and noted in some studies such as the one undertaken in the 1990's by Schmitt & Meara (1997) and during which decrease in vocabulary size was observed in 28% of the subjects, tested under similar conditions. According to Weltens & Grendel (1993), vocabulary knowledge is one of the most fragile elements of language learning that can be subject to attrition for varied reasons such as long periods of disuse of the TL, lack of motivation or negative attitude towards the language. However, in the context of the present study, none of these reasons seems relevant to advanced students who have chosen to study English and who are about to graduate. Thus, it was noted that these 3LMD participants had a vocabulary size that, in five frequency levels, was lower than 2LMD participants, and that the vocabulary gain during that last year of the degree course was as low as 257 words.

Moreover, evaluating vocabulary knowledge in comparison to proficiency level, it was also noted that the advanced participants who were tested just before

the end of their final degree year of the undergraduate course did not have a full mastery of the most frequently used words of English. In fact, the 3LMD sample scored an average of 8.25 out of 10 (82.5%) on the 1K band and 7.06 (70.6%) on 2K band, while only 5.5% got 10 out of 10 in 1K and 2.7% in 2K.

It is true that when comparing these figures with the results of other international studies one might argue that Algerian EFL students' performance is not so weak regarding the frequency bands. For the sake of comparing these results with those obtained in an Asian context, for instance, the findings obtained from a study conducted with EFL university students in Indonesia showed that these students knew around 60% of the 1K words and 37% of 2K words, even after about six years of prior EFL instruction (Nurweni & Read 1999). Besides, a longitudinal study with EFL students in Taiwan also showed a mastery of 73% at 1K level, and 33% at 2K level (Webb & Chang 2012).

However, in the context of the present study in which the participants not only learn but also study English in various courses over three years and with an average of 7 years of prior EFL instruction, not knowing the meaning of all the 1K band (1K words: saw - time - period - figure - poor - drives - jump - shoe - standards - basis) at the final degree year of the course, is quite alarming given that most of these participants have the ambition and the possibility of becoming English language instructors right after completing the undergraduate course.

The fact that only 5.5% of the participants knew the most frequently used words of English in 1K and 2.7% in 2K, might suggest that a more structured grading of vocabulary learning should be used in the English curriculum because such lack of knowledge of the most frequently used words can easily lead to difficulties in all areas of EFL learning, whether receptively or productively.

In terms of vocabulary size growth, the results of the present study seem to indicate that the instruction the students receive at the department has contributed moderately in the development of their vocabulary breadth. This was particularly observed among the second-year participants whose vocabulary size jumped significantly compared to the first year, and who performed slightly better than

the third-year group. In the literature, most students consider the vocabulary component as the most important and most difficult part of their FL learning, an issue which makes them spend a great deal of time trying to memorize words or using bilingual dictionaries to fill up gaps in their vocabulary knowledge (Read 2000). Awareness about the demanding nature of vocabulary learning in a TL makes learners, even at advanced levels of proficiency, conscious about their lexical difficulties.

When asked about their preference in terms of vocabulary teaching and whether they were satisfied with the current content of the English curriculum in helping them increase their vocabulary size and VLS use, a significant majority of participants declared preferring the vocabulary component to be taught explicitly in the curriculum, with percentages between 70% and 83% among the four sample groups. These results reveal that even at university level, where students are expected to be more autonomous in their EFL learning, most of them seem to believe that direct instruction of vocabulary is important and is essential for their language achievement. These findings are in line with the conclusions reached by Folse (2006), according to whom students view this part of learning as the most challenging task because it creates problems in their EFL learning; from their perspective, the best way to help them in this task would be to teach vocabulary explicitly.

Besides, one cannot allocate vocabulary size growth pattern to the English degree instruction exclusively. Indeed, the majority of participants declared having frequent access to internet (up to 80%) and to English speaking TV channels (over 76%), which might indicate that these participants made use of other input sources in English, outside the classroom, possibly to fill in gaps in the current vocabulary instruction. The fact that all the participants were young adults sharing more or less the same characteristics and evolving in a typically foreign language environment might explain the huge impact that multimedia and technology-related devices (smartphones, computers, internet, movies, songs) might have had on their overall vocabulary building.

Despite the fact that the participants showed a significant preference to direct instruction of vocabulary, only a non-significant number (13 out of 184) mentioned lack of vocabulary size as a difficulty in their lexical learning process, while many reported difficulties related to insufficient or inappropriate use of vocabulary learning strategies. This might suggest that the most problematic aspect of this process, from students' perspectives, is the insufficient or ineffective use of VLS, and that the key for a larger vocabulary size certainly lies in strategy use. This is an aspect that the present study attempted to investigate through the second research question below.

7.2 Vocabulary Learning Strategies across the three years of the English degree course:

This section aims at answering the second research question of the study:

RQ2: What vocabulary learning strategies do students use in Year 1, 2 and 3 of the English degree course to understand and retain words?

The second variable investigated in this study is the use of vocabulary learning strategies by the same sample groups of year 1, year 2 and year 3 undergraduates, and the development of their VLS behaviour from the time they join the university until the last year of the undergraduate course. Results show a significant growth in the number of strategies used between the 1LMD Freshers level - before any university instruction took place - and the other stages of the course. In fact, there was a jump from 28 strategies reported to be used by the Freshers group to 43 for the 1LMD group, while this number remained approximately the same between year 1 and year 3. This growth might be explained by an increase in consciousness and awareness of the concept of learning strategies use, particularly after many months of instruction at first year level. As discussed earlier, the concept of learning strategies itself is new to most students coming from high school as these techniques are not usually explicitly taught or hardly referred to in the high school curriculum. However, during the

first year of the English degree program, there is a clear focus on the teaching of language skills and language mechanics, including introduction to the concept of strategies. In the Reading/Writing course for instance, the teaching of various reading strategies is a key element of the course; therefore, students quickly realize that there are some explicit and implicit techniques that can be used to improve language learning; these techniques were probably unknown to them before they enter university. Moreover, the Study Skills course offered during the first year focuses on promoting students' personal learning style and study habits in order to cope with the demands of the English degree course and develop techniques that would help them become more autonomous in their overall EFL learning process. This evolution of strategic awareness at the beginning of the course is in line with Hamzah et al (2009)'s results who found out that the Iranian participants of their study were positively influenced by the Study Skills course which raised their awareness of the strategies available to them to improve their vocabulary learning.

Many researchers in the field of vocabulary knowledge observed that L2 learners at advanced levels of TL proficiency tend to use a large palette of VLSs compared with learners at lower proficiency levels (Schmitt 1997, Fan 2003, Catalan 2003, Tseng & Schmitt 2008), and also that this VLS use is usually quite efficient in developing their vocabulary knowledge. The high number and frequency of VLSs use is considered to be an indicator of the learners' high proficiency in EFL (Fan 2003, Liu 2004). Thus, a good learner is described as the one using regularly not only a large variety of learning strategies but also different combinations of strategies while a less proficient learner tends to use much less strategies. (Liu 2004)

However, in the present study this phenomenon was not observed. Indeed, apart from the jump in number of VLSs used between the newly enrolled students and the first year students, the number of VLSs that the participants reported to use in Year 1, 2 and 3 was nearly the same. This stability in the number of strategies used - regardless of the proficiency level - seems to suggest that little change has occurred during the English undergraduate course strategy wise.

While this finding was consistent with respect to the number of VLSs used, it was important to investigate the type of strategies the participants used in order to determine whether there was any change or evolution as they moved from one proficiency level to another.

Considering the VLSs in terms of the six categories of Schmitt (1997) comprised in the VLS questionnaire, the 1LMD Freshers, 2LMD and 3LMD sample groups seemed to use Determination and Metacognitive categories quite frequently, while the Memory and Cognitive strategies were moderately used, and the Social categories were the least frequently used. The 1LMD participants, though, had a preference mainly for Consolidation social strategies, and unlike the other groups, the Metacognitive strategies were at the bottom of the six categories. Preference for Determination and Metacognitive categories is in line with the findings of a large number of studies undertaken in various EFL contexts such as China, Turkey, Spain, Iran, Algeria, Saudi Arabia and Iraq (Gu 2010, Tanyer & Ozturk 2014, Waldvogel 2013, Hamzah et al 2009, Anber 2010, Alahmadi 2018, Mahmoud et al 2017, Ansarin et al 2012, Maghsoudi & Golshan 2017, Sener 2015, Alahmadi et al 2018, Nouioua 2018).

Besides, the fact that the social strategies are the least frequently used among most of the population of the present study supports findings by other researchers (Tanyer & Ozturk 2014, Hamzah et al 2009, Mahmoud et al 2017, Ansarin et al 2012, Maghsoudi & Golshan 2017, Sener 2015, Nouioua 2018, Alahmadi et al 2018). In the Iranian context for instance, the neglect of social strategies is thought to be due to the lack of collaborative learning habits and interaction in the Iranian instruction model as most teachers are still influenced by the traditional approaches to language teaching in which the teacher is the main source of input. If teachers do not promote collaborative and social learning within the classroom, it may be because of the high number of students per class that does not allow for such collaborative practice to learn new vocabulary.

Moreover, Schmitt (1997) also considers that the lack of popularity of the social strategies in an EFL environment is due to the limited opportunities the learners have to use interaction with native speakers, teachers or classmates as a source of

vocabulary development compared to ESL contexts. The reasons just mentioned would also apply to the Algerian context in which English is taught as a FL, and explain the fact that Social strategies were the least frequently used category.

In terms of the nature of the VLS used individually between the first enrollment in the undergraduate course and just before graduation, the results of the present study show that the participants' behavior seems to be significantly identical. When analyzing the use of various strategies and establishing a top-10 classification of the most frequently used ones, the four sample groups demonstrate the same preferences, reflecting a very limited evolution in terms of VLS choice.

In fact, a comparison of the top-10 classification of the most frequently used VLS among the results of the whole population reflects a very limited evolution in terms of nature of vocabulary strategies use from the low-intermediate to the advanced levels of the undergraduate course. Thus, even if each year of the English degree course is supposed to provide the students with new learning tools to evolve and improve their learning process, including the use of VLS use, most participants seem to have kept the same learning behaviours and have the same vocabulary learning strategies. This sameness of results is observed for both Discovery and Consolidation categories.

When trying to discover the meaning of unknown words, most participants declare using the same Determination strategies, involving the use of contextual clues for guessing, together with the strategies that are translation and L1 cognate related. The Determination strategy (D5) involving guessing meaning through the context in which the word appears is the most frequently used strategy among 83% of the whole population of the present study. The high score of this strategy in comparison to others is even more significantly obvious for the 1LMD sample, which might be explained by the fact that the Reading/Writing course during this first year of the program heavily focuses on the teaching of reading strategies, and most students are usually encouraged by the teachers to use guessing from

context to overcome lexical difficulties and develop autonomous reading comprehension skills. These results support findings of other researchers in the field who also found that their participants had a high preference for the Determination strategies such as guessing from context or use of dictionary when encountering a new word for the first time (Hulstjin 1993, Gu & Johnson 1996, Schmitt 1997, Nation 2001, Hamzah et al 2009, Tanyer & Ozturk 2014, Gu 2010, Sener 2015, Alahmadi 2018).

Moreover, high preference for L1 cognate-related determination strategies can also explain why many participants were able to find the meaning of words in higher frequency bands in the VST that were beyond their proficiency level; the reason is because these frequency bands contained many words with similar morphological forms in French (see 7.1) .French is a very influential language in the Algerian instructional context, taught as a first FL since primary school, and both English and French are taught side by side from middle school onwards. As already mentioned above, the French-related VLS might have helped the participants cope with vocabulary ignorance by guessing the meaning of unknown English words through superposition with similar French words that have similar spelling. As explained by Kelly (1990), the strategy of guessing from context based on the assessment of the morphological resemblance of words with forms in the L1 of the learners is usually a useful technique to use. Even though "false friends" do exist and can lead to inappropriate guessing, these are minor exceptions as true cognates are usually much more frequent. However, the second type of guessing from context that involves use of context instead of word cognates is believed by Kelly (1990) to be less efficient because it is more demanding in terms of target language knowledge. Indeed, being able to guess meaning using contextual clues usually requires the learner to understand the context, achieve at least 95% coverage, and have good reading strategies; all these aspects are usually acquired at advanced proficiency levels only (Huckin & Coady 1999). This latter type of guessing therefore needs to be associated with other vocabulary strategies to be fully efficient. It is important to mention that in the Algerian context, the L1 of the students is Arabic, even though between 5%

and 13% of the population in the four samples of the present study declared French as their native language. This can be explained by the fact that the use of French within the family, and outside, is so important for some students that they consider it as another L1 in addition to Arabic.

To consolidate the meaning of the lexical items encountered, the study subjects also use similar strategies, frequently preferring multimedia-related metacognitive strategies, as well as memory strategies implying memorization through the use of word forms (written and aural), personal experience, or already existing cognates, with a higher number though. When asked to add any strategies that were not mentioned in Schmitt's taxonomy, many participants from the four proficiency levels declare their particular attraction to multimedia devices as supports to improve and reinforce their overall vocabulary learning. Using smartphone applications, movies with subtitles, translations of songs, listening to audio books, or keeping phones and computers in English - when most of these devices are usually in French or Arabic - are some of the metacognitive techniques they stated to use in order to enrich their EFL input outside the classroom. These responses would confirm their strong reliance on multimedia devices that was noticed in the results of the VLS questionnaire, as these strategies were among the most frequently used (in the top-ten) among the participants of all four proficiency levels of the present study. In a FL environment like Algeria where English is used almost exclusively inside the classroom, university students - who are studying English with the purpose of getting an English language- related profession - might feel frustrated because of the lack of TL input. Besides the use of internet and TV, many subjects also mentioned the use of smartphones in order to practice English. One can question whether the sort of vocabulary that is acquired this way is vocabulary for "fast consumption" or for long-term retention. In other words, the frequency of use of such 2.0 devices might not necessarily lead to retention of new words, as stated by Ghouali & Benmoussat (2019), who declared that despite the fact that some teachers viewed social media as highly positive to learners as they assist them in

developing their writing, their findings highlighted on the contrary that the negative impact of such devices was more significant. However, the majority of studies undertaken with EFL students, and mostly Arabic speaking learners of English, advocated the positive impact of using phone applications such as WhatsApp to reinforce lexical knowledge as well as other varied technology-based resources including multimedia platforms (Bensalem 2018, Fageeh 2013, Yanguas 2009, Puspa 2018, Bensemmane & Boukhedimi 2017, Bouzar et al 2012, Bellalem et al 2018). Thus, the use of multimedia devices such as internet, English speaking TV channels, or smartphone applications as a source of authentic input can be a way for EFL students to compensate for the limited exposure they get in the classroom; this can also demonstrate their high degree of autonomous learning of EFL vocabulary.

