THE INFLUENCE OF AGE ON VOCABULARY ACQUISITION IN ENGLISH AS A FOREIGN LANGUAGE

Tesi doctoral presentada per

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com a requeriment per a l'obtenció del títol de

Doctora en Filologia Anglesa

Programa de Doctorat: *Lingüística Aplicada*
(Bienni 2000-2002)
Departament de Filologia Anglesa i Alemanya

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Universitat de Barcelona

2008

ACKNOWLEDGEMENTS

During the preparation of this dissertation, I have received help and advice from many people, to whom I would like to express my gratitude.

My greatest debt is to my supervisors, without their dedication this project would have never been possible. I feel really lucky to have had the privilege to work with Dr Carme Muñoz and Dr Paul Meara.

From the very beginning, Dr Muñoz has offered me invaluable guidance and unwavering support, I will never thank enough all the help she has offered to me in this dissertation as well as in other aspects of my work. I would like to thank her for her strong commitment with the thesis, her never-ending patience, her constant supply of feedback and her scrupulous revision of the drafts. She has made many indispensable comments and given illuminating insights and advice and I have benefitted from her expertise in many different areas. In addition, her kindness, her constant encouragement and personal qualities have made the preparation of this dissertation much easier and the work with her a great pleasure.

I am indebted as well to Dr Meara, who allowed me to make my first research stay in Swansea in 2002 and has enormously helped me ever since. He has contributed to the present work in countless ways. He has allowed me to dig into his archives for publications and to actively participate in the creation of computer tools, which I have really enjoyed. I am extremely grateful for his indications to work with the data and for his detailed comments on my work, they have always been an incentive to go on and a spur of motivation. In addition to possessing outstanding academic qualities, he has always been very helpful, patient and supportive and I thank his generosity in sharing his knowledge and skill with me.

I owe also a great deal to all the members of the BAF ('Barcelona Age Factor') Project, I would like to thank them all for their contribution to my development as a researcher and also because, from the time I started working with them as a research assistant, they have always been a source of motivation. I am especially grateful to Dr M.Luz Celaya for her help in one of my DEA projects, which later on gave birth to an idea for this thesis. I have also learned a lot with Dr Teresa Navés, from whom I have received help in uncountable aspects, from computer tools to statistics; she has provided me with bibliography that offered much food for thought. I have also gained insights into various research fields thanks to Dr Elsa Tragant.

I would like to express my sincere gratitude as well to Dr Joan Carles Mora for making easier the task of combining teaching and research during the last few years. I also thank Dr Roger Gilabert for his willingness to help this last semester, when this thesis was coming to an end and Dr Raquel Serrano, for sharing with me the last stages of her thesis completion.

Former or present research assistants of the project have also offered me their help and friendly encouragement and therefore I thank Dr Josep Mª Armengol, Laura Sánchez, M.del Mar Suárez, Júlia Barón, Cristina Aliaga, Àngels Llanes and Anna Marsol. I would also like to express my heartfelt thanks to Dr Natàlia Fullana, who has shared with me the preparation of this work from the very beginning, helping me to choose the right path on different occasions, and to Gisela Grañena, who has offered me constant support and bibliography even in the distance. I also thank the schools, teachers and children who took part in the project for their willing cooperation.

I should like to record here my deep appreciation to the people at the Centre for Applied Language Studies at the University of Wales Swansea, who took interest in my research and let me share my research stays with them. Dr James Milton gave me access to the department and university services and offered interesting suggestions for my work. Dr Núria Lorenzo-Dus also gave me expert advice and great encouragement. Dr Jim Ronald, Mitsuru Orita, Masa Mochizuki and Tad Kamimoto made useful comments at early stages of my research. I also thank them all because, together with Giovanna Donzelli, Dr Thomai Alexiou and Nikos Konstantakis, have made of my stays in Wales an enjoyable experience.

I am thankful to Dr Laura Collins for sharing with me her latest work and making very sensible suggestions on my research, for which I am indeed grateful. Thanks also to Ferran Carrascosa for his help with statistics and to the colleages at the English Department, who have always showed me their support, especially to Dr Guàrdia.

I gratefully acknowledge the financial help of the grant 2001FI-0062 from Generalitat de Catalunya ('Formació de Personal Docent i Investigador'), which allowed me to work as a research assistant for four years and to spend time abroad to prepare the present work. This research has also been partly supported by the grants BFF2001-3384 and HUM2004-05167 from the Ministry of Education of Spain to the BAF Project and by the designation of the BAF research group as 'Grup Consolidat de la Generalitat' (2005SGR00778).

