

Gender differences in vocabulary
acquisition in the foreign
language in primary education:
Evidence from lexical errors

M^a Pilar Agustín Llach



UNIVERSIDAD
DE LA RIOJA

GENDER DIFFERENCES IN VOCABULARY
ACQUISITION IN THE FOREIGN LANGUAGE
IN PRIMARY EDUCATION

EVIDENCE FROM LEXICAL ERRORS

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INTRODUCTION

Research uses a number of factors to distinguish among second language learners. These factors or learner characteristics affect the process of second language acquisition. Contrary to what happens in mother tongue acquisition, the process of acquiring and using a second language is influenced by external factors whose confluence can result in different levels of attainment and proficiency. Traditionally, researchers and teaching practitioners have observed that, in spite of the general inclination of L2 learners to process the target language in similar ways, they show great differences concerning their proficiency and performance. The variability perceived in their interlanguage as regards their target language use can be traced back to the influence of some variables external and internal to the learner (see Ellis 1997, 1985, Cook 1991/1996, Skehan 1989, Littlewood 1984). Depending on the age, usually pre- or post-puberty learners, the sex, male or female, the mother tongue, intelligence, degree of extroversion and sociability, etc. of the learners, we can expect their vocabulary acquisition and use to develop and manifest in one way or another¹.

There are more and less proficient learners, more and less motivated learners, older learners and younger learners, introvert and extrovert learners, learners with a visual cognitive style or with an auditory one and so on. Nevertheless, the dividing line between members of one group and of the other is not always clear and researchers not always coincide as to where to draw the line for high or low proficient learners or for adult or child learners. By contrast gender results in a clear cut category for grouping learners, and therefore it has become one of the most conspicuous and most frequent factors to classify learners.

1. Littlewood believes that "individual differences simply reflect how quickly- or how far-specific learners progress along this common path", rather than causing them to progress along different paths in the process of foreign language acquisition (Littlewood 1984: 51).

Gender studies stretch over a number of areas. There are numerous investigations trying to elucidate whether there are any differences between male and female learners in their second language learning behaviour. However, we have observed a lack of studies addressing sex differences in error production, lexical error production, in particular. Especially scarce is research concerning the performance of young learners of EFL, since most studies on error analysis on the one hand, and gender differences, on the other have focused on older learners at the secondary or tertiary levels, but not in primary education. This study wants to contribute to cover that gap in research by focusing on the quantitative and qualitative differences between male and female learners when producing lexical errors in writing.

The starting point of this research is the interest in finding out more about the processes of lexical acquisition and how the gender of the participants may affect these processes. In particular, we are interested in how young learners of English of low proficiency learn and use the words of English. The lexical errors they commit in their written compositions will inform us about this and help us carry out this research.

The main purpose of this monographic work is to analyze the written performance of young learners of English by determining whether there are any sex differences regarding the amount of lexical error production and the types of lexical errors. Finding out about possible gender differences has important implications for foreign language teaching approaches, e.g. different instructional interventions should be adopted for males and females in case they would turn out to acquire vocabulary in a different way.

The present work is divided into two main parts. The first one reviews the main studies addressing gender differences in different language areas and systematizes and synthesizes research results. The second part collects a research study conducted to examine lexical error production in writing. Account is given of the method chosen and of the results obtained which are discussed in light of previous research.

PART I
THEORETICAL BACKGROUND

1. GENDER STUDIES

One of the variables that may affect the production of vocabulary in written tasks, and consequently the production of lexical errors is gender². Gender studies have yielded contradictory results with three main lines of conclusions:

1. studies that point to female superiority in general language learning,
2. studies that found males to outperform their female peers in general language learning, and
3. studies that could find no gender differences in the acquisition of a language by female or male learners.

We will now see these results in more detail in the corresponding linguistic areas.

1.1. GENERAL COGNITIVE AND VERBAL RESEARCH

Sex is the primary way of classifying people into groups, and this is a fact difficult to deny (Halpern 1996). Research studies on gender differences regarding cognitive abilities are common in the literature. Three main areas of gender differences in general learning have been identified: verbal skills, visual-spatial abilities, and mathematical or quantitative skills. Women exceed men in the first one, but males are reported to be better in the latter two (Andreou, Vlachos, and

2. In the literature controversy is found in the use of the terms 'sex' and 'gender' (see, e.g. Sunderland 1995). Generally, some scholars distinguish between the two using 'sex' as a biological category that serves to differentiate males from females, and 'gender' as a social category that alludes to the social role and characteristics given to men and women in society (see Creswell 2003 for a harsh critique of the sex/gender distinction). Here, this distinction will not be made and both terms will be used interchangeably all through the study.

Andreou 2005, Chipman and Kimura 1998, Casey 1996, Halpern 1996, Halpern and Wright 1996).

Also females are found to draw on past experiences and knowledge and long-term memory rather than inventing new approaches, whereas males do better on tests that require manipulation of mental information stored in short-term memory (Casey 1996, Halpern and Wright 1996, Hyde 1996).

These established gender differences in performance on various cognitive tasks, specifically verbal versus spatial and mathematical skills, are consistent with research that claims that females are, in general terms, better language learners than males. For verbal skills in first language development many previous studies have shown that females outperform their male counterparts in verbal fluency (Halpern and Wright 1996), in syntactic and semantic performance, but not in phonological (Andreou et al. 2005), in production of written and oral language (Halpern 1996), in reading comprehension³ (Halpern 1996), and finally, girls also excel their male peers in spelling, but curiously enough not in vocabulary (Feingold 1996, Halpern and Wright 1996).

However, no differences in intelligence have been found depending on sex (Lynn, Fergusson, and Horwood 2005), and gender differences tend to decrease with time (Casey 1996). This reduction of sex differences over time together with the fact that males and females seem to develop at different rates may account for why females are ahead of boys in most academic subjects during the earliest years of life and schooling (Halpern 1996).

Further qualitative differences have been reported in answers to open-ended questions. Moreno and Mayer (1999) noticed that subjects answered open-ended questions in a different way according to the gendered social roles assigned to them, and they concluded that the wording of such questions is extremely important in order to avoid triggering sex-role stereotypes.

Strategic behaviour also turned out to be different for males and females⁴, with girls reporting more rote-learning and memorisation strategies than boys⁵ (Rozendaal, Minnaert, and Boekaerts 2003), although the results of available studies are still inconclusive. Females, then, seem to use more strategies than boys, but also different strategies.

Females also reported higher levels of anxiety in test taking situations and higher overall school interest (Rozendaal et al. 2003), but lower levels of self-

3. See also research on reading comprehension in the second/foreign language for more controversial results.

4. Compare with research in second language strategic behaviour.

5. Compare this behaviour with girls' reliance in long-term memory rather than in creative and improvisation abilities, or short-term memory.

confidence (Furnham 2004, Rozendaal et al. 2003). These results are in line with Prieto and Delgado's finding (1999) that pointed to females avoiding answering if they were not sure and males preferring to guess.