The strong reliance on multimedia related strategies of these Algerian participants is in line with the findings of other studies undertaken with Arabic speaking EFL learners for whom strategies such as watching English speaking TV are quite popular and used as an important source for vocabulary learning (Hamzah et al 2009, Alahmadi 2018, Mahmoud et al 2017, Bensalem 2018, Fageeh 2013, Nirattisai 2014).

The psychological aspect of learning and more particularly strategy use and depth of learning is an element that needs to be taken into account when referring to vocabulary retention as the learner's degree of involvement and self-regulation while processing vocabulary leads to better retention of these words (Zimmerman 1998). As a matter of fact, achieving self-regulation implies motivational, metacognitive, and behavioural involvement of the learner in his own learning process, by adapting the appropriate methods and strategies that best fit his learning objectives in various contexts, and by self- monitoring his own performance to evaluate his progress. Learners succeeding in such self-regulation would have a greater flexibility and reactivity to their possible lack of vocabulary knowledge, and would therefore use strategies to resolve the issue. (Zimmerman 1998).

Apart from the general picture showing similar behaviours in the choice of VLS among the whole population of the study, there are some exceptions reflecting behaviours specific to some proficiency groups but not others. For instance, the first and second year samples declared using the metacognitive strategy involving learning vocabulary through mistakes made in tests and exams (Met 55*). This strategy did not appear on Schmitt's taxonomy, but was rather added by the researcher as a sub- category for Schmitt's "Testing oneself with word tests" (see Appendix 5). The reason behind this addition relates to the fact that we believed that sitting for a test or exam is in a sense a way for the students to test themselves on their vocabulary knowledge and consequently to learn from their own mistakes. In other words, these participants considered taking tests and exams as a learning experience.

The fact that the majority of students in the English department are thought to be test and exam-driven is certainly something that has been observed throughout the researcher`s teaching experience. Thus, teacher feedback involving correcting mistakes, including vocabulary mistakes, given after exams seems to be a technique frequently perceived by students to reinforce their lexical knowledge; and this was clearly displayed by the 1LMD and the 2LMD sample groups. In her study with a sample of subjects at the university of Tizi Ouzou (Algeria), Anber (2010) also found out that one of the most frequently used Metacognitive strategy reported by the participants was the one involving learning from their own mistakes.

Moreover, there is a consolidation memory strategy that is mentioned as highly frequent by the advanced group exclusively (3LMD); it is the one related to paraphrasing word meaning and putting it in their own words for better memorization (M40). The use of this strategy by this group, and not by the other proficiency groups, might indicate that these students have become slightly more proactive in developing their own cognitive references instead of simply counting on direct translation for instance, especially during their third year of the degree course.

When asked to add any other strategies used and not mentioned in Schmitt's taxonomy, many students added strategies that were categorised by the researcher as Memory strategies. These ranged from those involving connection of words to cognates to remember them, to those relating the words to retain to personal experience, contextual topic, or to their pictorial representation. Moreover, some participants mentioned saying the new words aloud as a technique to consolidate its meaning, giving the example of uttering the words in front of a mirror. In a foreign language environment where oral practice and interaction in the FL is quite limited, self-talk could be used as a strategy to practice the spoken form of words for better memorization. These memory strategies, added by the participants, did fit in the taxonomy of Schmitt, but another technique not stated by Schmitt was also mentioned. Some participants reported using a sort of post-memorization, i.e., trying to remember and retain new words after a while – before going to sleep, or a few hours after having learned the word – in order to test their retention of these new words. Such Memory strategies seem quite popular among students and can be a reflection of the relatively strong effect of a school system that heavily relies on memorizing and rote learning. It can also be argued that students have been used to this technique of memorizing the sourates of the Quran since childhood, and would therefore find memorization of new words quite successful.

The assumption of applied linguistics researchers is that the beliefs of learners regarding the FL/L2 learning process can somehow influence the learning strategies they use (Horwitz 1988, Wenden 1999). For instance, the fact that most participants in this study reported to view the reading and listening skills as the major vocabulary input providers might explain why their most frequently used discovery strategies were mainly related to guessing from context using textual clues, while the social strategies involving asking the teacher or classmates received less emphasis. This social strategy of asking the teacher or a peer in class may be viewed by some subjects as 'face-losing' or revealing one's ignorance in front of classmates, and some students might also

fear the teacher's negative reaction in relation to this ignorance; the thing which might be due to the anxiety provoked by classroom atmosphere. Besides, many participants indicated using multimedia devices as metacognitive aids to improve their vocabulary through the use of songs, movies, cell phone recording, etc; this confirms that they like to diversify their aural input resources when outside the classroom. In other words, being in a FL environment in which exposure to the target language is limited to the classroom, the participants might be using multimedia resources as additional sources of input to gain more vocabulary. This preference for multimedia devices might also be allocated to the young age of the participants which ranges between 18.8 and 21.9 years on average.

When asked to state their most important problems related to vocabulary learning in general, most difficulties mentioned by the participants of this study relate to an inappropriate use of vocabulary strategies, while few only are linked to external factors such as lack of vocabulary practice, self-confidence, teachers' assistance, and laziness to learn words. This suggests that the students are aware of the existence of vocabulary strategies and techniques that are meant to help them improve their lexical competence, but they are also conscious about the fact that they might not be using these strategies efficiently enough to achieve better vocabulary knowledge.

Studies investigating strategies use have demonstrated that while the benefit of using many strategies to improve language learning is acknowledged, many students tend to use a limited choice of strategies instead and usually in an inappropriate way. One of the best ways to help these students is believed to be strategy training (Nation 2001). As mentioned earlier in the study, in an EFL context like Algeria, English is used only in class time, and learners tend to rely on the material provided in class as their main source of input. Strategy training should therefore encourage these students to take control of their own learning by becoming more proactive in the learning process. Strategy training would also teach them how to use the needed strategies available in the most effective way to serve their learning objectives.

For instance, in a study undertaken with third year undergraduate students enrolled in the Teacher Training School of Constantine (Ecole Normale Supérieure) in Algeria, Benyahia (2015) investigated the effect of strategy training of specific VLS on the performance of a sample of ten low achievers who were selected as the ones with the weakest annual average marks. Her purpose in choosing only students who had vocabulary learning difficulties was to test the extent to which focusing strategy training on VLS such as contextual guessing, dictionary use, key word method or semantic mapping, would enhance the performance of these weak students. The training involved not only presentation of the strategies but most importantly their practice in the classroom. Results showed a significant improvement of the students' scores in activities involving these strategies, implying the importance of explicit teaching of VLS in the Algerian context to overcome major vocabulary problems and to lead to better lexical learning.

In light of the results obtained from the various research tools used for the present study, it appears that there is a moderate growth of the receptive written vocabulary knowledge of the participants from the level they start with at university, until the proficiency level they are expected to reach just before graduation. Moving from a vocabulary size of 5924 to 7500 words stands for a fairly acceptable growth pattern generally. However, for university students whose majority are preparing for an English language teaching degree course, such growth can be viewed as insufficient.

Besides, the results obtained from the vocabulary learning strategies questionnaire along with the open-ended questionnaire, demonstrate that the participants' behaviour in terms of VLS use did not considerably evolve from one proficiency level to another. Some progression was noted in the number of strategies used between the 1LMD Freshers group - before any university instruction took place - and the three consecutive years of the course. Such evolution seems to indicate a positive impact of English instruction on raising the students' awareness of the existence of strategies and techniques of various kinds

to help them cope with insufficient vocabulary knowledge. However, apart from the couple of instances mentioned above, the results mainly showed that in terms of the type of VLS used there was no significant evolution between the time the participants join the university and the time they are about to graduate. Thus, it was important to investigate the possible correlation between the vocabulary size growth and the use of the different VLS in order to demonstrate whether one construct has any impact on the other. This is a question that we attempt to find answers to in the next section of this chapter.

7.3 Relationship between Vocabulary Size Growth and VLS use:

The purpose in this section is to answer the third research question of the study:
RQ3: Is there a relationship between vocabulary size and students' use of VLS across the three years?

As mentioned earlier, the primary purpose of the present study is to shed light on the possible correlation between the receptive written vocabulary size growth and the use of VLS by EFL students at the University of Algiers 2 at different stages of their proficiency development. Investigating this relationship required first to analyse the two constructs individually before any superposition of results could be set up. Results obtained from the different research tools show a gradual growth of vocabulary size from the time the participants joined the university until the time they were about to graduate, although this growth can be considered as quite unsatisfactory given that the population of this study are aimed to embrace a teaching or another specialised EFL- related career that does imply high standard mastery of English, including its vocabulary. Besides, their behaviour in terms of vocabulary learning strategies seemed to be quite static as minor differences were observed in the VLS use among the four sample groups, while most preferred strategies - discovery and consolidation of word meaning - were common to all proficiency groups. Thus, despite the very limited evolution of VLS use from one level to another, it was important to investigate the relationship between the two variables under study to check whether there were

any particular strategies, or categories of strategies, that were conducive to growth of vocabulary size.

Results show that apart from a moderate correlation for the 1LMD Freshers and the 3LMD samples, there was no significant correlation between the vocabulary size of the participants and the six categories of VLS used. Indeed, the linear analysis of the constructs revealed only a relatively moderate correlation between the use of metacognitive strategies and the vocabulary size of the newly enrolled participants (1LMD Freshers group), and also the same degree of correlation between the use of determination strategies and the vocabulary size of the advanced 3LMD sample. In other words, despite the fact that the two categories of determination and metacognitive strategies were reported to be the most frequently used among most participants, they can hardly explain the variation in vocabulary size for these two groups, while no correlation was observed between these two categories at the intermediate level of English proficiency.

Thus, considering the VLS in terms of the six categories suggested by Schmitt, it seems that there is a small degree of correlation with the vocabulary size of the participants, whatever their proficiency level. However, when analysing this correlation in terms of the individual strategies used, a few instances of notable correlations emerged. For instance, taken as a global category, the metacognitive strategies showed only an average correlation with vocabulary size among the Freshers sample. But when taken separately, some metacognitive strategies emerged as having a high correlation and thus explaining the significant growth of vocabulary size of these participants. Strategies involving the use of internet to search for information or to communicate with others using English seemed to have a more significant impact on the vocabulary size growth of the participants who had just joined the university. These results align with the findings presented in the previous chapters 5 & 6 demonstrating that these two strategies (Met 54* and Met 54**) are among the most frequently used consolidation strategies, along with additional multimedia-related devices. As already noted, these findings are in line with a few other studies conducted in EFL contexts that also

found a correlation between the use of English-speaking media and the growth of vocabulary size (Hamzah et al 2009, Waldvogel 2013, Mahmoud et al 2017, Alahmadi 2018).

The average age of the participants in the current study ranges between 18.8 and 21.9 years old; between 66% and 80% of them declared having access to internet at home, but even if multimedia-related strategies were frequently used by most participants, they were conducive to better vocabulary growth only for the Freshers students. An important aspect to mention is the fact that this group consists of students who had just joined the university from high school and were tested at the beginning of the academic year- before any university instruction had taken place - and therefore this strong correlation mentioned above could not have been influenced by the English degree instruction but rather by other external factors such as the instruction they received in high school, or their motivation in learning English in and outside the classroom. One possible explanation might be that these freshers come from high school where English is only a school subject of their mainstream education; thus, they feel the necessity to cope with lack of exposure to the TL - and therefore lack of vocabulary knowledge - through the use of multimedia as source of input to fill these gaps. At university, English becomes both the main subject of study and the language of instruction - except for some humanities courses such as Sociology or Philosophy which are done in Arabic. Therefore, students are exposed to English input which is much richer and more diversified. Their high motivation to study English might have acted as a driving force to enlarge their vocabulary through a variety of sources of input, granted that learners' motivation plays a crucial role in achieving success in language learning (Ur 2002, Sener 2015). However, although a significant majority of participants reported using multimedia-related devices - including internet – frequently and across the three years of the English degree course, these strategies did not seem to contribute significantly in the growth of their vocabulary repertoire. The 1LMD Freshers sample was the only one to show a strong correlation between a specific strategy and vocabulary size; all the other samples revealed either average or low correlation. These findings

are in line with a number of studies which also reported minor to non-significant correlation between VLS use and vocabulary size (Seyed et al 2012, Ansarin et al 2012, Kirmizi 2014, Tanyer & Ozturk 2014, Sener 2015, Maghsoudi & Golshan 2017, Mahmoud et al 2017).

Despite the popularity of the strategy of guessing from context among the whole population of the study - reported to be the most frequently used - no significant correlation was found between this strategy and vocabulary size for any of the four sample groups, which might reflect a lack of efficient use of this strategy. The strategic knowledge involved in guessing from context implies "conscious control over cognitive resources" (Nagy 1997:65); it refers to the idea that if learners are taught explicitly strategies to help them guess, they would become better guessers. It is clear that practice in the gradual and separate steps involved in guessing, such as analysis of parts-of-speech, roots and affixes, and context is likely to assist students in using the guessing strategy more effectively (Nation 2001).

When comparing the correlations at the four proficiency levels, one can notice that while in the first two groups (1LMD Freshers and 1LMD) the individual strategies that showed correlation with vocabulary size were quite limited in number, the other more proficient groups (2LMD and 3LMD) used a number of strategies that was more significant. For instance, within the sample group of third year students, there were 7 strategies (mostly determination and memory) that showed average correlation with vocabulary size, and also 7 others (mostly memory and metacognitive) that showed low correlation. These strategies included determination and memory strategies based on analysis of word form, L1 cognate and guessing from context with an average rate, while strategies such as the metacognitive strategy involving internet use to search for information showed low correlation only.