Finally, I thank Carol and Eric Davies, who made me feel at home in my stays in Swansea and last, but not least, I owe gratitude to my family and friends, who allowed me time to carry out this work. Above all, I would like to thank my parents, to whom I dedicate this thesis, for encouraging me to choose what I liked and for their understanding and support at all times. I also thank Jordi for all his help along the way and for always being there.

To Montserrat and Lluís

SUMMARY

This dissertation analyses the effects of age on the acquisition of vocabulary in English as a Foreign Language (FL). It focusses on productive vocabulary because it is a crucial aspect in language learning which is also vital in communication, both oral and written, and it has often been the neglected component in research on age.

Studies on age in naturalistic contexts have usually shown that 'the earlier one starts learning the language, the better'. Although in the short term Early Starters (ES) are outperformed by Late Starters (LS), due mainly to the superior cognitive maturity and the quickest rate of development of the latter, in the long run ES will catch up with LS and will eventually overtake them. Our educational system also promotes an early start to the FL, as the age at which English is first introduced at schools has progressively been brought down in the recent years. However, results in instructional settings are not as clear-cut as the ones obtained in natural contexts and 'the earlier the better' assumption does not always seem to apply in a straightforward way. The present work analyses the oral and written production of two groups of Catalan/Spanish bilinguals who learn English at school as a FL. One of the main aims of the research is to determine if, in the long term, towards the end of secondary education, there are consistent differences between a group of ES (who started at 8) and one of LS (who started at 11) as regards productive vocabulary. The design presented also allows to study the development and draw comparisons between the groups from primary education onwards (data collections were carried out after 200, 416, 726 and 800 hours of exposure). Therefore, the analyses are performed by controlling the Amount of Exposure that learners have received, their Cognitive Maturity (Age at Testing) and their Age of Onset (Starting Age).

In order to analyse the participants' production, both intrinsic and extrinsic vocabulary measures are used. It is also a research purpose of the present work to survey some of the widely-used measures of lexical richness and to evaluate new ones, such as *D* and *P_Lex*. In addition, as the Second Language Acquisition research field is very much in need of testing tools, especially as regards vocabulary, this thesis presents one of the first methods to compute estimates of productive vocabulary size for different tasks. The process to carry out the estimations has been automated into *V_Size*, a new computer tool.

Results show that in the long term, ES do not surpass LS in a formal context as far as lexical production is concerned. The same takes place even if ES receive some more exposure. This LS advantage seems to be present since the first stages of learning the FL, even though both groups show a boost in vocabulary from the age of 13 onwards. The findings are discussed in the light of other results found in natural and formal contexts for lexis and other language components. They are also interpreted in relation to other factors that may contribute to a successful learning apart from an early start. Results on different lexical measures are considered for research in the field and potential advantages of the new *V_Size* are described. Therefore, not only does the thesis bring new evidence to research on age and FL acquisition, but it also offers new insights into productive vocabulary testing.

RESUM

Aquesta tesi analitza els efectes del factor edat en l'adquisició de vocabulari en anglès com a llengua estrangera. Es centra en vocabulari productiu perquè és un aspecte crucial en l'aprenentatge de llengües que també és molt important per la comunicació, oral i escrita, i ha estat sovint el component oblidat en recerca sobre edat.

Els estudis sobre el factor edat en contextos naturals mostren que és millor començar a aprendre un idioma el més abans possible. Tot i que a curt termini els aprenents més grans siguin millors que els joves, sobre tot a causa del la maduresa cognitiva i del ritme ràpid de desenvolupament dels primers, a llarg termini els més joves atrapen els grans i arriben a depassar-los. El nostre sistema educatiu també promou un començament primerenc de l'anglès, ja que l'edat en què l'idioma estranger és introduït a les escoles és cada vegada més baixa. Tanmateix, els resultats en contextos d'instrucció no són tan clars com els obtinguts en contextos naturals i la suposició de 'quan abans millor' no sembla del tot certa. Aquest treball analitza la producció oral i escrita de dos grups d'estudiants bilingües català/castellà que aprenen anglès com a llengua estrangera a l'escola però que començaren a edats diferents (uns als 8 i els altres als 11). Un dels propòsits de la recerca és determinar quin dels dos grups serà més competent a llarg termini, al final de la Secundària, pel que fa al vocabulari productiu. El disseny permet també estudiar el desenvolupament i establir comparacions entre els dos grups des de l'educació primària (es portaren a terme recollides de dades després de 200, 416, 726 i 800 hores d'aprenentatge). Les anàlisis controlen, per tant, les hores d'exposició, la maduresa cognitiva i l'edat d'inici de l'anglès.