1.2. SECOND LANGUAGE RESEARCH

But not only has sex been an issue of interest in general cognitive research, research on linguistics has also considered gender differences. Traditionally, as observed by Jiménez Catalán (2003), sex has been one of the salient individual variables considered in linguistic research, basically, in the field of sociolinguistics (see also Ladegaard and Bleses 2003). Research in this field has brought to light the existence of differences in language use, including vocabulary, grammar and pronunciation, depending on the sex of the interlocutors. That males and females talk in different ways seems to be a reliably established finding in sex differences research (see Cheshire 2005, Sunderland, e.g. 1995). The social roles to which these male and female speakers (must) conform play a relevant role in determining these sociolinguistic differences (Ladegaard and Bleses 2003, Sunderland 1995).

1.2.1. *General second language acquisition and performance*

Nevertheless, despite the significance of sex as a factor of variation in language issues, relatively little attention has been devoted to sex as a predictor of variation in second and foreign language teaching and learning. Ekstrand (1980), and Burstall et al. (1974), for example, reported girls to be superior to males in language achievement (see also Wen and Johnson 1997, Schaer and Bader 2003). Nonetheless, Al-Othman (2004) found that males performed better on an achievement test after an EFL on-line course, and Lin and Wu (2003) found no differences on an English proficiency test with Chinese students. Despite the confirmed presence of gender-related differences in language acquisition and use, and the general agreement to acknowledge female superiority in verbal abilities there is no consensus about which aspects of language acquisition and use show gender differences (Lin and Wu 2003).

Meanwhile males obtained higher ratings in phonology in first language development (see Andreou et al. 2005), Lin and Wu (2003) found that females did significantly better than males in L2 listening comprehension. Albeit this result, Bacon (1992) obtained no differences in L2 comprehension between boys and girls in authentic listening tasks.

Regarding sex and attitudinal factors different studies have shown girls having higher levels of interest in the second language and being more motivated than their male peers (MacIntyre, Baker, Clément, and Donovan 2002, Kaylani 1996, Powell and Baters 1985, Burstall et. al 1974). In the Spanish school

context, Jiménez Catalán (1993) found that girls are more interested than boys in learning a foreign language. By contrast, Lasagabaster (2003) did not find significant sex differences regarding motivation to learn the foreign language. This higher motivation on the part of females may be responsible for obtained gender differences in achievement (MacIntyre et al. 2002).

Girls learn in a different way than boys. Female L2 learners prefer social environments where co-operation is stressed and they focus their attention on personalised information and relationships, whereas men prefer self-organised learning, are more competitive and focus on facts and detached information (Al-Othman 2004, Meunier 1995/1996, Ehrman and Oxford 1989, Willing 1988, Reid 1987⁶). Similarly as in native language development and general learning styles, Andreou, Andreou, and Vlachos (2004) found for second language acquisition that females rely more on rote-learning of isolated facts, whereas males were more prone to relate ideas to a wider context and to examine them critically before accepting them; furthermore, men also reported higher levels of self-confidence. However, this did not give males any advantage in L2 learning achievement (Andreou et al. 2004: 30). Tercanlioglu (2004) did not find any differences among male and female L2 learners regarding beliefs about foreign language learning.

1.2.2. *Reading comprehension*

Concerning gender differences in reading comprehension in a second/foreign language we find conflicting results. Summarising trends in research findings, we see the following:

- males and females do not differ in their reading comprehension performance if text topic is controlled for, i.e. if the topic of the text is gender-neutral⁷ or if subjects have to read multiple texts with varying topics (Brantmeier 2003, Phakiti 2003: 668, Young and Oxford 1997),
- males and females are familiar with different text topics, and this influences their reading comprehension performance so that females perform better with humanity-oriented texts, whereas science-oriented passages favour males (Brantmeier 2004, 2003, Pae 2004: 267).

In a nutshell, text topic, and therefore topic knowledge influences foreign language reading comprehension by gender, i.e. the topic of a text explains gender-based differences in reading comprehension in a second language (Brantmeier 2004, 2003). In relation to these gender differences Brantmeier (2004: 2) noticed that although at the early stages of language instruction gender may be a “critical

6. These last three in Jiménez Catalán 2003.

7. This means that both men and women have the same background knowledge of the text topic and are equally familiar with text topic.

factor”, it is not at the upper levels⁸ (cf. San Mateo Valdehita 2003/2004 for similar results with gender differences regarding vocabulary learning in Spanish L2).

1.2.3. *Learning strategies*

A closer look at the relationship between sex and L2 learning strategy use reveals differences at two levels:

- *Quantitative differences*. Females are generally reported a greater use of L2 learning strategies and also a wider range, i.e. females use L2 learning strategies more often than males and also they use more types of strategies (Jiménez Catalán 2003, Young and Oxford 1997, Oxford et al. 1993, Oxford et al. 1988).
- *Qualitative differences*. Regarding the range of strategies, research shows that men and women differ in the specific L2 learning strategies they use and in the frequency with which they make use of those strategies (Jiménez Catalán 2003, Phakiti 2003, Young and Oxford 1997), these differences are slight, though. In a study of strategy use in L2 reading conducted by Phakiti (2003) “males were found to report more use of metacognitive strategies than females” (p. 668), whereas no difference was found between males and females in use of cognitive strategies (p. 668). In a previous study of L2 reading strategies, Young and Oxford (1997) also found that males more often than females monitored their reading pace and reading behaviour, used paraphrases, and stated understanding of words while reading, whereas females more often than males solved vocabulary problems and acknowledged lack of background knowledge while reading. Jiménez Catalán (2003) carried out a research on vocabulary learning strategies and came to the conclusion that females exceeded males in the use of formal rule strategies, input elicitation strategies, rehearsal strategies and planning strategies. Males used more image vocabulary learning strategies than females.

1.2.4. *Vocabulary acquisition*

Considering the studies specifically designed to investigate sex as a variable in L2 vocabulary learning we observe controversies. Among others, Boyle (1987) studies sex differences in listening vocabulary, and determines that, exceptionally, boys are superior to girls in the comprehension of heard vocabulary. This result

8. Casey (1996) had already called attention to gender differences decreasing with time rather than with proficiency level as Brantmeier (2004) notes. We may assume that both decreases are related.

contrasts with those commented on previously that show female advantage in listening comprehension.

Alcón and Codina (1996) focus on the impact of sex on negotiation and vocabulary learning in classroom interaction, finding that the role that sex plays in learning vocabulary through interaction is dubious and seems to be a non-discriminating factor (see also O'Sullivan 2000).

Nonetheless, Scarcella and Zimmerman (1998) found that men performed significantly better than women in a test of academic vocabulary recognition, understanding and use. In a like way, in Lin and Wu's study (2003) males also outperformed females in the vocabulary section of an English proficiency test. Similar results were reported by Lynn et al. (2005). By contrast, in Nyikos' study (1990 as cited in Sunderland 2000: 206) women performed better than men in a memorisation test of German vocabulary. Meunier (1995/1996) found out that males were superior to females in acquiring vocabulary related to geographical facts, and females were better acquiring vocabulary pertaining to story characters. In the same line of specific vocabulary areas are Yang's (2001) results, which clearly point to a female superiority in size and accuracy of color vocabulary.

In her study about vocabulary retention and access to translations by beginner language learners using CALL, Grace (2000) establishes that there is no significant difference between male and female learners in their performance on receptive vocabulary tests and rate of vocabulary retention. Nevertheless, she concludes that there are differences in the strategies used by members of both sexes.