This specificity among the advanced participants might suggest that these students use these specific strategies slightly more adequately than the less proficient groups, even though they contributed only moderately to the growth of

their vocabulary size. In other words, the advanced students do use more vocabulary strategies than the lower proficiency groups, but the way they use them is not effective enough to lead to significantly better vocabulary size growth. These findings contrast with other studies in which the frequency of VLS use was found to correlate with the vocabulary size of the participants (Ansarin et al 2012, Gu 2010, Baharudin & Zwawi 2014). Successful learners are assumed to be the ones who have a frequent and active use of VLS leading to better vocabulary learning (Ahmed 1989, Sanaoui 1995). Such active use of strategies seems to reflect the effective organization and amount of time devoted by the learner to his language learning.

In a study investigating the relationship between VLS use and vocabulary size of a large number of EFL learners learning Spanish at different levels of proficiency, Waldvogel (2013) found out that this relationship was significant only among the advanced sample, while the other lower proficiency groups showed no correlation. The strategies that were found to predict a high vocabulary size among the advanced adult learners were the consolidation social, cognitive and metacognitive learning strategies, a fact that was previously noted by Schmitt (1997) as well. Thus, the results of Waldvogel's study (2013) imply that the higher the proficiency level of the learners, the better they could use VLSs adequately and therefore self-manage their own vocabulary learning process. However, in the present study, the emergence of advanced level users of strategies that show significant correlation with the vocabulary size was only moderately reduced. Rather, the participants in the final year of the undergraduate English course did not seem to be using specific cognitively demanding strategies that were conducive to higher vocabulary breadth; and their vocabulary size did not evolve significantly during that third year as the average gain was of 257 words only. In the literature, it is commonly reported that the more proficient the learners are, the more complex and cognitively-demanding strategies they use (Schmitt 1997, Ahmed 1989, Gu & Johnson 1996, Fan 2003, Tseng & Schmitt 2008). It is true that the determination strategy of contextual guessing is reported by the present participants to be the most frequently used;

however, its use does not seem to have led to better vocabulary knowledge. Thus, even though some researchers declared that the more proficient the learner is in the TL, the more successful his guessing of unknown words can be (Qian 2005, Nassaji 2006), the participants in the present study do not seem to be using the guessing strategy appropriately even at an advanced proficiency level.

Thus, the findings of the present work seem to imply that these Algerian undergraduate EFL students are not effective enough in managing their vocabulary learning process -particularly through VLS use - to enlarge their lexical repertoire significantly as they move from one proficiency level to the next. Apart from the high correlation of the metacognitive strategy involving the use of internet with vocabulary size among the newly enrolled participants, results of the whole population of the study showed no significant correlation between the two constructs being measured. In other words, the VLSs that most participants declared to use had little to no impact on their vocabulary size growth. While this lack of correlation could be predictable for the less-proficient students, this result is quite surprising for the advanced group as these students were about to complete their undergraduate degree course in EFL (Licence). Previous research studies have demonstrated that the effective use of VLSs is a cognitive and metacognitive process that usually requires demanding and high cognitive capacities that only learners at advanced levels possess (O'Malley & Chamot 1990, Laufer 1997). Less-proficient learners on the other hand tend to use their cognitive abilities for low demanding linguistic processes because they lack the metacognitive skills necessary for high demanding processes such as effective VLS use (Nation 1997, Qian 2002). In other words, EFL students might be using a variety of VLSs but still not be successful in learning the language because they might not be able to make effective use of these strategies in a metacognitive way to relate VLS use with language use in general; and this gap might be due to lack of experience and proficiency (Nation 1997, Qian 2002, Ellis 2002). However, the fact that even the participants who are considered as advanced in the present study have not demonstrated a significantly effective and

correlated use of VLSs with high impact on their vocabulary size is also unexpected as these participants are assumed to have reached a quite advanced proficiency level to be able to use high cognitively demanding strategies in an efficient way.

As noted earlier, in terms of English language learning experience, the participants of the present study had learned English of at least seven years: four years in the middle school and three years in the high school. Thus, they were expected to be more skilful in their overall English vocabulary and strategy use owing to their relatively long learning experience. Studies in the field of learning strategies have demonstrated that lack of EFL experience can lead learners to use the same learning strategies even if these strategies do not help them improve their knowledge (Anderson 2005). However, in the present study, students' use of the same VLS might suggest that the seven years of EFL experience before university enrolment have not significantly helped them in developing a more efficient VLS behaviour. Most importantly, English instruction at university also seems to have had little impact on developing successful use of VLS, as the students kept using the same strategies generally from one proficiency level to another. It is clear that these strategies have not significantly contributed to vocabulary growth. Thus, one might question the degree of influence that the undergraduate English degree course had on developing the students' autonomy in vocabulary learning.

Given that the findings of the present study did not reveal significant correlation between the two variables of vocabulary size growth and VLS use, one might consider that the vocabulary size growth - though quite moderate - was possibly impacted by other factors than VLS use. Some scholars have advocated the influence of external and learner-related parameters such as motivation, anxiety, experience with the TL, EFL/ESL context, age or gender on vocabulary development (Gardner 1985, Gass & Selinker 2008).

7.4 VLS use among high proficiency students with large vocabulary size:

This final section of the chapter aims to answer the last research question addressed in the present work:

RQ4: What VLS do high proficiency students use that contribute to the growth of their vocabulary size?

When analysing and interpreting the results obtained from the various research tools used for the present study - and apart from a few exceptions mentioned in the previous sections of this chapter - there were no significant features that emerged from the four sample groups. Thus, the fact that the correlation described above was found non-significant led us to question what really makes the difference between high and low achievers in terms of vocabulary knowledge. In an attempt to find an answer to the fourth research question, the population was narrowed down to include only the participants with a high vocabulary size - a score of 7000 and above on the VST - as their vocabulary knowledge was believed to reflect their overall EFL proficiency. The study of the correlation between the two constructs among that focused group showed that these students used no VLSs that were conducive to high vocabulary size. In fact, there were some high correlations noticed between some strategies within the same categories, even though these correlations were also observed when studying the four sample groups previously. Moreover, in the top-10 of VLSs that the high proficient group reported to use, there were also many similarities with the top-10 classifications among the whole population of the study whatever their proficiency level. Thus, it is clear that the high proficient group who had a large vocabulary size demonstrated no particular VLSs behaviour that could explain their high scores at the Vocabulary Size Test.

However, among the top-10 preferred strategies - and apart from the majority that were similar to the other participants of the study - there were four strategies that were unique to the high proficient participants. For instance, the determination strategy involving analysis of parts of speech while trying to

discover the meaning of unknown words seemed to be frequently used by the participants with high vocabulary size.

In the literature on strategy use, bottom-up processing related to the strategy of guessing from context relies on the linguistic characteristics of the word such as analysis of part of speech, its relation with other words in the context in hand, as well as its relationship in terms of conjunctions, and this processing is said to provide better chances to learn vocabulary than top-down processing involving background knowledge (Haastrup 1989, Nation 1993). Schmitt (1997) also stated that a learner is able to guess the meaning of unknown words if he analyses the part of speech, roots or affixes of the unknown word, links the new words with cognates in his mother tongue, or when he tries to infer meaning from context; success in such practices is said to be higher as the students get to higher proficiency levels in the TL. In other words, practice in the gradual and separate steps involved in guessing, including analysis of parts of speech, could assist the learners in using the guessing strategy more effectively (Nation 2001). Thus, as the learners mature and become more proficient in the TL, they are assumed to be using analytical strategies like analysis of part of speech and guessing from contextual clues (Schmitt 1997).

The memory strategy involving connection of a new word with an existing cognate also seemed to be popular among the students with a large vocabulary size in the present study. The fact that many words included in the Vocabulary Size Test have resembling forms with their equivalent in French might explain why the high proficiency participants were able to identify their meaning even when they were in the low frequency bands. In fact, this identification of French-related words was not proper to this sample group but rather to the whole population of the study. However, only this high proficiency group mentioned frequently using the memory strategy of connecting new words with their existing cognates; this might indicate that these students have a better awareness of this cross-linguistic influence.

It is commonly agreed that the closest the L2 word is to the learner's L1 cognate, the easiest it is to learn (Webb & Nation 2017). Thus, when the L2 word has a similar orthographic form as in the L1 of the learner, this word is easier to understand, learn and retain (Groot 2006). Besides, considering that around 60% of the words in English come from French, Latin and Greek (Webb & Nation 2017), one can assume that learners with knowledge of these three languages would have some advantages when facing the English words that come under this category of borrowing.

Other memory strategies through which the participants relate the new words with their synonyms, antonyms or to personal experiences were among the most frequently used. The important role that memory strategies can have on vocabulary learning is a fact that has been recognized in the literature (Oxford 1990, Schmitt 1997), as they enable the learner to organize mental information and previously learned knowledge in a way that allows for memorization and retrieval (Schmitt 1997).

These four strategies, even if limited, might reflect a VLS behaviour among these high proficiency participants that was slightly specific to them; however, this particular behaviour did not seem to be conducive to high vocabulary size as no significant correlation was found between any of these strategies and vocabulary size. Moreover, it was noticed that all four strategies were cognitively low demanding, which might suggest that these participants with the highest vocabulary size did not have a very good mastery of VLS use that would lead to effective vocabulary gains. Indeed, the fact that the strategies specific to this group were either determination or memory strategies contradicts the general assumption in the literature according to which successful learners are believed to be using more complex and sophisticated cognitive, metacognitive or social strategies appropriately to achieve vocabulary acquisition (Ahmed 1989, Gu & Johnson 1996, Schmitt 1997, Ellis 2002, Fan 2003, Tseng & Schmitt 2008).

Thus, one possible explanation for that situation might be that there were other external factors, apart from VLS use, such as a higher exposure to TL input outside the classroom leading to a larger number of words learned; the latter seem to have allowed these participants at different proficiency levels to develop their lexical repertoire to reach 7000-word families and above. In terms of English instruction, throughout the three years of the undergraduate course, even the participants with high vocabulary breadth did not seem to have developed effective use of VLS.

Conclusion

From the perspective of vocabulary and strategy learning and use, the fact that no clear correlation pattern was found between VLS use and vocabulary size growth among the sample of undergraduate students did not allow for identification of the VLS that are the more prompt to develop adequate vocabulary size. Yet, the findings of the present study are insightful as they confirm the complexity of the vocabulary learning process and suggest that these Algerian students seem to have difficulties not necessarily in the use of VLS, but rather in making this use efficient in a way that serves the growth of their lexical knowledge from one proficiency level to another. The fact that the VLS use pattern did not significantly evolve from the time the students joined the undergraduate course until just before they graduated, does reflect an issue with VLS use. These findings should therefore encourage teachers and syllabus designers to focus on building up a strong knowledge base among students about the different VLS available to them and to teach them how to choose the ones that can best serve their individual styles and needs in an effective and efficient way.

These findings also suggest that English vocabulary learning within this undergraduate course is not as effective as it should be at university level. In terms of VLS use and vocabulary learning process in general, most students seem to lack the autonomy that would allow them to develop strategic behaviour as

they go to upper proficiency levels and therefore to achieve larger vocabulary knowledge. In this context, it is important to provide the students with appropriate learning tools and to assist them in being more proactive through instruction. As such, we believe that the English undergraduate curriculum could be improved to give the vocabulary component more focus. Between 70% and 83% of the participants of the present study declared preferring vocabulary to be directly and explicitly taught within the English curriculum. If this high percentage can be comprehensible at the early proficiency levels of the course, it was quite unexpected to find that no less than 83% of the third-year participants expressed their preference for direct vocabulary instruction. Even advanced learners - who were about to graduate- still felt lack of confidence and demonstrated lack of autonomy in terms of learning and mastery of English vocabulary. Thus, the role of the curriculum would certainly be to work on this gap right from the early stages of the course so that students have more opportunity to develop their autonomy and VLS use effectively in a way that would impact positively their vocabulary size gains.

It is generally agreed that language use is primarily a matter of words, and that the language ability of a learner of a FL/SL is significantly predicted by the size of his vocabulary repertoire (Gu 1996). Besides, given that one of the major factors that can lead to success in FL vocabulary learning is the use of vocabulary learning strategies, researchers have advocated the importance of spending more time in the classroom on teaching strategies rather than on the teaching of individual words (Nation 2001).

The necessity for any EFL/ESL learner to consciously optimize and develop his vocabulary knowledge is an area that many researchers in the field of SLA have advocated since the 1970s (Singleton 1999, Schmitt 2000, Nation 2001). In this perspective, a vocabulary learning strategy is supposed to be complex involving gradual learning processes, to offer the possibility to choose from many options, and also to benefit from training in order to be efficient and lead to better vocabulary development (Nation 2001).

In light of the conclusions reached from answering the four research questions, it is clear that there is much more to vocabulary size growth than VLS use for Algerian EFL undergraduate students. Thus, it is important to investigate other variables that might have influenced either the receptive vocabulary size growth or the use of VLSs of these students; such pedagogical implications as well as further research perspectives are addressed in the conclusion of this work. Moreover, some limitations of the present study are acknowledged.

CONCLUSION

General Conclusion 254
Pedagogical Implications 257
Limitations of the Study 265
Scope for further research 269

General Conclusion

According to psycholinguists, learning and processing a language in any FL context is primarily based on knowledge of its lexicon. A situation in which one is unable to find the words to express oneself or to understand what others try to transmit, is probably one of the most frustrating experiences for a speaker of another language. Given the necessity for any FL students to develop large lexicons in order to communicate adequately, their vocabulary growth patterns is an area that should concern anyone interested in the learning process. It is important for students, instructors, researchers and material designers to know whether students are gaining enough vocabulary as they progress in their language studies. This sort of information can clearly help better planning and evaluation of language curricula and can lead to possible adjustment of the learning/teaching methodologies. Moreover, it is also important to diagnose the difficulties that might hinder this growth pattern, as well as the elements of language learning that can best serve this vocabulary development.

On the basis of my own teaching experience, the vocabulary component was identified as a major source of difficulty for a large number of students in the English Department of the University of Algiers 2, whatever their proficiency level. Drawn by the desire to investigate some aspects of their lexical problems and basing my assumptions on a possible relationship between vocabulary size growth and VLS, the present study has attempted to shed light on the way students evolve in terms of vocabulary knowledge and VLS use from one proficiency level to another, and how these two variables correlate. The purpose was to assess the growth patterns of both vocabulary size and VLS use from the beginning of Year 1 to the end of Year 3 of the undergraduate students, as well as a possible correlation between them throughout these learning stages. Results are thought to show whether the present English curriculum is contributing to the development of the students' vocabulary breadth and strategic competence on the one hand, and to demonstrate if there are any particular strategies that are conducive to better vocabulary size growth.