Per tal d'analitzar la producció dels aprenents s'han utilitzat mesures de vocabulari intrínisques i extrínsiques. És també objectiu d'aquesta tesi estudiar algunes de les mesures més utilitzades en lèxic així com avaluar-ne de noves com la *D* i el *P_Lex*. A més, com que el camp de recerca en Adquisició de Segones Llengües necessita eines d'avaluació, especialment en vocabulari, es proposa en aquest treball un dels primers mètodes per realitzar estimacions del tamany de vocabulari productiu dels aprenents per diferents tasques. Aquest procés d'estimació ha estat computeritzat en el programa *V_Size*, una nova eina informàtica.

Els resultats indiquen que, a llarg termini, els aprenents més joves no avantatgen els més grans en contextos formals a igualtat d'hores d'exposició pel que fa a vocabulari productiu, encara que els més joves hagin començat abans; tampoc si aquests han rebut més hores d'exposició. Aquest avantatge dels més grans sembla ser present des dels estadis inicials d'aprenentatge, tot i que hi ha un desenvolupament notable als voltants dels 13 anys en ambdós grups. Els resultats són posats en relació a altres estudis en contextos formals i naturals tant pel que fa a vocabulari com per altres components lingüístics. Així mateix, són interpretats en relació a altres factors que poden ser tan o més importants que una jove edat d'inici. També els resultats obtinguts de les diferents mesures lèxiques són considerats per recerca en el camp i es descriuen els possibles beneficis derivats del nou mètode d'estimació de tamanys de vocabulari. Per tant, la tesi ofereix no només noves evidències a la recerca sobre el factor edat en l'adquisició de llengües estrangeres sinó també nous mètodes d'anàlisi de vocabulari productiu.

CONTENTS

Chapter 1. Introduction **1**

1.1. Age and Second Language Acquisition 1
1.2. Vocabulary acquisition 3
1.2.1. The importance of words 3
1.2.2. The importance of measures 5
1.3. The present study 7

Chapter 2. Age and Vocabulary Acquisition **11**

2.1. Introduction 11
2.2. General overview 12
2.3. The Critical Period Hypothesis 13
2.4. Age and time in SLA 15
2.5. Age and SL vocabulary acquisition 22
2.5.1. Vocabulary: a neglected area in age studies 24
2.5.2. Why it is relevant to study vocabulary in relation to age 27
2.6. Main findings on SL vocabulary and age 36
2.6.1. Folk beliefs on age and SL vocabulary acquisition 36
2.6.2. Naturalistic settings 38
2.6.3. Formal settings 42

Chapter 3. Measuring Vocabulary **51**

3.1. Introduction 51
3.2. Different words in a text sample of a given size 52
3.3. What we mean by saying that a writer has a rich vocabulary 54
3.3.1. Types of vocabulary 54
3.3.2. How can 'richness' be assessed 56
3.4. Estimations of vocabulary size 64
3.4.1. Why vocabulary size is important 64
3.4.2. Difficulties in estimating vocabulary size 66
3.4.3.'Theoretical' vs. 'observed' vocabularies 67
3.4.4. Vocabulary size estimates 68

Chapter 4. Research Questions and Method **79**

4.1. Introduction 79
4.2. Research questions 79
4.3. Method 81
4.3.1. Participants 81
4.3.2. Instruments 87
4.3.2.1. Background questionnaire 88
4.3.2.2. Oral tests 88
4.3.2.3. Written tests 89
4.3.3. Procedure 93
4.3.4. Analyses 93
4.3.4.1. Methodological decisions 94
4.3.4.1.1. Oral data 94
4.3.4.1.2. Written data 110
4.3.4.2. Description of the studies and statistical analyses performed: Some preliminary considerations 111