Regarding rate of vocabulary acquisition, San Mateo Valdehíta (2003/2004) found that girls native speakers of English need, in general, fewer expositions to a Spanish L2 word in order to learn it. These differences were not significant, though.

Controversy and disparity of findings also arises in measures of vocabulary size by sexes. Young Spanish L1 girls outperformed their male peers in vocabulary use in written compositions (productive vocabulary knowledge) (Jiménez Catalán and Ojeda Alba 2007), but showed no significant differences in receptive vocabulary (Jiménez Catalán and Terrazas Gallego forthcoming)⁹. Jiménez Catalán and Ojeda Alba (2007) found that girls use greater number of tokens and of types indicating that female learners have a more varied vocabulary and are more prolific in writing. Still for Dutch primary school learners, boys reported higher levels of word knowledge than girls (Edelenbos and Vinjé 2000).

In a further study conducted with the same subjects as in the present research, Jiménez Catalán and Ojeda Alba (2007) found that girls when writing

9. The findings of these two studies are of special relevance for the present research, because the subjects under scrutiny are the same.

letters used more conventions in openings and closings, asked more questions, and showed more concern for their addressees.

Finally, in research in vocabulary learning in the mother tongue, Reyes Diaz (1999) proved that girls learn vocabulary quicker than their male counterparts. Ávila (1991) also found out that girls deployed more vocabulary than boys, although the difference was not significant. A more recent study, however, points to male superiority in lexical competence in Spanish as a native language (Álvarez Castrillo and Diez-Itzá 2000).

Very few studies have investigated the relationship between sex and errors. Among them, Jiménez Catalán (1992) found significant differences in the relative frequency of errors committed, being this higher in male than female learners. She also reports women having a bigger vocabulary size than their male peers and being more fluent with the foreign language, English.

In summary, there are conflicting findings across the studies cited. Some point to the superiority of girls in some aspects of second language learning, on the contrary, others claim no difference between male and female learners in their vocabulary acquisition processes, or even they are for male advantage. From the review of some empirical studies two main tendencies call the reader's attention: the inconsistency of the findings concerning sex differences and girl's advantage more specifically, on the one hand, and the relative smallness of the differences between sex groups, on the other hand¹⁰. The following chart summarises the results of empirical studies.

TABLE 1. GENDER DIFFERENCES IN L2 LEARNING

Study	Language aspect studied	Gender differences
Schaer and Bader 2003 MacIntyre et al. 2002 Wen and Johnson 1997 Ekstrand 1980 Burstall et al. 1974	General language achievement	F > M
Al-Othman 2004	General language achievement	F < M
Andreou et al. 2004 Lin and Wu 2003	General language achievement	F = M
Lin and Wu 2003	Listening comprehension	F > M
Boyle 1987	Listening comprehension	F < M

10. See for instance Sunderland (2000), Ekstrand (1980), Powell (1979) for good reviews of studies that investigate sex differences in different aspects of language learning.

Study	Language aspect studied	Gender differences
Bacon 1992 MacIntyre et al. 2002 Kaylani 1996 Jiménez Catalán 1993 Powell and Baters 1985 Burstall et al. 1974	Listening comprehension Attitudes and motivation	F = M F > M
Lasagabaster 2003	Attitudes and motivation	F = M
Al-Othman 2004 Meunier 1995/1996 Ehrman and Oxford 1989 Willing 1988 Reid 1987	Learning environment	F = social environment, co-operation, personal information and relationships M = self-organised learning, competitive, facts and detached information
Andreou et al. 2004	Learning styles	F = rote-learning M = critical and associational learning
Tercanlioglu 2003	Learning beliefs	F = M
Brantmeier 2003 Phatiki 2003 Young and Oxford 1997	Reading comprehension performance	F = M
Brantmeier 2004, 2003 Pae 2004	Text topic familiarity & more favourable performance	F = humanity-oriented M = science-oriented
Jiménez Catalán 2003 Young and Oxford 1997 Oxford et al. 1993 Oxford et al. 1988 Phakiti 2003	L2 learning strategy (frequency of use & range)	F > M
Phakiti 2003	Type of strategy used	F ≠ M
O'Sullivan 2000 Alcón and Codina 1996	Input negotiation	F = M
Lynn et al. 2005 Lin and Wu 2003 Scarcella and Zimmermann 1998	Vocabulary learning and use	F < M
Nyikos 1990	Vocabulary learning	F > M
Meunier 1995/1996 Yang 2001	Specific vocabulary areas	F = story characters, colors M = geographical facts

Study	Language aspect studied	Gender differences
Grace 2000	Receptive vocabulary learning	F = M
Jiménez Catalán and Terrazas Gallego forthcoming	Receptive vocabulary size	F = M
Edelenbos and Vinjè 2000	Receptive vocabulary size	F < M
San Mateo Valdehíta 2003/2004	Rate of vocabulary acquisition	F > M
Jiménez Catalán and Ojeda Alba 2007	Productive vocabulary use	F > M
Álvarez Castrillo and Diez-Itzá 2000	Lexical competence Spanish L1	F < M
Jiménez Catalán 1992	Number of errors	F < M

F = female

M = male

It is precisely this lack of definitive and conclusive results regarding sex differences in L2 learning and more specifically in L2 vocabulary learning that call for further investigation regarding the sex variable.

In view of the important role of the sex variable as a crucial predicting factor in second language learning and performance, it is astonishing that sex differences in male and female second language learners as regards their error production have not been more thoroughly studied in specifically designed studies. When studied, sex differences in error production have been computed as a by-product of studies with other objectives. For instance, in the work of Jiménez Catalán (1992), aimed at identifying the conditioning factors of errors, significant differences were found in the relative frequency of errors committed, being this higher in male than female learners. Furthermore, women were more fluent in the use of English and they were attested to produce an average of 50 words more than their male peers. Size of vocabulary is also a determining factor concerning sex differences, with girls having a more extensive vocabulary.

PART II
THE STUDY

2. OBJECTIVES AND HYPOTHESES

Lexical errors and the sex variable are two scarcely correlated factors in the literature. The present study is intended to determine whether these two factors are actually related in the written production of young learners. To date, studies performed on second language learning and the sex variable have generally older learners as subjects. Usually, university students, although also high school teenagers and sometimes even younger pupils (see, e.g. Lynn et al. 2005, Jiménez Catalán 2003, Sunderland 1995) serve as the informants in this type of studies. Although researchers concur that vocabulary is central to L2 development and communication, and issues pertaining gender and L2 vocabulary acquisition and use merit careful attention, there is an obvious dearth of studies that investigate sex differences in the production of lexical errors by children EFL learners.

Considering this, the general and specific objectives of this research are:

1. Identify the frequency of lexical errors produced by young Spanish EFL learners.
2. Determine the categories of lexical errors most frequently produced by young Spanish EFL learners.
3. Compare the male and female production of lexical errors in quantitative and qualitative terms and explore for sex differences.
4. Examine the evolution of lexical error production by male and female learners from 4th to 6th grade and explore for sex differences.