Findings demonstrate that even though the growth pattern in vocabulary size is acceptable, predictably increasing, and in line with some studies undertaken in different contexts at home and worldwide, the overall vocabulary breadth of the participants in the current study can be considered as moderate when compared to the needs of these students who are being prepared for an EFL teaching career which requires a high standard of language mastery, including its vocabulary. Moreover, the facilitative influence of knowledge of the French language (the first SL of the Algerians) is largely observed among the students at all four proficiency levels, as similar orthographic forms allow them to understand words that are beyond their proficiency level.

In terms of VLS use, a comparison between the number of strategies used at the four proficiency levels demonstrates an increase in strategic awareness after the first year of the English degree course, possibly reflecting a positive impact of the Study Skills course in Year 1 which emphasizes instruction of learning strategies, a concept that is probably new to them. However, the number as well as the types of these strategies remained approximately identical throughout the three years of the undergraduate course. In other words, the students seem to have kept similar VLS behaviours when moving from a low level to a higher one, and to have globally a significant preference for strategies that are not very cognitively demanding such as some determination and memory strategies relating the new words with L1 cognates, to synonyms and antonyms, or to personal experiences.

Besides, there is overall no significant correlation between vocabulary size growth and the use of specific VLS among most of the undergraduate participants, which implies that no strategies seem to lead to better vocabulary knowledge in this context. The growth pattern of vocabulary breadth seems therefore to be possibly influenced by other factors, as noted earlier, that are worth investigating in further research. Moreover, the static behaviour in VLS preferences as well as the non-significant impact of strategy use on vocabulary development seem to suggest that the major lexical difficulty of these students - whatever their proficiency level - is mainly related to inefficient use of VLS.

One of the key elements that emerges from the VLS use of these EFL subjects is their heavy reliance on multimedia-related strategies and devices as supports to improve and reinforce their overall vocabulary learning; and the use of internet seems to be more significantly correlated to vocabulary size growth for the newly-enrolled freshers. This aspect needs to be exploited and taken into consideration by instructors and syllabus designers as using multimedia resources in and outside the classroom - with an appropriate monitoring to minimize negative impact - is an interesting tool that can contribute positively to language learning in general and vocabulary development in particular. Moreover, one of the aims of the Algerian Ministry of National Education is to encourage the teaching of English at all levels in Algeria so as to support students' access to technological and cultural spheres across the world (Bensemmane & Boukhedimi 2017).

Even though the advanced students as well as the ones with the highest vocabulary size have a few non-significant specificities in their choices of VLS, the whole population of the study demonstrates approximately similar profiles in terms of vocabulary learning strategies use. It is true that the findings of the present study do not provide a clear picture of the VLS that are the most conducive to vocabulary size growth among Algerian EFL students, nevertheless, they have enabled to uncover the complexity of the vocabulary learning process in an EFL academic context and the need for more empirical research in the field in order to broaden the knowledge base in a way that best serves the interests of Algerian EFL students in terms of language learning in general and vocabulary development in particular.

In light of these findings, some pedagogical implications as well as suggestions for further research are addressed below.

Pedagogical Implications

Taking into account the findings discussed in the previous chapter, a number of pedagogical implications for the EFL classroom have been identified, involving both vocabulary learning and teaching.

The important role that vocabulary size plays in L2 learning overall is now a fact established in many recent studies, as well as the crucial need for any EFL learner to have a large vocabulary size in order to be able to function appropriately in English (Meara 1996, Laufer 1997, Laufer 1998, Schmitt 2000, Nation 2001, Nation 2006, Lu 2008, Schmitt et al 2011, Hu & Nation 2000, Schmitt 2011). In fact, these studies have demonstrated that there is a significant correlation between students' vocabulary size scores and the scores obtained in general proficiency tests, which implies that vocabulary size is a strong indicator of overall achievement and success in the TL. Thus, measurement of both receptive and productive vocabulary size is an area that teachers and curriculum designers should focus on, as it allows to evaluate not only the vocabulary knowledge of the students but also their overall proficiency in the TL. Such information would help diagnose when there is a clear difficulty in vocabulary learning, and would encourage people involved in this process (teachers and curriculum designers) to try and find solutions and help students effectively.

Tests that are designed to assess vocabulary breadth should be used as diagnostic tools when teachers notice that students have difficulties in language skills, as poor vocabulary is quite often the cause of low reading or writing proficiency. In the Algerian educational context for instance, tests such as the VST (Nation 2007) can be used by teachers teaching language skills at the beginning of each academic year in order to identify the vocabulary breadth of the students and to assess if the content of the course does meet their needs in terms of vocabulary development.

Except for the words that had similar orthographic forms to their equivalent in French and which many students were therefore able to find the meaning of, most students were found to know very few words in the low

frequency bands of the VST. One of the objectives of a reading or writing course, for instance, would be to help students develop appropriate vocabulary knowledge and enlarge their vocabulary breadth. However, given the large number of low frequency words, it is unrealistic to expect teachers to teach all these words in the classroom. Besides, low frequency words have limited coverage in the academic texts the students are exposed to, even outside the classroom. Thus, another objective of such course would be to help students to develop efficient strategies that would allow them to understand and learn the low frequency words through guessing from context for example, as such strategy training would be less time consuming and more efficient than direct teaching of these words in the classroom (Nation 1990). The purpose behind teaching students such strategies would be to provide them with the appropriate tools that would enable them to carry on learning new words and increase their vocabulary size outside the classroom and to become autonomous and life-long learners.

It is axiomatic that the shift from a teacher-oriented to a learner-oriented methodology has put much emphasis on the need for the learner to take responsibility for his own language learning and to become an independent learner (O'Malley & Chamot 1990, Oxford 1990). However, in light of the results of the present study, it is clear that the vocabulary knowledge of the undergraduate students does need assistance from teachers, and more vocabulary-based curricula need to be designed. Indeed, even in the communicative approach, in which priority is given to vocabulary learning, students need to be taught how to become autonomous through the efficient use of VLS. Knowing about the strategies available to them is not enough; students need to have proper strategy training that teaches them how to choose the appropriate strategies that can fit their needs and learning styles and how to use them in the most effective way. This is especially relevant as most students in this study - including the advanced sample group - considered that their lexical difficulties are related to their VLS use and expressed the need for the vocabulary

component to be taught explicitly in the classroom. But strategy training does not involve students exclusively; it also implies that teachers get trained on the principles of strategy instruction in order to make the task easier for the students (Oxford 1990).

Before engaging in strategy training, there are some aspects to consider and reflect on to make sure the training fits the situation and context it is used in (Cohen 1998). Firstly, an analysis of the students' needs, styles and difficulties in terms of vocabulary knowledge has to be done while taking into consideration the material and human resources that can be allocated by the Department for this training. In this perspective, further research investigating the VLS use of the Algerian undergraduate students (in the University of Algiers 2 as well as in other universities in Algeria) would contribute in building up a full picture of their needs. For instance, the findings of the present study have put into light the need to exploit the metacognitive multimedia-related strategies, contextual and textual guessing, as well as the French cognates-related strategies in order to show the students how to use these strategies efficiently. According to Cohen (1998), it is also important to consider ways to integrate strategy training in various language tasks in a way that gives the student different contexts in which strategies can be used, and to teach him how to use them to fit specific preferences and situations. Giving the students the possibility to choose the strategies that fit with their styles and which they prefer to learn would increase their motivation, which is a driving force in any strategy training (Cohen 1998). For example, the Study Skills course already includes a general awareness-raising lesson aiming at explaining to the students that there are strategies and techniques that are available to them and which they can make use of in order to improve their language learning. It would also be interesting to add specific activities to practice some focused VLS to put theory into practice. The more practice the students have with strategy use, the more chances they would use these strategies spontaneously for different learning tasks after the training is over (Cohen 1998).

It is generally acknowledged that the similarity between the languages already known by the students and the TL does make vocabulary learning easier, especially when the two languages are typologically similar and have resembling orthographic or auditory forms (Meara & Buxton 1987, Meara & Jones 1990, Meara 1993, Fraser 1999, Kellerman 1977/1983, Odlin 1989, Ringbom 1992/1987). The findings of the present study have shown that most students were able to recognize the meaning of some low frequency words that were beyond their expected proficiency level because these words had similar orthographic forms as their French equivalents which, obviously, is not their L1, but it has a "special status" of L1 for many speakers. Considering the fact that French is the first foreign language in Algeria with a significant influence on most aspects of life, the students already had cognates about these words. It is important to mention that since the Vocabulary Size Test written format was used in the present study and the participants were required to read the words and find their meanings, thus the visualisation of the English words which spell like French might have helped trigger the students' cross-linguistic knowledge. However, this process would have possibly been different if these English words were pronounced orally, granted the complexity of the French sound-spelling system. Studies investigating the possible transfer from French to English or vice-versa, by Algerian EFL students at the level of listening or speaking /pronunciation skills, would provide insightful information about this cross-linguistic phenomenon in relation to vocabulary learning and its impact on vocabulary teaching.

There is no doubt that cognates are a useful source for rapid vocabulary acquisition and development in language learning, as stated by Sikogukira (1993). Therefore, the possible facilitating effect of French cognates can be an area that instructors and syllabus designers can make use of in order to adjust and maximise the vocabulary learning process, as raising learners' awareness of morphological, phonological and structural similarities or differences between languages can facilitate the recognition of cognates and consequently lead to easier lexical learning (Molnar 2010, Hancin, Bhatt & Nagy 1994). The positive

impact of explicit cognate-based instruction on vocabulary learning has been defended by Molnar (2010) specifically who stated that this technique aims at encouraging learners to pay attention to cognates - something they may not do consciously - which can lead to lexical learning. Moreover, raising learners' awareness about the morphological forms of words is found to help them recognise cognates and achieve better vocabulary learning (Hancin-Bhatt & Nagy 1994). These are some instances of techniques that can be used by teachers in the language skills courses in order to make the most of the similarities between English and French, for instance, in a way that can assist better vocabulary learning.

The fact that most participants of the present study reported using multimedia devices as a way of improving their understanding and consolidation of vocabulary might be an indicator of another source of input that could have a role in the growth of their overall vocabulary size. Thus, being in a FL environment in which exposure to the target language is largely limited to the classroom, the participants might be using multimedia resources as sources of input other than the classroom to gain more vocabulary. Findings of the present study also demonstrate that the metacognitive strategy involving the use of internet to search for information or to communicate with other people had a positive correlation with vocabulary size growth among the low-intermediate students who had just enrolled in the undergraduate course. It seems therefore quite useful to encourage students at different proficiency levels to use such multimedia devices outside the classroom. to improve their vocabulary knowledge. Given that most students declared having access to internet and English language TV channels, teachers might consider giving more assignments involving the use of external sources of information. For instance, students may be asked to summarize a film, a programme, or a specific TV show they watched on television. They could then come to class and discuss them with the teacher and peers. They could also listen to specific songs, focusing on the vocabulary in the lyrics. There are a large number of free access recordings available online

that are created for English language learning. More and more teachers are using these English learning supports today. As present-day students are extremely attracted and motivated by multimedia and social networks, finding ways to use these 2.0 tools that the 21st century technologies afford us is worth considering. In addition to classroom learning, digital learning can successfully serve vocabulary learning. For example, the teacher can ask students to allocate a specific amount of time on social media to converse with other EFL learners worldwide in order to diversify their input and practice more social strategies, as this category of strategies is reported by the students to be the least frequently used. The teacher would for instance give the students a specific (written) productive task that he can assess in order to integrate it fully into the learning process. Another way to trigger better social strategy use can be through organizing pen pal connections between EFL students from different classrooms, or even different universities in Algeria, by means of internet for example. If supervised by the teacher and used with the purpose of learning, such digital tools can be very beneficial in diversifying and developing the vocabulary knowledge of EFL students.

The difficulty that was the most frequently stated by the whole population of the present study relates to memorization of lexical items. Statements such as "... I don't remember new words when needed" or "...I forget a word when another comes" seem to demonstrate the difficulty for those participants to recall words they have already encountered possibly because the consolidation of their meaning was not done effectively. However, when looking back at the results of the VLS questionnaire, many participants from all four sample groups declared using Consolidation Memory strategies quite often. Strategies involving memorization based on the form of the word (written or aural), loud repetition, as well as link with L1 cognate, personal experience and synonyms were reported to be frequently used. As noted earlier, it seems that the students' problem lies in finding an efficient way of using such memory strategies with the purpose of consolidating word meaning. It is true that the language learning curriculum

nowadays is more focused on developing competences through a communicative approach. However, from the students' perspective, basic and simple processes such as memorization are still viewed by many as a key aspect they need to develop to have better lexical knowledge.

Considering the static VLS behaviour of the students over the three years of study, and given the fact that the only significantly high correlation between a specific VLS and vocabulary size was observed among the newly enrolled sample group only might indicate that the English undergraduate instruction in did not seem to play a significant role in the participants' VLS behaviour. In fact, this group of freshers participants were tested at the beginning of the academic year, before any university instruction took place. Thus, the high correlation showed between internet-related metacognitive strategies and vocabulary size was possibly related to other external factors, such as previous instruction they received in high school, or their high motivation. However, when looking at the three other sample groups who received one, two or three years of English instruction, one can notice that there seemed to be very little change in terms of VLS behaviour that could lead to better vocabulary learning. The vocabulary learning process of these participants did not show any significant correlation between VLS use and vocabulary size, while their vocabulary breadth grew only moderately. Thus, one might question the degree of influence that the undergraduate English degree course had on developing the students' autonomy in vocabulary learning. It might be worth re-evaluating the English curriculum in terms of vocabulary learning by giving more emphasis to explicit teaching of VLSs, as strategy training can lead the students to better and more effective use of the various vocabulary strategies they have in hand, and therefore to become more autonomous in their overall EFL vocabulary learning. One of the advantages of the LMD curriculum is that it is a dynamic program that allows for changes, adjustments and additions to meet students’ needs. Indeed, since its implementation at the English Department, the name as well as the content of the different courses have been reviewed and revised over time in order to meet the

department's resources and students' needs. Therefore, it would not be excessive to consider the possibility of adjusting the curriculum in a way that puts more focus on explicit vocabulary teaching and VLS training. One of the findings of the present study is the significant jump in the number of VLS used by first year students at the end of the academic year compared to the number of strategies used before any university instruction took place (from 28 to 43 VLS). This jump may reflect a rise of awareness about learning strategies as this concept is usually new to freshers, and the Study Skills course in Year 1 might have been at the origin of this rise of awareness. Therefore, in addition to introducing the concept of learning strategies to first year students, it would also be worth having a proper strategy training program within the Study Skills course, which would teach students how to use the different strategies in an efficient way, as well as how to choose the ones that best fit their learning styles and needs. In this respect, further studies investigating the impact of strategy training on the growth of vocabulary size and depth as well as on overall vocabulary learning would provide interesting insights.