Chapter 5. Descriptive Analyses **113**

5.1. Introduction 113
5.2. Methodology: Measures used in the analyses 114
5.2.1. Traditional measures 114
5.2.2. D 114
5.2.2.1. D_Tools: Creation and validation of the program 116
5.3. Results 117
5.3.1. A long-term comparison: The role of AO, AT and Exposure 117
5.3.1.1. Groups with the same Exposure but different AO and AT 121
5.3.1.2. Groups with the same AT but different AO and Exposure 123
5.3.1.3. Groups with the same AO but different AT and Exposure 123
5.3.2. A short and mid-term comparison of longitudinal data from early and late starting school learners 124
5.3.3. A short and mid-term comparison of cross-sectional data from early and late starting school learners 126
5.3.4. D and other measures 137
5.4. Discussion 142
5.5. Conclusion 151

Chapter 6. Lexical Frequency Profiles and P_Lex **153**

6.1. Introduction 153
6.2. Participants 154
6.3. Data analysis 155
6.4. Results 158
6.4.1. General descriptive results 158
6.4.2. Results from statistical analyses 162
6.5. Discussion 164
6.6. Conclusion 169

Chapter 7. Vocabulary Size Estimates **171**

7.1. Introduction 171
7.2. V_Size 171
7.2.1. What the program does 172
7.2.2. How the program works 173
7.2.3. The main advantages of the program 179
7.3. Experimental work with V_Size 180
7.3.1. From vocabulary sizes to profiles 180
7.3.2. From profiles to vocabulary sizes 183
7.4. V_Size applied to our data 188
7.4.1. Estimations for EFL learners 190
7.4.2. Estimations for native speakers 200
7.5. Discussion and conclusions 203

Chapter 8. Discussion and Conclusions **209**

8.1. Introduction 209
8.2. Age, exposure and vocabulary acquisition 209
8.3. Vocabulary measures 222
8.4. Estimating productive vocabulary size 228
8.4.1. Towards a model 230
8.4.1.1. Language as an ordered and as a random system 230
8.4.1.2. Language acquisition as an ordered and as a random process 235
8.4.2. Pros and cons of the model 239
8.4.2.1. The curve-fitting procedure 239
8.4.2.2. The estimation process and text length 241
8.4.2.3. Estimations for tasks 242
8.4.3. Validity and reliability: reasonable expectations 244
8.5. Final conclusion 245

References 255

Appendix A. Tests 283
Appendix B. Data Samples 291
Appendix C. Conventions to edit data 297
Appendix D. D_Tools Manual 299
Appendix E. D_Tools Validation 307
Appendix F. V_Size Manual 311
Appendix G. Profiles and Vocabulary Sizes Generated by V_Size 319

INDEX OF TABLES

Table 3.1.	Studies on estimations of the vocabulary sizes of learners in instructional settings	71-73
Table 4.2.	General outline of the participants in the BAF Project	84
Table 4.3.	Types and number of longitudinal participants in each group	86
Table 4.4.	Tasks performed by the students	90
Table 4.5.	Traits found in the storytelling task at different proficiency levels	97
Table 5.6.	Common and different variables in the groups compared	118
Table 5.7.	Interview: long term	119
Table 5.8.	Storytelling: long term	119
Table 5.9.	Roleplay: long term	119
Table 5.10.	Composition: long term	119
Table 5.11.	Results of t-tests analyses between A3 and B3 when $p \leq .01$	121
Table 5.12.	Summary of the effects of the two-way repeated measures Anova	126
Table 5.13.	Participants in each group together with descriptive data	127
Table 5.14.	T-tests results when $p \leq .01$	135-136
Table 5.15.	Correlations between D and other measures in each of the tasks	137
Table 5.16	D results obtained by different researchers compared to the ones obtained in the present study	140-142
Table 5.17.	Results from two learners in different measures	147
Table 6.18.	Participants in the study	155
Table 6.19.	Total amount of tokens in each corpora and average length for the tasks in each of the groups	156
Table 6.20.	Mean percentages and standard deviations of words at different levels for each task and group	160
Table 6.21.	Percentages of Anglo-Saxon and Cognate words as well as mean lambdas for each group and task	162
Table 7.22.	Zipf's Law exemplified with an extract from the BNC	174
Table 7.23.	Profiles given by the program for some vocabulary sizes and different samples	181
Table 7.24.	Example of the effects of moving one word between bands	186-187
Table 7.25.	Tokens produced in each task by each participant together with the means and the total amount of tokens for each task and group	190-191