With these objectives in mind, we stated the following hypotheses:

1. There will be no significant differences between boys and girls regarding lexical error production over time.

Female superiority in language acquisition and use is prevalent in research, but as has been put forward above, no significant gender differences are found all over the different areas of language acquisition. Echoing previous research on vocabulary and (lexical) errors, we believe that there is no evidence to predict significant sex differences in our data.

The general belief among teachers, learners, and even the lay people that girls are, in general terms, better language learners than boys has not found justification in research results. Research studies have not come to definite and conclusive results to that respect. As we have seen above, findings are conflictive with girls outperforming boys in some language areas, boys doing better than girls in some other aspects of SLA, and finally with no gender differences in performance in some other studies.

In the particular case of vocabulary acquisition, females were found to be superior to boys in vocabulary learning (Nyikos 1990), in rate of vocabulary acquisition (San Mateo Valdehita 2003/2004), and in productive vocabulary use (Jiménez Catalán and Ojeda Alba 2007). By contrast, males were better than female learners in vocabulary learning and use (Lynn et al. 2005, Lin and Wu 2003, Scarcella and Zimmermann 1998), in receptive vocabulary size (Edelenbos and Vinjé 2000), and in general vocabulary knowledge in the L1 (Álvarez Castrillo and Díez-Itzá 2000). Grace (2000) and Jiménez Catalán and Terrazas Gallego (forthcoming) did not find any significant gender differences in receptive vocabulary learning and vocabulary size, respectively.

As regards error production, Jiménez Catalán (1992) reported males committing more errors than females. However, in a more recent study Agustín Llach, Fernández Fontecha and Moreno Espinosa (2006) found that girls and boys commit lexical errors with the same frequency. Although girls were slightly better than boys, that is, they produced fewer lexical errors, this difference was not significant.

In view of the conflictive findings of previous research regarding sex differences in vocabulary knowledge and error production, it seems reasonable to hypothesize that there will be no significant differences in the production of lexical errors, although we will most possibly find girls producing fewer lexical errors than their male peers.

2. Boys and girls will produce the same type of lexical errors.

There is no evidence to believe that males and females follow fundamentally different processes of lexical acquisition. In fact, some studies have shown that they basically use the same types of strategies when learning a language, although the frequency in which they apply individual strategies differs across sexes. In this sense and basing on previous studies on learning and communication strategies (Jiménez Catalán 2003, Phakiti 2003, Young and

Oxford 1997) and on error production (Agustín Llach et al. 2006), we dare posit the idea that there will not be any difference in the categories of lexical errors produced by our subjects, and that furthermore, they will also display similar frequencies of each type irrespective of their sex.

Bearing in mind that lexical errors are insights into the process of lexical acquisition, confirmation of this hypothesis would put forward the universality of the process of lexical acquisition as learners of different sexes are concerned. Identification of the different types of lexical errors produced by boys and girls at the different testing moments could allow us to establish a route of lexical acquisition. In light of the lack of evidence pointing to differences in the process of vocabulary learning, we believe this will be the same for both male and female learners, although their rate of acquisition may be different.

3. THE METHOD

The following sections will provide an account of the methodology chosen in order to carry out the study reported here. In other words, below we present how this research was conducted and which is its nature. For clarity's sake, we give account of our informants, the materials we used to collect the data analysed, and the way we administered those instruments of data collection. To further add clarity to the explanation of how we proceeded in the present study, we also inform about how we performed the analysis of the data, including the descriptive and inferential measures we used to that respect.

The study reported in the present research is of the quasi experimental type which has as its main objective the identification of the lexical errors and lexical error types produced by Spanish learners of English at two different testing moments and the comparison of lexical error production in quantitative and qualitative terms for male and female learners. The written production of Spanish male and female learners is examined for lexical errors when participants are attending the 4th and 6th grade of primary school, i.e. after 419 and after 629 hours of uncontrolled input¹¹, respectively. We have observed how the production of lexical errors evolves on the basis of gender, and how the gender of the participants influences the production of lexical errors by subjects.

3.1. PARTICIPANTS

We analysed the written production of a total of 283 Spanish young learners of English as a foreign language. Data were collected on the first occasion in

11. Although some of the subjects revealed attending private English lessons, we decided not to eliminate them from the sample, because in the present research we are examining the development of the lexical error production of the *same* subjects at two different times, Time 1 and Time 2 after two years of formal instruction in English (210 hours of difference between the first and second testing moments), i.e. we are doing not only a transversal study, but also a longitudinal one.

spring 2004 when learners were attending 4th grade in four schools in Logroño (La Rioja, Spain), and had received a total of 419 hours of instruction in English, their first foreign language. The second data collection moment was two years later, when learners were enrolled in 6th grade. This time our informants had received a total of 629 hours of instruction¹². Henceforth, we will refer to the first data collection moment or testing time as Time 1, and to the second data collection moment or testing time as Time 2.

At Time 1, informants were between 9 and 10 years old with a mean age of 9.39 years. At Time 2 learners were between 11 and 12 years old with a mean age of participants at Time 2 of 11.39. In the design of the present study, increasing amount of instruction and level of proficiency¹³ co-occur with increasing age.

Participants at T1 had a low proficiency in English and therefore they were ascribed to the beginner level. After further 210 hours of instruction, the level of proficiency of subjects had increased and accordingly participants at T2 could be classified as low-intermediate¹⁴. The following table shows the characteristics of the participants such as the total number of informants, age, and amount of instruction at both testing times.

TABLE 2. GENERAL CHARACTERISTICS OF PARTICIPANTS AT BOTH TESTING TIMES

	N	Mean age	Hours of instruction
T1	283	9.39	419
T2	283	11.39	629

Spanish was the native language of all the subjects studied and therefore none of the informants was excluded from the study. Nevertheless, not all subjects were present in the tests, or either some of them did not complete the tasks complying to the instructions and thus they had to be discarded¹⁵.

12. See footnote 11 for clarification of the issue concerning subjects who had attended private English lessons outside school.

13. Although this is not necessarily true for all cases, here as amount of instruction increases, level of proficiency also increases.

14. Although learners were not specifically tested for the levels of the European Framework of Reference, they could be ascribed to levels between A1 and A2 for 4th graders and between levels A2 and B1 for 6th graders.

15. Those subjects had to be discarded for the analysis, because either they had not attended class the day a data collection session took place, or they did not complete a particular test, or their handwriting was so unintelligible that their compositions remained illegible for the researcher, or either their responses to the composition task did not comply with the instructions, i.e. it was not written in English.

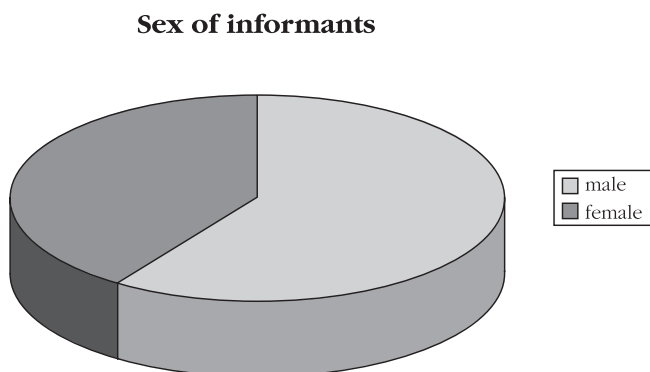
As regards the variable sex it should be noted that male subjects totalled 162 (57.24 %), meanwhile the other 121 (42.75 %) were female participants. See Table 3. for a summary of the distribution of the participants into sex groups.