Despite the recognized importance of vocabulary learning and the fact that EFL students and teachers view it as a crucial component to focus on in the classroom, the amount of material available to guide teachers on how to effectively design a vocabulary learning programme that fits the needs of the students is still insufficient (Webb & Nation 2017). The reason behind this lack is that even though significant research has been undertaken in this field, it does not always lead to practical and concrete resources for the classroom, and that more focused research is needed on how to apply findings in the language classroom.

Limitations of the study

Throughout the present study, we attempted to reduce any internal or external factors that could have influenced or distorted the results. The purpose was to ensure maximum reliability and validity, within the limits of the given context and possibilities, in order to obtain results that reflect the intended construct. However, despite our attempts, we are aware of the existence of some theoretical and practical limitations which we thought important to mention.

The purpose of the present cross-sectional study was to investigate the growth pattern of both vocabulary size and VLS use from the time the students joined the university until their last month before graduation. For that purpose, the same research instruments were administered to different sample groups of four different proficiency levels, ranging from low-intermediate to advanced levels. However, given that the proficiency levels chosen for this study were at three different study levels, we did not follow the same group of participants over three academic years. Instead, for each proficiency level a sample was randomly chosen to represent around 10% of the whole population of that given year of study. In other words, during the academic year 2013/2014, three groups were selected: one first year (1LMD), one second year (2LMD) and one third year (3LMD); and the research instruments were administered at the end of the academic year just before final examination. Besides, during academic year 2014/2015, another group was selected and added to the overall sample, representing the newly enrolled first year students before any instruction started. The fact that we did not follow the same group over three years but rather different groups at different stages of their learning process might be considered as a limitation for the present study. As a matter of fact, for administrative reasons, a longitudinal study would have been more difficult to conduct because students keep changing groups and thus tracing them over three years would have been quite complicated given the huge number of students enrolled each year. Moreover, to test the students, we used our personal relationships with colleagues so as to get collaboration of the students to sit for a test that took

about 90 minutes; this helpful element would have been lost if we had to follow the same sample group as the teachers also change groups each academic year. In the future, it would be interesting to conduct a longitudinal study following the same students at different stages of proficiency and investigate how their learning process evolves from one year to another; such study may yield different results and increase the validity of the findings.

From my teaching experience, I noticed that a lot of students were driven by test marks and rarely by learning pleasure, and that attracting them to participate in a research test would have been difficult without showing them that there was something "in it for them" (Schmitt 2010). Thus, it was decided to tell them that the test through which data were collected in the present study was going to be scored and would therefore contribute to their final marks. Even though this information was not quite true and even if I had the collaboration of their teachers, I wanted the subjects to take the test seriously and cooperatively to ensure maximum validity of results. Although ethically debatable, the marks obtained by the students for the purpose of my research were used as "a carrot" to maintain motivation and concentration (Schmitt 2010). Nevertheless, the test may have generated anxiety in the students and such test anxiety could have been a hindrance for some of them, and might have affected their performance. For ethical reasons and for the sake of honesty, at the end of the data collection, the participants were informed that the real objective of the test was to undertake research and that their marks would not be taken into consideration; they were also encouraged to come and see the researcher for any feedback about their performance in the vocabulary or the VLS tests. Surprisingly, no participant was curious enough to come and inquire about his own results. Even though the participants of this study were not the students taught by myself, the researcher, no one tried to contact me in the next few weeks or months to enquire about the results for personal interest. The participants seemed to have no interest in tests that are not scored. This observation confirmed the assumption mentioned above according to which most students seemed to be driven by marks and rarely by the pleasure to learn and acquire knowledge, or sheer curiosity.

The purpose of the present study was to investigate the correlation between two cognitive processes involved in lexical learning, namely vocabulary building in the mental lexicon and use of vocabulary strategies. To shed light on these two aspects, a vocabulary comprehension test, a VLS questionnaire, and open-ended questions were used to collect data. One might question whether the product of comprehension, i.e. test and questionnaire results, could be used to understand the comprehension process. Vocabulary comprehension and strategies use are processes that are among the most difficult to study as they involve the internal behaviours of a learner which cannot be observed or measured in isolation. Thus, the non-observable nature of a cognitive process, such as comprehension, has drawn many researchers to use the product as an indicator of the process, even though it is difficult to know whether the outcome truly reflects the students' cognitive ability. Moreover, some of the instruments used in the present study involved the use of writing to reflect the process of comprehension. Indeed, if the VST and the VLS questionnaires needed only circling or ticking the chosen answer, both the demographic information survey and the open-ended questions at the end of the data collection provided useful content information as they required the participants to write their information and retrospective thoughts regarding their vocabulary learning process. In order to minimise the effects of this limitation, it would be interesting for future research in this field to add complementary instruments such as interviews, to measure the level of vocabulary knowledge and comprehension in the participants.

The use of questionnaires for data collection in the present study might also be questioned given that the participants can possibly have a different interpretation of the items from the one intended by the researcher due to the limited details provided for each questionnaire item, while an interview for instance would allow the researcher to explain extensively any element not understood by the participants. We have tried to minimise this aspect by adjusting the wording of the standardised questionnaires and make them as comprehensible as possible. For instance, the Vocabulary Strategies

Questionnaire based on Schmitt's taxonomy was adjusted each time the strategy was thought to cause possible misunderstanding or ambiguity. Thus, in such cases, simplified language was provided to replace technical words, and examples were also added to make sure the participants understood the meaning of the strategies (See Appendix 5). Research methods involving observation are usually not adequate for studies on learning strategies as the latter are internal processes that are not visible. In fact, research in this field is closely related to the learner' ability and willingness to report on his own internal behaviours and processing (Oxford 1992). Moreover, two other advantages of using questionnaires were considered in the present study. Firstly, filling in a questionnaire provides much more anonymity and freedom of answer than an interview which might lead the participant to answer according to what he thinks the researcher wants to get from him. Thus, using a questionnaire allows the researcher to give full control to the participant as he would be the one providing all the data without interference from the researcher. Secondly, using a questionnaire certainly allows for a much larger number of participants, especially when the purpose of the study is to investigate a growth pattern among a given population.

In the literature, there has been some criticism made against the Vocabulary Size Test as a tool to measure vocabulary knowledge. For instance, this test is believed to overestimate the vocabulary size of the test-takers because they can get to the correct answer among the multiple choice by means of guessing, with each of the four choices carrying 25% of chances to be the right one (Wesche & Paribakht 1996). Besides, the fact that the test contains a number of words that have similar/resembling cognates in French -a language that is the first L2 for the participants in the present study - might have led to an over-estimation of their vocabulary size (Meara & Buxton 1987, Meara & Jones 1990). However, we believe the VST used in this study contains a number of words with similar forms in French that reflect a real proportion of cognates between French and English, and cognates have their place in this test because

the major aim of the VST is to test what learners know, not what they have learned (Nation 2012). Moreover, given that the VST is a low stakes test that is easy to administer makes it carry the risk of underestimating the vocabulary size of the participants if they are not motivated enough to answer the questionnaire, and this risk applies mainly to low proficiency learners who can easily give up the test is they see they do not have the sufficient knowledge (Nation 2012). Despite these possible disadvantages, the VST has been used in a very large number of studies undertaken in the field of vocabulary learning and it has largely proven to be valid, reliable and very easy to administer. In the context of the present study, the VST seemed the most appropriate instrument to measure the intended variable. But it would also be worth using different instruments with a similar sample group and compare the results to check if there is any under or over estimation of vocabulary knowledge. It would also be useful to undertake interviews with some participants, especially the low achievers, in order to ask them how they answered correctly some of the low frequency words, or to check that the low scores are not the result of lack of motivation.

Scope for Further Research

In light of the findings of the present work, its pedagogical implications as well as its limitations, this section provides some recommendations for future research.

It is important to mention that the data collection of the present study took place more than five years ago, while the LMD curriculum was in its early years of implementation. Thus, it would be interesting to investigate the state of vocabulary size growth and VLS use of students in the same department today, as findings might show whether there has been any evolution in the growth pattern of both variables, and therefore to assess if the LMD curriculum is now contributing differently to the vocabulary learning of the students.

The benefits of direct vocabulary instruction for overall vocabulary learning are now agreed, and the students in the present study have explicitly

expressed this preference, even the advanced students who were expected to be more autonomous. However, the most adequate content of a vocabulary-focused course that would meet students' needs is still an area that needs further research. For instance, it would be worthwhile to undertake a needs analysis in terms of lexical requirements and to try to set up a vocabulary-focused course; then to test its impact on the students' development of lexical competence in general and vocabulary breadth and depth in particular.

Having focused the scope of the present study on undergraduate students from Year 1 to Year 3, future research could investigate the same growth patterns in terms of vocabulary size and VLS use among the Master's or Doctoral students in the department. Such studies would allow for a comparison between all the three stages of the LMD curriculum, instead of focusing only on the Licence degree stage.

Also, gender variation could be researched in order to check if there is any significant difference in terms of dynamics of vocabulary learning between male and female students in the Algerian context, knowing that the English Department has a higher proportion of female students enrolled.

There were many studies that investigated the two dimensions of receptive and productive word knowledge to find out that language learners usually have a larger receptive repertoire than a productive one (Fan 2000, Webb 2008).

As the present study focused exclusively on the written receptive vocabulary size and its relationship to VLS use, further research may investigate this growth pattern as far as the productive vocabulary size is concerned. This would allow for a comparison between the growth patterns of both receptive and productive vocabularies and would establish if the LMD curriculum is giving enough opportunities for the students to develop their lexical repertoire in the EFL context and to be competent both receptively and productively.

From the findings of the present study, it appears that the effective use of VLS is the most crucial and problematic aspect of lexical learning, even from the students' perspectives. Given that knowledge of vocabulary strategies is not sufficient, what students seem to need most is explicit teaching of how to use these strategies in the most efficient way to meet their needs and personal preferences. Thus, strategy training seems to be a solution worth investigating, testing and evaluating in the present context. In other words, future studies may focus on researching the extent to which explicit strategy training would help the students improve their VLS use and therefore empower their overall vocabulary learning, for instance through a comparison between an experimental group receiving strategy training and a control group not having any strategy instruction. This comparison would allow the researchers to assess the extent to which students are receptive to strategy training and whether the gains are significant enough.

Despite the fact that vocabulary learning with its different aspects has largely been researched worldwide in various contexts and with different participants, we are aware of a limited amount of research undertaken with Arabic speaking EFL students, and more specifically Algerian university students. Thus, any of the future studies suggested above would contribute in building up an exhaustive knowledge base of how Algerian learners process vocabulary and would also give the vocabulary component a stronger and more focused place in the English curricula in Algerian universities, and even in pre-university curricula. It is important to help students acquire a large amount of vocabulary, but it is equally crucial to show them how to use vocabulary learning strategies and learn how to learn. As the popular saying goes, teaching somebody to fish would feed him for a lifetime.

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APPENDIX 1

Demographic Information Questionnaire

Please fill in the following information before you start the test

1. Name : ……..

2. Gender : Male / Female (Circle your answer)

3. Current year of study (LMD): **1st Year / 2nd Year / 3rd Year** (Circle your answer)

4. Age:…….

5. What is your native language? **Arabic / Berber / French** (Circle your answer)
If another language, please specify: ……

6. a) How many years have you studied English from Middle school till now?
Number of years:……

b) Did you study English in the primary school ? **Yes / No** (circle your answer)

c) Have you ever studied English outside the University (eg: private language schools)?
Yes / No (circle your answer)
If your answer to 6c is "Yes", please indicate the following:
When:…… Where:…… For how long:…… At what level of proficiency……

7. a) Have you ever lived in an English speaking country? **Yes /No** (circle your answer)

If your answer is "Yes", please indicate the following:
How long:…… Where: …….

b) Have you ever studied English outside Algeria? **Yes / No** (circle your answer)

If your answer is "Yes", please indicate the following:
How long:…… Where: …….

8. After the Baccalaureate, was English your first choice? Have you chosen to study English at University? **Yes / No** (Circle your answer)

9. Do you have internet at home? **Yes / No** (circle your answer)
If your answer is "No", do you use internet spaces/cafés? **Yes/No**(circle your answer)

10. Do you have English language TV channels at home? **Yes / No** (circle your answer)
If your answer is "Yes", which channels do you watch most?……

APPENDIX 2

Vocabulary Size Test

For each question, circle ONLY ONE letter (a, b, c, or d) which has the closest meaning to the key word written in **bold** in the question.