Table 7.26.	Pros and cons of using the Nation's Lists or the Jacet's List	194
Table 7.27.	Estimated vocabulary for our learners	196-197
Table 7.28.	Group means and standard deviations when estimates are computed individually for each student	199
Table 7.29.	Estimates and corresponding error when estimations are done for the tasks in each group	199
Table 7.30.	Native speakers' ages and tokens produced, vocabulary estimates and errors (in brackets) compared to learners' performance in the storytelling task	201

INDEX OF FIGURES

Figure 5.1.	Interview: long term	120
Figure 5.2.	Storytelling: long term	120
Figure 5.3.	Roleplay: long term	120
Figure 5.4.	Composition: long term	120
Figure 5.5.	TTRs with and without standardising length	120
Figure 5.6.	Means obtained for A1, B1, A2 and B2 in each measure and task	125
Figure 5.7.	Means obtained for all groups in each measure and task	128
Figure 5.8.	Interview: times 1, 2 and 3	130
Figure 5.9.	Storytelling: times 1, 2 and 3	131
Figure 5.10.	Roleplay: times 1, 2 and 3	132
Figure 5.11.	Composition: times 1, 2 and 3	133
Figure 5.12.	Cloze: times 1, 2 and 3	133
Figure 5.13.	A comparison of Ds and standard TTRs (50 tokens) in each task and group	138
Figure 6.14.	Group profiles (LFP) for the storytelling	161
Figure 6.15.	Percentage of tokens and types in 1k band for each group and task	161
Figure 6.16.	Percentage of tokens and types in 2k band for each group and task	161
Figure 7.17.	The empirical curve of the profile from the learner's production should match the theoretical profiles generated by the program	177
Figure 7.18.	How V_Sizes estimates vocabulary	178
Figure 7.19.	Idealised vocabulary profile of a vocabulary size of 2,500 words	182
Figure 7.20.	Idealised vocabulary profile of a vocabulary size of 3,500 words	182
Figure 7.21.	Empirical and theoretical profiles for a vocabulary of 3,500 words (Error=590)	185
Figure 7.22.	Empirical and theoretical profiles for a vocabulary of 4,200 words (Error=1,272)	185

Figure 7.23. Estimate vocabularies for each task computed in two ways: mean of the estimates computed individually and estimates computed for whole groups 200
Figure 7.24. An idealistic representation of the frequency of words in any language 204
Figure 8.25. Unusual receptive vocabulary profiles in language learners 240

INDEX OF APPENDICES

Appendix A. Tests 283
A.1. Students' Questionnaire 283
A.2. Written tests 286
A.3. Oral tests 287
A.3.1. Semi-guided interview 287
A.3.2. Storytelling 287
A.3.3. Roleplay 289

Appendix B. Data Samples 291
B.1. Interview 291
B.2. Storytelling 294
B.3. Roleplay 295
B.4. Composition 296

Appendix C. Conventions to Edit Data 297

Appendix D. D_Tools Manual 299

Appendix E. D_Tools Validation 307

Appendix F. V_Size Manual 311

Appendix G. Profiles and Vocabulary Sizes Generated by V_Size 319

INDEX OF ABBREVIATIONS

AE	Amount of Exposure
AO	Age of Onset
AT	Age at Testing
AWL	Academic Word List
BICS	Basic Interpersonal Communicative Skills
BNC	British National Corpus
CALP	Cognitive/Academic Language Proficiency
CATSS	Computer Adaptive Test of Size and Strength
CHILDES	Child Language Data Exchange System
CP	Critical Period
CPH	Critical Period Hypothesis
EFL	English as a Foreign Language
ERP	Event-Related Brain Potentials
ES	Early Starters
EVST	Eurocentres Vocabulary Size Test
FL	Foreign Language
GSL	General Service List
LC	Language Centre
LD	Lexical Density
LFP	Lexical Frequency Profile
LS	Late Starters
LSD	Language-Specific Details
LV	Lexical Variation
L1	First Language (Mother Tongue)
L2	Second Language
NS	Native Speaker
NNS	Non-Native Speaker
OLS	Ordinary Least Squares
PPVT	Peabody Picture Vocabulary Test
SL	Second Language
SLA	Second Language Acquisition
TTR	Type-Token Ratio
UG	Universal Grammar
UWL	University Word List
VLT	Vocabulary Levels Test
WF	Word Families