TABLE 3. DISTRIBUTION OF SUBJECTS INTO SEX GROUPS

	Informants
Male learners	162 (57.24 %)
Female learners	121 (42.75 %)
Total	283

The following figure shows the distribution of subjects into sex groups in a graphical way (Figure 1.).

FIGURE 1. DISTRIBUTION OF SUBJECTS ACCORDING TO SEX



Rather than volunteers, intact classes were selected for testing. Thus, eleven intact classes in four schools tested twice with an interval of two years were used for this study. The names and grade levels of the participants were removed and replaced with identification numbers.

3.2. MATERIALS

The instruments used for the study consisted of a written composition, and two tests of general proficiency: a cloze test and a reading comprehension test. In order to obtain demographical and academic information about the participants, they were administered a questionnaire to complete as part of

the research study¹⁶. These instruments of data collection will be explained in more detail in the corresponding sections below.

3.2.1. *Written Composition*

In order to obtain real language from the participants, we used a written composition as the elicitation procedure. During 30 minutes participants were required to write the composition. No other constraint apart from time and topic type was imposed on the learners. There was no minimum length or word constraints and learners were encouraged to write as much as they could.

The topic of the composition task was writing a letter to a prospect English host family where the learner introduced him/herself and talked about his/her family, home town, school, hobbies, main interests, and any other thing about their life and liking they may have deemed interesting for the host family to know. This composition topic was selected because

- a) it imposed little or no constraints as to the type of language and content to be used by the informants. Because of this writing topic, learners could display as much linguistic knowledge in English as they were able to. Accordingly, differences between learners in English language proficiency were ruled out, since the topic did not require the learner to use specific grammatical structures, or particular lexical items.
- b) By providing participants with this writing topic, we wanted to make sure that they had something to write about. Consequently, the possible differences in essay length or in language mastery would be due to differences in the linguistic level of participants and not lack of word knowledge, or topic knowledge. It was assumed that the specific, personal information required from learners was available to them and thus the task could be more easily performed, a very important fact, considering the young age of our subjects. It is reasonable to expect that a familiar topic related to the learner's experience is chosen, if the writing task "is intended to elicit a fluent sample of writing under test conditions without advanced preparation" (Read 2000: 198).
- c) Finally, this composition topic was selected because it was also employed to elicit data in a much larger national project within which this study is framed. Furthermore, one further joint research project

16. Informants, tests, instruments and data from the present study are from the research project: *El desarrollo de la competencia léxica en la adquisición del inglés en educación primaria* (BFF2003-04009-CO2-02) funded by the Spanish Ministry of Science and Technology (*Ministerio de Ciencia y Tecnología*). This study was therefore carried out under the auspices of the project BFF2003-04009-CO2-02.

conducted at the University of the Basque Country has also used the same topic in the written compositions participants had to complete. This allows for comparison with subjects from other schools, permitting thus further research.

Subjects were given oral and written instructions in Spanish, their mother tongue.

We used compositions, also known in the literature as free writing tasks (Read 2000: 198) for two main reasons. Firstly, compositions provide very valuable data for error analysis, since they deal with learners' performance at the production level. Secondly, compositions provide relatively spontaneous language material produced by the learner with the intention of communicating. In our particular case, learners were not aware of the exact nature of the test, although they knew they were taking part in a language study aimed at finding out more about the way they learn and use the foreign language. Therefore, we believe that participants had a genuine interest in performing well and in their compositions being understood by the researcher. This fact assures the spontaneity of the data. It is commonly agreed among practitioners and second language researchers that error analysis should be performed on spontaneously produced language data. Compositions are considered the best sources for this goal (da Rocha 1980: 85). Besides, if time and topic of composition is controlled for, the resulting products are comparable (Wolfe-Quintero et al. 1998). Moreover, Argüelles Álvarez (2004: 84) echoing Jacobs et al. (1981) and Ferris and Hedgcock (1998) believes that direct testing of writing ability, i.e. writing assessment through composition, is the most effective, valid and reliable method of assessing writing in the classroom.

Compositions do not offer an exact measure of linguistic knowledge, however, it is assumed that as a general indication of written production, compositions reflect the real linguistic and lexical knowledge of the learners. Furthermore, written essays have been shown to be a valid instrument for measuring linguistic and lexical proficiency. Consequently, compositions have been repeatedly used to assess linguistic knowledge and lexical competence of ESL learners (see among many others, Engber 1995, Laufer and Nation 1995, Jiménez Catalán 1992, Harley, Allen, Cummins, and Swain 1990, Jacobs et al. 1981).

Nevertheless, we also find counter opinions. For example Da Rocha (1980: 85) reports on research findings that show that "compositions are not capable of providing measurements of learner control of structures, lexis and usage which are sufficiently reliable". This contention seems rather untenable, since compositions have been proved to be a good source to obtain authentic learner's language in context within a communicative situation (see, e.g. Ambroso 2000, Engber 1995), and therefore the best data collecting technique in error studies, especially in

studies of lexical errors¹⁷. The bulk of studies that have recently used written compositions as data collection techniques, and especially as lexical error collection technique attests this fact (see for example, Naves et al. 2005, Lasagabaster and Doiz 2003, Celaya and Torras 2001, Ambroso 2000, Fernández 1997, Jiménez Catalán 1992, Hyltenstam 1988, Vázquez 1987, Warren 1982).

3.2.2. *General Language Proficiency Level tests*

To determine the English level of the participants at the two testing moments and to check if proficiency developed and increased as experience with the language increased, learners were asked to complete two level tests consisting in a cloze procedure and a reading comprehension passage. This was an objective measure of the proficiency level of the participants. A total of 10 minutes was given to complete each of the two proficiency tests.

Analysis of cloze procedure and reading comprehension test yielded expected results in general language proficiency in English: level of proficiency increases with amount of instruction, as illustrated by the following table¹⁸.

TABLE 4. PROFICIENCY LEVEL OF THE PARTICIPANTS

	Mean score cloze	Mean score reading
4 th grade	33.9 %	24.39 %
6 th grade	46.8 %	34.28 %

3.2.2.1. Cloze Procedure

The cloze procedure was of the multiple choice type, also called “multiple-choice cloze” (Read 2000: 102), where each deleted word is incorporated into a multiple choice item, and test takers had to choose between three options the correct one, the one that fills in the blank in the text. The number of multiple choice items totalled 8 within a total number of words of 110. This indicates that on average one word is deleted every 14 words. The cloze stems from Corporate Author Cambridge ESOL, 2004.

17. Suffice it to mention here the close relationship between vocabulary and communication, and more specifically, between lexical errors and (in)effective communication.

18. Scores were here converted into percentages of correct answers so that measures of comparison could be conducted among the results of the cloze test and the reading comprehension test at both testing times.

Acknowledged by many as an integrative measure of overall language proficiency, the cloze procedure results in a highly effective way of testing learners' general second language knowledge (Read 2000, and Oller 1973 in Alderson 1979, among others). Rather than measuring small or concrete areas of language such as the grammatical or lexical component, the cloze procedure is thought to measure overall English knowledge. Carter (1990, 1988) believes that apart from being used to test language, the cloze procedure can also be used for pedagogical purposes, i.e. as an instrument of language development.