1. SEE: They **saw** it.
   a. cut
   b. waited for
   c. looked at
   d. started

2. TIME: They have a lot of **time**.
   a. money
   b. food
   c. hours
   d. friends

3. PERIOD: It was a difficult **period**.
   a. question
   b. time
   c. thing to do
   d. book

4. FIGURE: Is this the right **figure**?
   a. answer
   b. place
   c. time
   d. number

5. POOR: We are **poor**.
   a. have no money
   b. feel happy
   c. are very interested
   d. do not like to work hard

6. DRIVE: He **drives** fast.
   a. swims
   b. learns
   c. throws balls
   d. uses a car

7. JUMP: She tried to **jump**.
   a. lie on top of the water
   b. get off the ground suddenly
   c. stop the car at the edge of the road
   d. move very fast

8. SHOE: Where is your **shoe**?
   a. the person who looks after you
   b. the thing you keep your money in
   c. the thing you use for writing
   d. the thing you wear on your foot

9. STANDARD: Her **standards** are very high.
   a. the bits at the back under her shoes
   b. the marks she gets in school
   c. the money she asks for
   d. the levels she reaches in everything

10. BASIS: This was used as the **basis**.
    a. answer
    b. place to take a rest
    c. next step
    d. main part

1. MAINTAIN: Can they **maintain** it?
   a. keep it as it is
   b. make it larger
   c. get a better one than it
   d. get it

2. STONE: He sat on a **stone**.
   a. hard thing
   b. kind of chair
   c. soft thing on the floor
   d. part of a tree

3. UPSET: I am **upset**.
   a. tired
   b. famous
   c. rich
   d. unhappy

4. DRAWER: The **drawer** was empty.
   a. sliding box
   b. place where cars are kept
   c. cupboard to keep things cold
   d. animal house

5. PATIENCE: He has no **patience**.
   a. will not wait happily
   b. has no free time
   c. has no faith
   d. does not know what is fair

6. NIL: His mark for that question was **nil**.
   a. very bad
   b. nothing
   c. very good
   d. in the middle

7. PUB: They went to the **pub**.
   a. place where people drink and talk
   b. place that looks after money
   c. large building with many shops
   d. building for swimming

8. CIRCLE: Make a **circle**.
   a. rough picture
   b. space with nothing in it
   c. round shape
   d. large hole

9. MICROPONE: Please use the **microphone**.
   a. machine for making food hot
   b. machine that makes sounds louder
   c. machine that makes things look bigger
   d. small telephone that can be carried around

10. PRO: He's a **pro**.
    a. someone who is employed to find out important secrets
    b. a stupid person
    c. someone who writes for a newspaper
    d. someone who is paid for playing sport etc

APPENDIX 2

1. SOLDIER: He is a **soldier**.
   a. person in a business
   b. student
   c. person who uses metal
   d. person in the army

2. RESTORE: It has been **restored**.
   a. said again
   b. given to a different person
   c. given a lower price
   d. made like new again

3. JUG: He was holding a **jug**.
   a. A container for pouring liquids
   b. an informal discussion
   c. A soft cap
   d. A weapon that explodes

4. SCRUB: He is **scrubbing** it.
   a. cutting shallow lines into it
   b. repairing it
   c. rubbing it hard to clean it
   d. drawing simple pictures of it

5. DINOSAUR: The children were pretending to be **dinosaurs**.
   a. robbers who work at sea
   b. very small creatures with human form but with wings
   c. large creatures with wings that breathe fire
   d. animals that lived a long time ago

6. STRAP: He broke the **strap**.
   a. promise
   b. top cover
   c. shallow dish for food
   d. strip of material for holding things together

7. PAVE: It was **paved**.
   a. prevented from going through
   b. divided
   c. given gold edges
   d. covered with a hard surface

8. DASH: They **dashed** over it.
   a. moved quickly
   b. moved slowly
   c. fought
   d. looked quickly

9. ROVE: He couldn't stop **roving**.
   a. getting drunk
   b. travelling around
   c. making a musical sound through closed lips
   d. working hard

10. LONESOME: He felt **lonesome**.
    a. ungrateful
    b. very tired
    c. lonely
    d. full of energy

1. COMPOUND: They made a new **compound**.
   a. agreement
   b. thing made of two or more parts
   c. group of people forming a business
   d. guess based on past experience

2. LATTER: I agree with the **latter**.
   a. man from the church
   b. reason given
   c. last one
   d. answer

3. CANDID: Please be **candid**.
   a. be careful
   b. show sympathy
   c. show fairness to both sides
   d. say what you really think

4. TUMMY: Look at my **tummy**.
   a. cloth to cover the head
   b. stomach
   c. small furry animal
   d. thumb

5. QUIZ: We made a **quiz**.
   a. thing to hold arrows
   b. serious mistake
   c. set of questions
   d. box for birds to make nests in

6. INPUT: We need more **input**.
   a. information, power, etc. put into something
   b. workers
   c. artificial filling for a hole in wood
   d. money

7. CRAB: Do you like **crabs**?
   a. sea creatures that walk sideways
   b. very thin small cakes
   c. tight, hard collars
   d. large black insects that sing at night

8. VOCABULARY: You will need more **vocabulary**.
   a. words
   b. skill
   c. money
   d. guns

9. REMEDY: We found a good **remedy**.
   a. way to fix a problem
   b. place to eat in public
   c. way to prepare food
   d. rule about numbers

10. ALLEGE: They **alleged** it.
    a. claimed it without proof
    b. stole the ideas for it from someone else
    c. provided facts to prove it
    d. argued against the facts that supported it

APPENDIX 2

1. DEFICIT: The company had a large **deficit**.
   a. spent a lot more money than it earned
   b. went down a lot in value
   c. had a plan for its spending that used a lot of money
   d. had a lot of money in the bank

2. WEEP: He **wept**.
   a. finished his course
   b. cried
   c. died
   d. worried

3. NUN: We saw a **nun**.
   a. long thin creature that lives in the earth
   b. terrible accident
   c. woman following a strict religious life
   d. unexplained bright light in the sky

4. HAUNT: The house is **haunted**.
   a. full of ornaments
   b. rented
   c. empty
   d. full of ghosts

5. COMPOST: We need some **compost**.
   a. strong support
   b. help to feel better
   c. hard stuff made of stones and sand stuck together
   d. rotted plant material

6. CUBE: I need one more **cube**.
   a. sharp thing used for joining things
   b. solid square block
   c. tall cup with no saucer
   d. piece of stiff paper folded in half

7. MINIATURE: It is a **miniature**.
   a. a very small thing of its kind
   b. an instrument to look at small objects
   c. a very small living creature
   d. a small line to join letters in handwriting

8. PEEL: Shall I **peel** it?
   a. let it sit in water for a long time
   b. take the skin off it
   c. make it white
   d. cut it into thin pieces

9. FRACTURE: They found a **fracture**.
   a. break
   b. small piece
   c. short coat
   d. rare jewel

10. BACTERIUM: They didn't find a single **bacterium**.
    a. small living thing causing disease
    b. plant with red or orange flowers
    c. animal that carries water on its back
    d. thing that has been stolen and sold to a shop

1. DEVIOUS: Your plans are **devious**.
   a. tricky
   b. well-developed
   c. not well thought out
   d. more expensive than necessary

2. PREMIER: The **premier** spoke for an hour.
   a. person who works in a law court
   b. university teacher
   c. adventurer
   d. head of the government

3. BUTLER: They have a **butler**.
   a. man servant
   b. machine for cutting up trees
   c. private teacher
   d. cool dark room under the house

4. ACCESSORY: They gave us some **accessories**.
   a. papers allowing us to enter a country
   b. official orders
   c. ideas to choose between
   d. extra pieces

5. THRESHOLD: They raised the **threshold**.
   a. flag
   b. point or line where something changes
   c. roof inside a building
   d. cost of borrowing money

6. THESIS: She has completed her **thesis**.
   a. long written report of study carried out for a university degree
   b. talk given by a judge at the end of a trial
   c. first year of employment after becoming a teacher
   d. extended course of hospital treatment

7. STRANGLE: He **strangled** her.
   a. killed her by pressing her throat
   b. gave her all the things she wanted
   c. took her away by force
   d. admired her greatly

8. CAVALIER: He treated her in a **cavalier** manner.
   a. without care
   b. politely
   c. awkwardly
   d. as a brother would

9. MALIGN: His **malign** influence is still felt.
   a. evil
   b. good
   c. very important
   d. secret

10. VEER: The car **veered**.
    a. went suddenly in another direction
    b. moved shakily
    c. made a very loud noise
    d. slid sideways without the wheels turning

APPENDIX 2

1. OLIVE: We bought **olives**.
   a. oily fruit
   b. scented pink or red flowers
   c. men's clothes for swimming
   d. tools for digging up weeds

2. QUILT: They made a **quilt**.
   a. statement about who should get their property when they die
   b. firm agreement
   c. thick warm cover for a bed
   d. feather pen

3. STEALTH: They did it by **stealth**.
   a. spending a large amount of money
   b. hurting someone so much that they agreed to their demands
   c. moving secretly with extreme care and quietness
   d. taking no notice of problems they met

4. SHUDDER: The boy **shuddered**.
   a. spoke with a low voice
   b. almost fell
   c. shook
   d. called out loudly

5. BRISTLE: The **bristles** are too hard.
   a. questions
   b. short stiff hairs
   c. folding beds
   d. bottoms of the shoes

6. BLOC: They have joined this **bloc**.
   a. musical group
   b. band of thieves
   c. small group of soldiers who are sent ahead of others
   d. group of countries sharing a purpose

7. DEMOGRAPHY: This book is about **demography**.
   a. the study of patterns of land use
   b. the study of the use of pictures to show facts about numbers
   c. the study of the movement of water
   d. the study of population

8. GIMMICK: That's a good **gimmick**.
   a. thing for standing on to work high above the ground
   b. small thing with pockets to hold money
   c. attention-getting action or thing
   d. clever plan or trick

9. AZALEA: This **azalea** is very pretty.
   a. small tree with many flowers growing in groups
   b. light material made from natural threads
   c. long piece of material worn by women in India
   d. sea shell shaped like a fan

10. YOGHURT: This **yoghurt** is disgusting.
    a. grey mud found at the bottom of rivers
    b. unhealthy, open sore
    c. thick, soured milk, often with sugar and flavouring
    d. large purple fruit with soft flesh

1. ERRATIC: He was **erratic**.
   a. without fault
   b. very bad
   c. very polite
   d. unsteady

2. PALETTE: He lost his **palette**.
   a. basket for carrying fish
   b. wish to eat food
   c. young female companion
   d. artist's board for mixing paints

3. NULL: His influence was **null**.
   a. had good results
   b. was unhelpful
   c. had no effect
   d. was long-lasting

4. KINDERGARTEN: This is a good **kindergarten**.
   a. activity that allows you to forget your worries
   b. place of learning for children too young for school
   c. strong, deep bag carried on the back
   d. place where you may borrow books

5. ECLIPSE: There was an **eclipse**.
   a. a strong wind
   b. a loud noise of something hitting the water
   c. The killing of a large number of people
   d. The sun hidden by a planet

6. MARROW: This is the **marrow**.
   a. symbol that brings good luck to a team
   b. Soft centre of a bone
   c. control for guiding a plane
   d. increase in salary

7. LOCUST: There were hundreds of **locusts**.
   a. insects with wings
   b. unpaid helpers
   c. people who do not eat meat
   d. brightly coloured wild flowers

8. AUTHENTIC: It is **authentic**.
   a. real
   b. very noisy
   c. Old
   d. Like a desert

9. CABARET: We saw the **cabaret**.
   a. painting covering a whole wall
   b. song and dance performance
   c. small crawling insect
   d. person who is half fish, half woman

10. MUMBLE: He started to **mumble**.
    a. think deeply
    b. shake uncontrollably
    c. stay further behind the others
    d. speak in an unclear way

APPENDIX 2

1. HALLMARK: Does it have a **hallmark**?
   a. stamp to show when to use it by
   b. stamp to show the quality
   c. mark to show it is approved by the royal family
   d. Mark or stain to prevent copying

2. PURITAN: He is a **puritan**.
   a. person who likes attention
   b. person with strict morals
   c. person with a moving home
   d. person who hates spending money

3. MONOLOGUE: Now he has a **monologue**.
   a. single piece of glass to hold over his eye to help him to see better
   b. long turn at talking without being interrupted
   c. position with all the power
   d. picture made by joining letters together in interesting ways

4. WEIR: We looked at the **weir**.
   a. person who behaves strangely
   b. wet, muddy place with water plants
   c. old metal musical instrument played by blowing
   d. thing built across a river to control the water

5. WHIM: He had lots of **whims**.
   a. old gold coins
   b. female horses
   c. strange ideas with no motive d. sore red lumps

6. PERTURB: I was **perturbed**. a. made to agree
   b. Worried
   c. very puzzled
   d. very wet

7. REGENT: They chose a **regent**. a. an irresponsible person
   b. a person to run a meeting for a time c. a ruler acting in place of the king
   d. a person to represent them

8. OCTOPUS: They saw an **octopus**. a. a large bird that hunts at night b. a ship that can go under water
   c. a machine that flies by means of turning blades
   d. a sea creature with eight legs

9. FEN: The story is set in the **fens**.
   a. low land partly covered by water
   b. a piece of high land with few trees
   c. a block of poor-quality houses in a city d. a time long ago

10. LINTEL: He painted the **lintel**.
    a. Beam over the top of a door or window b. small boat used for getting to land from a big boat
    c. beautiful tree with spreading branches and green fruit
    d. board showing the scene in a theatre

1. AWE: They looked at the mountain with **awe**.
   a. worry
   b. interest
   c. wonder
   d. respect

2. PEASANTRY: He did a lot for the **peasantry**.
   a. local people
   b. place of worship
   c. businessmen's club
   d. poor farmers

3. EGALITARIAN: This organization is **egalitarian**.
   a. does not provide much information about itself to the public
   b. dislikes change
   c. frequently asks a court of law for a judgement
   d. treats everyone who works for it as if they are equal

4. MYSTIQUE: He has lost his **mystique**.
   a. his healthy body
   b. the secret way he makes other people think he has special power or skill
   c. the woman who has been his lover while he is married to someone else
   d. the hair on his top lip

5. UPBEAT: I'm feeling really **upbeat** about it.
   a. upset
   b. good
   c. hurt
   d. confused

6. CRANNY: We found it in the **cranny**!
   a. sale of unwanted objects
   b. narrow opening
   c. space for storing things under the roof of a house
   d. large wooden box

7. PIGTAIL: Does she have a **pigtail**?
   a. a rope of hair made by twisting bits together
   b. a lot of cloth hanging behind a dress
   c. a plant with pale pink flowers that hang down in short bunches
   d. a lover

8. CROWBAR: He used a **crowbar**.
   a. heavy iron pole with a curved end
   b. false name
   c. sharp tool for making holes in leather
   d. light metal walking stick

9. RUCK: He got hurt in the **ruck**.
   a. hollow between the stomach and the top of the leg
   b. pushing and shoving
   c. group of players gathered round the ball in some ball games
   d. race across a field of snow

10. LECTERN: He stood at the **lectern**.
    a. desk to hold a book at a height for reading
    b. table or block used for church sacrifices
    c. place where you buy drinks
    d. very edge

APPENDIX 2

1. EXCRETE: This was **excreted** recently.
   a. pushed or sent out
   b. made clear
   c. discovered by a science experiment
   d. put on a list of illegal things

2. MUSSEL: They bought **mussels**.
   a. small glass balls for playing a game
   b. shellfish
   c. large purple fruits
   d. pieces of soft paper to keep the clothes clean when eating

3. YOGA: She has started **yoga**.
   a. handwork done by knotting thread
   b. a form of exercise for body and mind
   c. a game where a cork stuck with feathers is hit between two players
   d. a type of dance from eastern countries

4. COUNTERCLAIM: They made a **counterclaim**.
   a. a demand made by one side in a law case to match the other side's demand
   b. a request for a shop to take back things with faults
   c. An agreement between two companies to exchange work
   d. a top cover for a bed

5. PUMA: They saw a **puma**.
   a. small house made of mud bricks
   b. tree from hot, dry countries
   c. very strong wind that sucks up anything in its path
   d. large wild cat

6. PALLOR: His **pallor** caused them concern.
   a. his unusually high temperature
   b. his lack of interest in anything
   c. his group of friends
   d. the paleness of his skin

7. APERITIF: She had an **aperitif**.
   a. a long chair for lying on with just one place to rest an arm
   b. a private singing teacher
   c. a large hat with tall feathers
   d. a drink taken before a meal

8. HUTCH: Please clean the **hutch**.
   a. thing with metal bars to keep dirt out of water pipes
   b. space in the back of a car for bags
   c. metal piece in the middle of a bicycle wheel
   d. cage for small animals

9. EMIR: We saw the **emir**.
   a. bird with long curved tail feathers
   b. woman who cares for other people's children in Eastern countries
   c. Middle Eastern chief with power in his land
   d. house made from blocks of ice

10. HESSIAN: She bought some **hessian**.
    a. oily pinkish fish
    b. stuff producing a happy state of mind
    c. coarse cloth
    d. strong-tasting root for flavouring food

1. HAZE: We looked through the **haze**.
   a. small round window in a ship
   b. unclear air
   c. strips of wood or plastic to cover a window
   d. list of names

2. SPLEEN: His **spleen** was damaged.
   a. knee bone
   b. organ found near the stomach
   c. pipe taking waste water from a house
   d. respect for himself

3. SOLILOQUY: That was an excellent **soliloquy**!
   a. song for six people
   b. short clever saying with a deep meaning
   c. entertainment using lights and music
   d. speech in the theatre by a character who is alone

4. REPTILE: She looked at the **reptile**.
   a. old hand-written book
   b. animal with cold blood and a hard outside
   c. person who sells things by knocking on doors
   d. picture made by sticking many small pieces of different colours together

5. ALUM: This contains **alum**.
   a. a poisonous substance from a common plant
   b. a soft material made of artificial threads
   c. a tobacco powder once put in the nose
   d. a chemical compound usually involving aluminium

6. REFECTORY: We met in the **refectory**.
   a. room for eating
   b. office where legal papers can be signed
   c. room for several people to sleep in
   d. room with glass walls for growing plants

7. CAFFEINE: This contains a lot of **caffeine**.
   a. a substance that makes you sleepy
   b. threads from very tough leaves
   c. ideas that are not correct
   d. a substance that makes you excited

8. IMPALE: He nearly got **impaled**.
   a. charged with a serious offence
   b. put in prison
   c. stuck through with a sharp instrument
   d. involved in a dispute

9. COVEN: She is the leader of a **coven**.
   a. a small singing group
   b. a business that is owned by the workers
   c. a secret society
   d. a group of church women who follow a strict religious life

10. TRILL: He practised the **trill**.
    a. ornament in a piece of music
    b. type of stringed instrument
    c. Way of throwing a ball
    d. dance step of turning round very fast on the toes

APPENDIX 2

1. UBIQUITOUS: Many weeds are **ubiquitous**.
   a. are difficult to get rid of
   b. have long, strong roots
   c. are found in most countries
   d. die away in the winter

2. TALON: Just look at those **talons**!
   a. high points of mountains
   b. sharp hooks on the feet of a hunting bird
   c. heavy metal coats to protect against weapons
   d. people who make fools of themselves without realizing it

3. ROUBLE: He had a lot of **roubles**.
   a. very precious red stones
   b. distant members of his family
   c. Russian money
   d. moral or other difficulties in the mind

4. JOVIAL: He was very **jovial**.
   a. low on the social scale
   b. likely to criticize others
   c. full of fun
   d. friendly

5. COMMUNIQUE: I saw their **communiqué**.
   a. critical report about an organization
   b. garden owned by many members of a community
   c. printed material used for advertising
   d. official announcement

6. PLANKTON: We saw a lot of **plankton**.
   a. poisonous weeds that spread very quickly
   b. very small plants or animals found in water
   c. trees producing hard wood
   d. grey clay that often causes land to slip

7. SKYLARK: We watched a **skylark**.
   a. show with aeroplanes flying in patterns
   b. man-made object going round the earth
   c. person who does funny tricks
   d. small bird that flies high as it sings

8. BEAGLE: He owns two **beagles**.
   a. fast cars with roofs that fold down
   b. large guns that can shoot many people quickly
   c. small dogs with long ears
   d. houses built at holiday places

9. ATOLL: The **atoll** was beautiful.
   a. low island made of coral round a sea-water lake
   b. work of art created by weaving pictures from fine thread
   c. small crown with many precious jewels worn in the evening by women
   d. place where a river flows through a narrow place full of large rocks

10. DIDACTIC: The story is very **didactic**.
    a. tries hard to teach something
    b. is very difficult to believe
    c. deals with exciting actions
    d. is written in a way which makes the reader unsure of the meaning

1. CANONICAL: These are **canonical** examples.
   a. examples which break the usual rules
   b. examples taken from a religious book
   c. regular and widely accepted examples
   d. examples discovered very recently

2. ATOP: He was **atop** the hill.
   a. at the bottom of
   b. at the top of
   c. on this side of
   d. on the far side of

3. MARSUPIAL: It is a **marsupial**.
   a. an animal with hard feet
   b. a plant that grows for several years
   c. a plant with flowers that turn to face the sun
   d. an animal with a pocket for babies

4. AUGUR: It **augured** well.
   a. promised good things for the future
   b. agreed well with what was expected
   c. had a colour that looked good with something else
   d. rang with a clear, beautiful sound

5. BAWDY: It was very **bawdy**.
   a. unpredictable
   b. enjoyable
   c. rushed
   d. rude

6. GAUCHE: He was **gauche**.
   a. talkative
   b. flexible
   c. awkward
   d. determined

7. THESAURUS: She used a **thesaurus**.
   a. a kind of dictionary
   b. a chemical compound
   c. a special way of speaking
   d. an injection just under the skin

8. ERYTHROCYTE: It is an **erythrocyte**.
   a. a medicine to reduce pain
   b. a red part of the blood
   c. a reddish white metal
   d. a member of the whale family

9. CORDILLERA: They were stopped by the **cordillera**.
   a. a special law
   b. an armed ship
   c. a line of mountains
   d. the eldest son of the king

10. LIMPID: He looked into her **limpid** eyes.
    a. clear
    b. tearful
    c. deep brown
    d. beautiful

APPENDIX 3

VOCABULARY LEARNING STRATEGIES QUESTIONNAIRE

The following list is a list of vocabulary learning strategies. Learning strategies here refer to methods/techniques by which you understand and learn vocabulary in English.

Please answer in terms of what you really do, NOT in terms of what you think you should do or what you want to do.

There are no right or wrong answers to these statements. It is very important that your answers reflect exactly what you do to understand and learn vocabulary as an English language learner.

Part A of the following questionnaire is about what you do when you do not know/understand a word

Part B is about what you do to reinforce the word and retain it AFTER you discover its meaning.

Part C is about giving your view on some aspects of English vocabulary learning/teaching

Please indicate how often you use the strategies/techniques mentioned in the table below whatever the skill (i.e., listening, reading, speaking and writing) and whatever the place of learning (i.e., in the classroom, at university, and at home).

If you do not use a strategy at all, please choose the box "never".
If you use a strategy, please choose one of the words "always", "sometimes", or "rarely", according to the frequency.

APPENDIX 3

Part A: **What do you usually do to DISCOVER the meaning of an English word that you do not know?**

Please read the following statement carefully then put (√) in the appropriate box. Please choose only **ONE** answer per statement.

	The strategy	Always	Sometimes	Rarely	Never
1	I analyse the part of speech (example: is it a noun, verb, adjective, adverb …etc)				
2	I analyse the word affixes (prefix or suffix) and roots to guess the meaning of a word				
3	I check for an L1 cognate (I try to link the English word to a word in my native language (Arabic, Berber or French) that reminds me of the English form and meaning, (e.g. history/histoire - cat / قط)				
4	I analyse any available pictures or gestures accompanying the word				
5	I try to guess the word's meaning from the text/context in which the word appears				
6	I look for the word's meaning in a bilingual dictionary (eg: English – French dictionary)				
6*	I look for the word's meaning in a bilingual dictionary (eg: English – Arabic dictionary)				
7	I look for the word's meaning in a monolingual dictionary (English – English dictionary)				
8	I learn the word through word lists (eg: Analyse→ analysed, analyser, analysing, *analysis*, analyst, analytical, analytically …etc)				

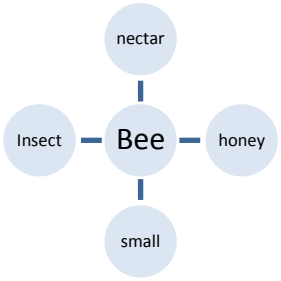
APPENDIX 3

		Always	Sometimes	Rarely	Never
9	I deduce the meaning of the word from flashcards and posters shown by the teacher (a flashcard is a card with a word or picture on it, used in teaching)				
10	I ask the teacher for a translation of the word into my native language (eg: English into Arabic or French)				
11	I ask the teacher for a paraphrase or synonym of the new word in English				
12	I ask the teacher to give me a sentence including the new word				
13	I ask classmates for the meaning of the word				
14	I discover the new meaning of the word through group work				

Part B: **What do you usually do to CONSOLIDATE the learning of a word after discovering its meaning?**

	The Strategy	Always	Sometimes	Rarely	Never
15	I study and practice meaning in pairs/groups in class				
15 *	I study and practice meaning in pairs/groups outside class				
16	I keep a word list/card and my teacher checks for learning				
17	I try to use the new word in interactions with native speakers of English				
17*	I try to use the new word in interactions with non- native speakers or English				
18	I study the new word with a pictorial representation of its meaning: through images, photographs or drawings				

APPENDIX 3

		Always	Sometimes	Rarely	Never
19	I study the word by forming an image of it				
20	I connect the word meaning to a personal experience in order to remember it				
21	I associate the word with its word coordinates, for instance: apple with peach, orange, banana. . . .				
22	I connect the word to its synonyms and antonyms (opposites)				
23	I use semantic maps (word trees) example: 				
24	I use 'scales' for gradable adjectives, for example: cold / colder/ coldest huge/ big/medium-sized/small				
25	I use the peg method (linking the word to one that rhymes with it) to learn the word, for example: two is a shoe, three is a tree, four is a door . . .				
26	I use the loci method to learn the word (I connect the new word to a familiar place)				
27	I group words together to study them, for instance, I relate the new word to other words from the same class, same meaning, same family, etc.				

APPENDIX 3

		Always	Sometimes	Rarely	Never
28	I group words together spatially on a page, notebook or card by forming geometrical patterns, for instance, columns, triangles, squares, circles, curves, etc.				
29	I learn the new word in an English sentence				
30	I group words together within a storyline, for instance: teacher, university, student, study, learning…etc				
31	I study the spelling of the word carefully				
32	I study the sound of the word carefully				
33	I say the new word aloud when studying				
34	I image the word form (try to memorize to word form)				
35	I underline the initial letter of the word				
36	I configurate the word (I arrange the word in parts, letters, etc. in order to memorize it better)				
37	I use the keyword method to learn the word (I connect the English word to a French/Arabic or Berber word by sound to remember it). For example: to remember the English word "left", I connect it with the Arabic word " لفت " (which is a vegetable.				
38	I try to remember the word affixes (prefix and suffix) and roots				
39	I try to relate the word to its part of speech (noun, verb, adjective, etc.)				
40	I paraphrase the word's meaning				
41	I connect the word to cognates (words of similar form and meaning in French, for instance: internal/interne, history/histoire, tomato/tomate)				

APPENDIX 3

		Always	Sometimes	Rarely	Never
42	I learn the words of an idiom together as if they were just one word. Example: "raining cats and dogs" means raining a lot.				
43	I use physical action to learn a new word (eg: the word "clap" = the physical action of joining the hands together)				
44	I use semantic feature grids, for example: man, woman = human beings; cat, dog = domestic animals (pets)				
45	I use verbal repetition of the word				
46	I write the word several times				
47	I use word lists and revise them				
48	I use flash cards with the representation of the word to consolidate meaning				
49	I take notes of new words on my notebook during the lesson				
50	I revise the vocabulary section in my textbook				
51	I listen to tapes of word lists				
52	I put English labels on physical objects				
53	I keep a vocabulary notebook				
54	I use English-language media (songs, movies, newcasts, etc.)				
54*	I use English internet regularly to search for information using English language				
54**	I use English internet regularly to communicate with friends using English language (eg: emails, social networks…etc)				
55	I test myself with word tests				

APPENDIX 3

		Always	Sometimes	Rarely	Never
55*	I learn words from tests/exams (I learn from my mistakes)				
56	I use spaced word practice to revise vocabulary (practice revision of words in different short sessions over a longer period of time)				
57	I skip or pass the new word (I ignore it)				
58	I continue to study the word over time				

Part C: **Please answer the following questions as honestly as possible:**

1) I use other techniques/strategies that do not appear in the table above, for example:

-
-
-

2) Which language skill gives you better opportunities to learn vocabulary in English?

Reading / Listening / Writing / Speaking (circle your answer)

Why? …….