The cloze procedure as a competence testing instrument has a series of advantages. First, it is especially adequate for low level subjects such as those being dealt with in this study, since it does not require writing ability on part of the test-takers. In addition to this, the multiple choice format reduces the range of possibilities for each blank, which makes it easier to respond (Read 2000: 111). Furthermore, the multiple choice cloze can also be marked more objectively, because the range of responses the learners can give is limited and controlled. This type of cloze procedure provides learners with possible answers and is easy to complete and because of this it is considered more "learner-friendly" (Read 2000).

The cloze procedure, either used in isolation or in combination with other proficiency measures like reading comprehension tests, or grammar and vocabulary tests, is a frequently used instrument to measure general language proficiency in the foreign language (see among many others Cenoz 2003, Ok 2003, Ozono and Ito 2003, Muñoz 2001, 2000). It meets the requirements of "naturalness" for language tests (Muñoz 2000: 169), reflects real language use, addresses different areas of language, and of linguistic competence, and it is economical to administer and correct (Muñoz 2000: 170), therefore it is a frequently chosen testing method to assess the level of learners, especially in large-scale studies.

With all, there are studies that have claimed against the cloze procedure as a valid and reliable measure of readability, reading comprehension, and global skills in EFL proficiency. For example in 1979 Alderson questioned this generally admitted contention. In his study, he found out that the cloze procedure correlates highly with tests of grammar and vocabulary, what he calls core proficiency rather than with tests of reading comprehension. In a more recent study with the same subjects and instruments as the present research, Jiménez Catalán and Terrazas Gallego (forthcoming) obtained results that supported Alderson's (1979) research in that the cloze test was observed to correlate positively with a test of vocabulary level. Echoing these findings¹⁹, here, the

19. Cf. also Weir (1990) for claims of the cloze test as a valid indication of overall language proficiency, and for further considerations about the reliability and validity of the testing format.

cloze procedure was used to measure general language competence (grammar and vocabulary together) (cf. Carter 1988), and also a reading comprehension test was further employed to assess subjects' level in English.

3.2.2.2. Reading comprehension test

A reading comprehension test was employed to evaluate the learners' proficiency level in EFL. A multiple choice reading test was used and three possible answers with just one correct option were provided for the 7 comprehension questions. The presence of context constitutes an important factor in using a reading passage to evaluate language knowledge (Read 2000). The reading passage used here had a total of 190 words. The seven comprehension questions consisted in circling the appropriate end for the sentence provided, or in circling the correct answer to the question posed.

Reading comprehension tests are commonly used as an instrument to ascertain degrees of overall language proficiency and they are generally included in proficiency tests, among which we highlight the highly prestigious TOEFL, Cambridge Proficiency Exam, also for foreign languages other than English, for instance in the DELE and DELF Exams for Spanish and French as a foreign language, respectively.

Reading comprehension ability is considered an indicator of the learning stage and proficiency level at which learners find themselves. Several studies have shown that learners of different proficiency levels also display variable reading skills and perform in a different way in their reading comprehension (Codina and Usó 2000, Mecarty 1998). Moreover, Phakiti (2003: 650) claims that reading success depends, among some other factors, on the proficiency level of the readers, especially at advanced stages, where it becomes a determining factor (Brantmeier 2004).

This proficiency level test was drawn from the *KET Handbook 2004, Read/Write Sample Test 2*. Moreover, the answering format chosen, i.e. the multiple choice is a very popular and valid instrument in language testing. Its main advantage over other testing formats is the easiness and convenience of its administration and the objective and well-established procedures for analysing and scoring it. Correcting multiple choice tests takes little time and mental effort for the researcher, since it is a rather mechanical act.

The instructions for the reading comprehension and the cloze test were given in the mother tongue of the participants (Spanish). A total of 10 minutes was given for participants to complete each of the two proficiency level tests. In both proficiency level tests, the cloze and reading, participants were provided with a real example from the text showing how to implement the activity.

The tests of general proficiency level had been used to test the language level of the informants. The two proficiency tests were marked by the researcher. Thanks to the multiple choice format of both tests, scoring proceeded easily and quickly. Each correct answer was given one point, the maximum punctuation was then 8 points for the cloze test, and 7 for the reading comprehension test. The resulting scores for the cloze and reading tests are presented as two separate measures which reflect the general language proficiency level of the participants.

3.2.3. *Questionnaire*

In order to complete the information about the participants obtained from the several data collection instruments presented above, in the last testing session, we administered a questionnaire for our informants to complete. The questionnaire was written in Spanish and participants had 30 minutes to answer all its questions.

The 26 questions of the questionnaire were grouped into a total of five main areas. The first area was devised to obtain demographical information of the participants, such as their sex, nationality, mother tongue, and date of birth.

The second main area dealt with in the questionnaire was that of subjects' experience with the foreign language. In this section, we asked whether they had received private English lessons outside school, and in the affirmative case we wanted to know for how long, how often, and what were the reasons to start up that private tuition. Subjects were also asked about their experience in contexts of *real* language use either in an English speaking country or in English summer camps.

Questions ascribed to the third area tackled learners' knowledge of EFL in two ways. First objective information was required by inquiring them about their past grades in English as a school subject. Then, their subjective perceptions of their proficiency level in EFL were investigated concerning the four skills²⁰, and their perception of their overall competence.

A fourth area accounted for the learning habits of the participants asking them about the time spent learning English, and how this time was employed, i.e., what type of learning activities were performed during learning English, e.g. doing homework, reading magazines, listening to music in English, or watching English TV, just to mention a few activities.

20. Traditionally language has been divided into four skills or abilities in the foreign language, namely, speaking, writing, listening and reading. The reasons on which informants based their judgements of their proficiency in each of the skills were also matter of interrogation.

And finally, the fifth area examined the beliefs and attitudes of learners towards a) the English language, b) the native speakers of that language, and c) the process of acquisition of EFL.

The questionnaire is used for the joint research project at the University of La Rioja and at the University of the Basque Country.

A sample of each data gathering instrument used appears in the Appendix.

3.3. PROCEDURES

Data were collected in two independent session sets consisting of three sessions each and with two years difference, i.e. Time 1 and Time 2. We proceeded in an identical way for every session. Participants completed the proficiency level tests, wrote the compositions and answered the questions of the questionnaire. The teacher and researcher were present all the time in the classroom. Learners were not allowed to use any dictionary, notes, grammar, or textbook, nor were they allowed to ask the teacher, researcher or their classmates for help.

In a preliminary correction session, the cloze procedure, the reading comprehension test were corrected and scored for right answers. The questionnaires were codified and the results typed in into the statistical program (SPSS, of which more below). During this session both the Time 1 and Time 2 data were submitted to scoring.

Compositions were collected and converted into computer readable files²¹. Then they were scrutinized for lexical errors. Lexical errors were identified, counted up, described, interpreted, and subsequently classified according to their origin. In order to classify lexical errors we base on the taxonomy of lexical errors designed by Celaya and Torras (2001). To the categories of this taxonomy we added up two further lexical error types basing on James's (1998: 144-154) classification of lexical errors. We agree with Celaya and Torras (2001) to consider a lexical error a word that "contains a malformation, if it is not an English word or if it violates native-like use in the context where it appears" (p. 6). With the term word these authors refer to any open class word, i.e. nouns, adjectives, verbs, and adverbs (see also Engber 1995).

We followed the traditional steps of EA, and found special difficulty in the identification and classification of lexical errors. Decisions were taken basing on

21. Here we want to express our gratitude to the members of the GLAUR group for their assistance with the keying in of the compositions. Asunción Barreras, Almudena Fernández, Rosa Jiménez, Juan Manuel Molina, Soraya Moreno, Julieta Ojeda, and Melania Terrazas.

the norm of standard English and with the help of dictionaries and grammars. Specifically we used the Collins Cobuild Dictionary, the Collins Spanish-English dictionary, The Oxford English Grammar and The Cambridge Grammar of the English Language. The fact that a lexical error may have either several causes or any ambiguous cause makes the task of classifying lexical errors an arduous one. Serious attempts have been made to classify lexical errors in the most systematic and objective way as possible.

Six main categories of lexical errors are distinguished in the taxonomy:

- a) **Misspellings**, also frequently known in the literature as “spelling errors” (see, e.g. Lindell, 1973, Arnaud, 1992, Fernández, 1997, Bouvy, 2000) or orthographic errors (Olsen 1999). These are violations of the orthographic conventions of English which are generated as a result of the difficulties learners have to cope with the “English encoding system” (Celaya and Torras, 2001: 7), e.g. *biutiful* for “beautiful”, *smool* for “small” or *guatermelon* for “watermelon”. Some researchers prefer to ignore spelling errors, but many of the learners in this study have problems with English orthography, and as Olsen (1999) noted these play an important role in the poor results achieved by learners with many spelling errors in their written essays. Therefore, it is interesting to examine the processes behind misspellings.
- b) **Borrowings**, also called “complete language shift”, “code switching”, (see e.g. James 1998, Olsen 1999, Naves et al. 2005) appear when the learner inserts any L1 word into the L2 syntax, “without any attempt to tailor them to the target language” (Celaya and Torras, 2001: 7), and this includes phonological or morphological adaptations, e.g.:

(1) My grandmother is *coja* (Eng. lame)

(2) My father is big and *lento* (Eng. slow)

We disregarded any clauses written completely in the L1.

- c) **Coinage** or “relexification” (see, e.g. Ringbom, 1983) consists in the adaptation of an L1 word to the L2 orthography or morphology, “so that it sounds or looks English” (Celaya and Torras, 2001: 7).
- (3) My rabbit is small, very *divert* (Sp. *divertido*, Eng. funny).
- (4) In mai house is famili: fatter, matter, *tater* and mai (Sp. *tato*, Eng. familiar for “brother”).
- d) **Calque** or “literal translation” happens when a learner literally translates the word from the L1. This has to do with the transfer of semantic features from an L1 word to an L2 equivalent but with different contextual distribution (see e.g. Zimmermann, 1986a, 1986b, 1987). In

other words, learners are aware of the existence of a word and of its form, but they lack knowledge of the semantic and/or collocational restrictions of that word (Ringbom 2001: 64).

(5) My *table study* is blue and big (literal translation from *mesa de estudio*, Eng. desk).

(6) My favourite *plate* is pasta and rice (literal translation from *plato*, Eng. dish).

Ringbom (2001) distinguishes between what he calls “semantic extension of single lexical units” (p. 64), and “calques of multi-word units (compounds, phrasal verbs, idioms)” (p. 64). In the present section we will not apply this distinction and will refer to semantic extensions of one or several words as calque or literal translation.

- e) **Misselection**, also called “synforms” (Laufer 1990, 1991, 1992), or malapropism (see, e.g. Chanell 1988), is a confusion of formally similar items, i.e. pairs or triples of words that sound (phonetic similarity) or look (orthographic similarity) similar are confused and interchanged (Laufer 1990, 1991, 1992, James 1998: 145). A misselection implies the wrong selection of an already existent word in the target language, i.e. error word and target word are both target language words (malapropism or synform)²².

(7) My *class* is big (*class* for “classroom”).

(8) I am tall and my *bear* is very long (*bear* for “hair”).

- f) **Semantic confusion** refers to the confusion of semantically related words, that is, two words are confused because they are semantically similar, i.e. they have similar meanings, but they are functionally different. Here again two existent target language words are mixed up (James 1998: 151-154).

(9) In the city there are *very* shops (*very* for “many”).

(10) My bedroom is *great* (*great* for “huge” or “big”).

In the present study, we have dealt with lexical errors that derive from the influence of the mother tongue, i.e. interlingual lexical errors, and also those that have their origin in the influence of the target language, i.e. intralingual lexical errors. By contrast, Celaya and Torras (2001) had restricted their analysis of lexical errors to interlingual errors, i.e. errors originated by mother tongue influence.

22. When the misselection has its origin in the mother tongue of the subject, then we talk about the “false friend” phenomenon. Nevertheless, we did not consider this possibility in our classification, and preferred to classify any possible instances of “false friend” errors as calques (see example 6 above).

In the taxonomy of lexical errors set up here, we also distinguished among formal lexical errors and semantic lexical errors. This dichotomy reflects the way in which the lexicon of the L2 learners is organised, i.e. formal and semantic criteria of vocabulary storage, and how vocabulary is accessed in L2 production, e.g. low-proficiency learners prefer form-based storage and high-proficiency learners show preference for semantic storage (James 1998: 145, see also Fernández 1997, Legenhausen 1975 for examples of this approach to lexical error classification). The following table offers a summary of the different types of lexical errors according to these two basic distinctions.

TABLE 5. DISTRIBUTION OF LEXICAL ERROR CATEGORIES ACCORDING TO SOURCE AND TYPE²³

		TYPE	
		Formal	Semantic
SOURCE ²⁴	Mother Tongue	<ul style="list-style-type: none"> • Borrowing • Coinage • Misselection (false friend)²⁵ 	<ul style="list-style-type: none"> • Calque²⁶
	Target Language	<ul style="list-style-type: none"> • Misspellings²⁷ • Misselection 	<ul style="list-style-type: none"> • Semantic confusion

The classification of lexical errors into their types or categories was implemented by the researcher. However, in order to determine the reliability of the classification, a sample of 100 randomly selected compositions was

23. This classificatory table follows James (1998: 144-154).

24. Attribution of lexical errors to mother tongue or target language source is not always easy. The distinction between both is not clear-cut in many instances. Sometimes it is difficult to discern whether a lexical error was caused due to L1 or target language influence.

25. No instances were found of this category of lexical error (false friend) in our data.

26. We do not agree here with James (1998: 150) in the ascription of calques to the formal type of lexical errors. In the sense that if the L2 word is a literal translation from another existing L1 word, it implies that a transfer of semantic features from the L1 word to the L2 word is taking place, as Zimmemann 1986a and b, and 1987 notes. Consequently, we believe that this type of lexical error can be better considered of the semantic rather than of the formal type. Other researchers that consider calque errors as semantic errors are Ringbom (1987, 2001), and Gabryś-Barker (2006).