3) Which modules give you more opportunities to learn vocabulary? (circle your answer)

Content modules (eg: Literary genres,Historical landmarks, Linguistics....etc)

Or

Language modules (eg: Grammar, Phonetics…etc)

APPENDIX 3

4) Would you prefer vocabulary to be taught explicitly/directly in the curriculum at the University? **Yes / No** (circle your answer)
Why?
……..... **.....**

5) a) What are the most significant **difficulties** in your vocabulary learning?
……
……
……..

b) How do you try to overcome these difficulties?
……
……
……
……

Thank you for your cooperation

APPENDIX 4

Schmitt's Taxonomy of Vocabulary Learning Strategies (Schmitt 1997 - pp: 207-208)

Strategies for discovering the meaning of a new word

Strategy Category	Strategy Description
Determination	DET Analyze part of speech
	DET Analyze affixes and roots
	DET Check for L1 cognate
	DET Analyze any available pictures or gestures
	DET Guess from textual context
	DET Bilingual dictionary
	DET Monolingual dictionaries
	DET Word lists
	DET Flash cards
Social	SOC Ask teacher for L1 translation
	SOC Ask teacher for paraphrase or synonym of new word
	SOC Ask teacher for a sentence including the new word
	SOC Ask classmates for meaning
	SOC Discover new meaning through group work activity

Strategies for consolidating a word once it has been encountered

Strategy Category	Strategy Description
Social	SOC Study and practice meaning in a group
	SOC Teacher checks students' flashcards word lists for accuracy
	SOC Interact with native speakers
Memory	MEM Study word with a pictorial representation of its meaning
	MEM Image word's meaning
	MEM Connect word to a personal experience
	MEM Associate the word with its coordinates
	MEM Connect the word to its synonyms and antonyms
	MEM Use semantic maps
	MEM Use "scales" fro gradable adjectives
	MEM Peg Method
	MEM Loci Method
	MEM Group words together to study them
	MEM Group words together spatially on a page
	MEM Use new word in sentences
	MEM Group words together within a storyline
	MEM Study the spelling of a word
	MEM Study the sound of a word
	MEM Say new word aloud when studying
	MEM Image word form
	MEM Underline initial letter of the word
	MEM Configuration
	MEM Use key word Method
	MEM Affixes and roots
	MEM Part of speech
	MEM Paraphrase the word's meaning
	MEM Use cognates in study
	MEM Learn the words of idioms together
	MEM Use physical action when learning a word
	MEM Use semantic feature grids
Cognitive	COG Verbal repetition
	COG Written repetition
	COG Word lists
	COG Flash cards
	COG Take notes in class
	COG Use the vocabulary section in your textbook
	COG Listen to tape of word lists
	COG Put English labels on physical objects
	COG Keep a vocabulary note book
Metacognitive	MET Use English language media (songs, movies, newscast, etc.)
	MET Testing oneself with word tests
	MET Use spaced word practice
	MET Skip or pass new word
	MET Continue to study over time

Appendix 5

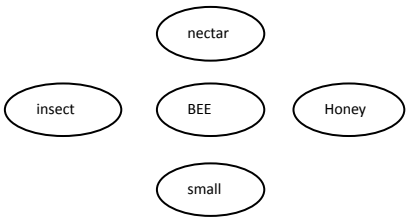
Comparison between Schmitt's Taxonomy (1997) and the version reviewed by the researcher for the present study

(Simplification of wording/more examples/additions)

Strategy Description in Schmitt's Taxonomy (Discovery Strategies)	Strategy Description in the VLSQ of the present study (adapted by the researcher)
DET Analyze part of speech	1. I analyse the part of speech (eg: is it a noun, verb, adjective, adverb,etc)
DET Analyze affixes and roots	2. I analyse the word affixes (prefix or suffix) and roots to guess the meaning of a word
DET Check for L1 cognate	3 I check for an L1 cognate (I try to link the English word to a word in my native language (Arabic, Berber or French) that reminds me of the English form and meaning,(e.g. history/histoire - cat / قط)
DET Analyze any available pictures or gestures	4. I analyse any available pictures or gestures accompanying the word
DET Guess from textual context	5. I try to guess the word's meaning from the text/context in which the word appears
DET Bilingual dictionary	6. I look for the word's meaning in a bilingual dictionary (eg: English – French dictionary) **6*. I look for the word's meaning in a bilingual dictionary (eg: English – Arabic dictionary)**
DET Monolingual dictionaries	7. I look for the word's meaning in a monolingual dictionary (English – English dictionary)
DET Word lists	8. I learn the word through word lists (eg: Analyse→ analysed, analyser, analysing, *analysis*, analyst, analytical, analytically …etc)
DET Flash cards	9. I deduce the meaning of the word from flashcards and posters shown by the teacher (a flashcard is a card with a word or picture on it, used in teaching)
SOC Ask teacher for L1 translation	10. I ask the teacher for a translation of the word into my native language (eg: English into Arabic or French)
SOC Ask teacher for paraphrase or synonym of new word	11. I ask the teacher for a paraphrase or synonym of the new word in English
SOC Ask teacher for a sentence including the new word	12. I ask the teacher to give me a sentence including the new word
SOC Ask classmates for meaning	13. I ask classmates for the meaning of the word
SOC Discover new meaning through group work activity	14. I discover the new meaning of the word through group work

****Items in bold red are the ones added by the researcher to meet context of Algerian EFL learning***

Appendix 5

Strategy Description in Schmitt's Taxonomy (Consolidation Strategies)	Strategy Description in the VLSQ of the present study (adapted by the researcher)
SOC Study and practice meaning in a group	15. I study and practice meaning in pairs/groups in class **15*. I study and practice meaning in pairs/groups outside class**
SOC Teacher checks students' flashcards word lists for accuracy	16. I keep a word list/card and my teacher checks for learning
SOC Interact with native speakers	17. I try to use the new word in interactions with native speakers of English **17*. I try to use the new word in interactions with non- native speakers of English**
MEM Study word with a pictorial representation of its meaning	18. I study the new word with a pictorial representation of its meaning: through images, photographs or drawings
MEM Image word's meaning	19. I study the word by forming an image of it
MEM Connect word to a personal experience	20. I connect the word meaning to a personal experience in order to remember it.
MEM Associate the word with its coordinates	21. I associate the word with its word coordinates, for instance: apple with peach, orange, banana. . . .
MEM Connect the word to its synonyms and antonyms	22. I connect the word to its synonyms and antonyms (opposites)
MEM Use semantic maps	23. I use semantic maps (word trees) example: 
MEM Use "scales" for gradable adjectives	24. I use 'scales' for gradable adjectives, for example: cold / colder/ coldest huge/ big/medium-sized/small
MEM Peg Method	25. I use the peg method (linking the word to one that rhymes with it) to learn the word, for example: two is a shoe, three is a tree, four is a door . . .
MEM Loci Method	26. I use the loci method to learn the word (I connect the new word to a familiar place)
MEM Group words together to study them	27. I group words together to study them, for instance, I relate the new word to other words from the same class, same meaning, same family, etc.
MEM Group words together spatially on a page	28. I group words together spatially on a page, notebook or card by forming geometrical patterns, for instance, columns, triangles, squares, circles, curves, etc.
MEM Use new word in sentences	29. I learn the new word in an English sentence
MEM Group words together within a storyline	30. I group words together within a storyline, for instance: teacher, university, student, study, learning…etc
MEM Study the spelling of a word	31. I study the spelling of the word carefully
MEM Study the sound of a word	32. I study the sound of the word carefully
MEM Say new word aloud when studying	33. I say the new word aloud when studying
MEM Image word form	34. I image the word form (try to memorize to word form)
MEM Underline initial letter of the word	35. I underline the initial letter of the word
MEM Configuration	36. I configurate the word (I arrange the word in parts, letters, etc. in order to memorize it better)
MEM Use key word Method	37. I use the keyword method to learn the word (I connect the English word to a French/Arabic or Berber word by sound to remember it). For example: to remember the English word "left", I connect it with the Arabic word " لفت " (which is a vegetable)
MEM Affixes and roots	38. I try to remember the word affixes (prefix and suffix) and roots

Appendix 5

MEM Part of speech	39. I try to relate the word to its part of speech (noun, verb, adjective..
MEM Paraphrase the word's meaning	40. I paraphrase the word's meaning
MEM Use cognates in study	41. I connect the word to cognates (words of similar form and meaning in French, for instance: internal/interne, history/histoire, tomato/tomate)
MEM Learn the words of idioms together	42. I learn the words of an idiom together as if they were just one word. Example: "raining cats and dogs" means raining a lot.
MEM Use physical action when learning a word	43. I use physical action to learn a new word (eg: the word "clap" = the physical action of joining the hands together)
MEM Use semantic feature grids	44. I use semantic feature grids, for example: man, woman = human beings; - cat, dog = domestic animals/pets
COG Verbal repetition	45. I use verbal repetition of the word
COG Written repetition	46. I write the word several times
COG Word lists	47. I use word lists and revise them
COG Flash cards	48. I use flash cards with the representation of the word to consolidate meaning
COG Take notes in class	49. I take notes of new words on my notebook during the lesson
COG Use the vocabulary section in your textbook	50. I revise the vocabulary section in my textbook
COG Listen to tape of word lists	51. I listen to tapes of word lists
COG Put English labels on physical objects	52. I put English labels on physical objects
COG Keep a vocabulary note book	53. I keep a vocabulary notebook
MET Use English language media (songs, movies, newscast,etc.)	54. I use English-language media (songs, movies, newcasts, etc.) **54*. I use English internet regularly to search for information using English language** **54**. I use English internet regularly to communicate with friends using English language (eg: emails, social networks…etc)**
MET Testing oneself with word tests	55. I test myself with word tests **55*. I learn words from tests/exams (I learn from my mistakes)**
MET Use spaced word practice	56. I use spaced word practice to revise vocabulary (practice revision of words in different short sessions over a longer period of time)
MET Skip or pass new word	57. I skip or pass the new word (I ignore it)
MET Continue to study over time	58. I continue to study the word over time

****Items in bold red are the ones added by the researcher to meet context of Algerian EFL learning***

نمو حجم المفردات الإنجليزية و استراتيجيات تعلمها: دراسة مقارنة عبر السنوات الثلاث للحصول على شهادة ليسانس في اللغة الإنجليزية في جامعة الجزائر 2

ملخص

هذه الدراسة هي محاولة لاستقصاء العلاقة بين نمط نمو حجم المفردات واستراتيجيات تعلم المفردات المستخدمة لدى عينة من 184 طالبًا من طلبة اللغة الإنجليزية كلغة أجنبية EFL المسجلين في ليسانس في اللغة الإنجليزية لمدة ثلاث سنوات في قسم اللغة الإنجليزية بجامعة الجزائر 2. الهدف هو تقييم الزيادة في المفردات المكتوبة المستقبلة فيما يخص استخدامهم لاستراتيجيات تعلم المفردات لأغراض الفهم. وبشكل أكثر تحديدًا ، يتمثل الهدف في دراسة مدى زيادة حجم مفردات الطلبة ذوي الكفاءة المنخفضة والمتوسطة والعالية نتيجة لاستخدام استراتيجيات تعلم المفردات المحددة من السنة الأولى إلى السنة الثالثة ليسانس. تم استخدام ثلاث أدوات بحثية لجمع البيانات الكمية والنوعية: اختبار حجم المفردات المكون من 14.000 عنصر (مقتبس من Nation 2007) ، وتصنيف استراتيجيات تعلم المفردات (مقتبس من Schmitt 1997) واستبيان حول استراتيجيات تعلم المفردات لاستنتاج عادات تعلم الطلبة وأفكارهم وصعوباتهم المتعلقة بتعلم مفردات اللغة الإنجليزية. تمت مقارنة اجابات الطلبة لجميع الأدوات الثلاثة في كل مستوى سنة دراسية. وكشفت النتائج أن حجم مفردات الطلاب ارتفع من 5924 إلى 7500 مفردة من المستوى المنخفض المتوسط إلى المستوى العالي، بمعدل ربح يبلغ 525 مفردة في السنة ، ومكاسب كبيرة من السنة الأولى إلى السنة الثانية ليسانس في اللغة الإنجليزية. ومع ذلك ، فإن سلوك استراتيجيات تعلم مفردات الطلبة لم يتغير بشكل ملحوظ على مدى السنوات الثلاث. حتى الطلاب الذين لديهم أكبر عدد من المفردات (7000 وأكثر) استخدموا نفس استراتيجيات تعلم المفردات مثل باقي الفئات الاجتماعية. كانت الاستراتيجيات الأكثر تفضيلاً هي استراتيجيات التحديد و استراتيجيات ما وراء المعرفية، بينما تم استخدام الاستراتيجيات الاجتماعية بشكل أقل. وبالتالي ، يبدو أن العلاقة الضعيفة بين نمو حجم المفردات واستراتيجيات تعلم المفردات التي توصلت لها هذه الدراسة تشير إلى أن طبيعة استراتيجيات تعلم المفردات لدى الطلبة كان لها تأثير غير معتبر على نمو حجم مفرداتهم. ومع ذلك ، لوحظ استثناء بين المبتدئين من المستوى المنخفض المتوسط الذين بدت لديهم استراتيجيات ما وراء المعرفية التي تنطوي على استخدام الإنترنت للبحث عن المعلومات أو للتواصل مرتبطة بشكل كبير مع حجم مفرداتهم الإجمالية. علاوة على ذلك ، لوحظ عدد كبير من الكلمات المنخفضة التردد ذات كتابة مشابهة لما يعادلها بالفرنسية (cognates) في العديد من الاجابات في السنوات الثلاث حيث كما أظهر العديد من الطلبة معرفة هذه الكلمات التي كانت تتجاوز مستوى كفاءتهم المتوقع. تشير هذه النتائج إلى أن الاعتماد على معرفة الطلبة السابقة باللغات الأخرى (اللغة الأم و اللغة الثانية) ، واستخدام موارد الوسائل المتعددة الوسائط، بالإضافة إلى التركيز على التدريب الاستراتيجي ودمج تعليم مفردات اللغة الإنجليزية الواضحة قد يساعد في زيادة مفردات الطلبة واستقلاليتهم وكفاءتهم الاستراتيجية.

العبارات الأساسية: حجم المفردات ، استراتيجيات تعلم المفردات ، نمو المفردات ، ليسانس في اللغة الإنجليزية كلغة أجنبية ، التعليم العالي الجزائري.