27. Celaya and Torras (2001) distinguish interlingual, i.e. L1-oriented, from intralingual, i.e. target language oriented errors in all the categories they mention. In this sense, they claim for misspellings which are derived from mother tongue influence:

This type of error [misspelling] can be explained by the fact that learners have acquired the oral English word, but not its written form and so, in order to write the word, learners use their available knowledge, that is the L1 [...] phonographic coding rules (p. 9).

scrutinized for lexical errors, and the lexical errors identified in this random sample of 100 compositions were categorized into the taxonomy by another trained teacher of EFL. The interrater reliability between both categorizations achieved a coefficient of .87²⁸.

3.4. ANALYSIS

We will discuss the data analysis before turning to the account of the results thrown by the study. Lexical errors were first identified for each category and a relative measure was then calculated that consisted in dividing the total number of words in the composition by the total number of lexical errors counted in that composition (i.e. accuracy ratio)²⁹. This measure relates lexical errors and composition length and is therefore known as lexical density. Still another complementary relative measure was used, namely the percentage of lexical errors per every hundred words. This was obtained by dividing the number of lexical errors by the total number of words per composition. This procedure yields a decimal which translates into a percentage. This latter procedure allows for t-test and other measures of comparison to be conducted to measure the differences among groups (cf. Kroll 1990b: 147).

The language level tests: cloze procedure and reading comprehension were scored for correct answers and numerical data was obtained. The results obtained in the cloze and reading comprehension tests were also coded into computer-readable documents, and transformed into percentages, i.e. they were standardized so as to allow for comparisons. Standardization was carried out on a 10 point scale. The questionnaire was analyzed to obtain relevant information for the present study.

First, we studied the two cohorts (subjects at T1 and T2) separately focusing on the description of the lexical errors at both moments, and giving also account of the general proficiency level of participants at each measuring time. We then compared the results of the male and female groups at both testing times to check for any gender differences.

Descriptive and inferential statistics were used for the analysis. Descriptive statistics included raw counts, i.e. simple frequency counts of particular units:

28. Interrater reliability was calculated using the Pearson product moment correlation coefficient test.

29. The procedure used here to calculate accuracy ratio of compositions is quite common, as can be inferred from Kroll's words (1990b: 146): "using the total number of words in a composition and tabulating the number of errors is one of the standard measures used in forming the basis for a kind of accuracy ratio".

words per composition³⁰, lexical errors, and lexical error types, and ratio measures expressed as percentages: lexical errors per composition (see above), lexical error types per total number of lexical errors, and percentage of correct answers in the language level tests.

After the descriptive analysis of the data to examine whether there is any change in lexical error production in relation to gender, we checked whether the differences found reached statistical significance. Inferential statistics included paired and matched (two-tailed) means comparison tests both the parametric type, e.g. t-tests for comparisons, and of the non-parametric type for not normally distributed data samples, e.g. Wilcoxon signed-ranks test. When the distribution of the sample variable was not normal, non-parametric measures had to be used³¹.

We use the SPSS 14.0 version to implement the statistical analysis.

30. Proper names (people's names, films, book titles) were not included in the word counts, since they do not always respect grammar and lexis rules, and lexical errors in these type of words were not considered for the analysis. For example: *My teacher's name is Eba.*

31. We are very grateful to the mathematician and statistician Montserrat San Martín for her help with the statistical analysis regarding the decision as to what statistical test to perform on our data. Remaining errors are our own.

4. FINDINGS

The present section will offer the results yielded by the analysis of the data and will try to answer the research questions posited above related to sex differences in the production of lexical errors. First we will offer the results of the descriptive statistics to turn then to analyze the data provided by the inferential statistics. The results for each of the two hypothesis will be examined in turn.

4.1. SEX DIFFERENCES IN LEXICAL ERROR PRODUCTION

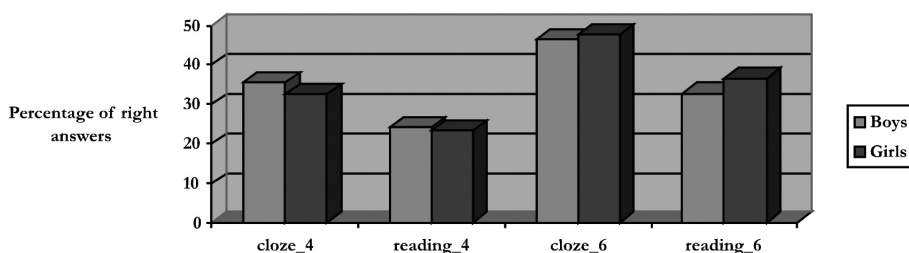
This section tries to answer the question of whether there are sex differences in lexical error production. In other words, here we will try to discern whether boys commit more lexical errors than girls, or on the contrary whether boys display fewer lexical errors in their written compositions. First, account will be given of the proficiency level of boys and girls separately for 4th and 6th grade, and then their lexical error production at both testing times will be reported. Finally, comparisons will be carried out to establish sex differences and find statistical significances.

Table 6. presents the figures for proficiency level measured by the cloze and the reading comprehension tests. As can be seen in the table, boys perform better than girls in both tests of proficiency in 4th grade at T1 with a mean percentage of correct answers of 35.5 % for the cloze and 24.24 % for the reading. For girls these percentages are slightly lower: 32.6 % for the cloze and 23.35% for the reading. However, for T2, two years later, girls surpass their male peers in their language level as revealed by the tests of the cloze and the reading: 47.61 % versus 46.31 % for the cloze, and 36.43 % versus 32.81 % for the reading. In other words, boys show a higher language level than girls in 4th grade, but two years and 210 hours of instruction later female learners do better than their male counterparts in the proficiency level tests. Figure 2. shows these results graphically.

TABLE 6. PROFICIENCY LEVEL ACCORDING TO SEXES AT T1 AND T2

		CLOZE			READING		
		N	% right answers	sd	N	% right answers	sd
Grade 4	Boys	157	35.5	11.87	155	24.24	16.94
	Girls	115	32.6	16.19	115	23.35	16.02
Grade 6	Boys	146	46.31	19.86	148	32.81	19.74
	Girls	110	47.61	20.14	109	36.43	18.18

FIGURE 2. PROFICIENCY LEVEL TESTS FOR BOYS AND GIRLS AT T1 AND T2



After establishing the proficiency level of boys and girls at both testing times and stating that whereas boys outperform girls in their scores in the level tests at T1, female subjects outperform boys at T2 two years later, we can now move on to examine the students' writing ability through their production of lexical errors in composition. The results are shown in Table 7. and Table 8. The figures indicate the mean numbers per composition.

From the figures in the tables, it can be observed that there are no big differences in the production of lexical errors between boys and girls. Surprisingly enough, boys commit on average fewer lexical errors than girls at both testing times with 10.08 errors per composition in 4th grade, and 8.25 instances in 6th grade for males and 12.54 lexical errors per 4th grade composition and 9.51 two years later for female. The boy that produced the highest number of lexical errors committed a total of 53 instances at T1, and 32 occurrences of lexical errors at T2 at most. At both testing times there were boys who committed zero lexical errors: S81, S91 and S105 at T1 and S11, and S240 at T2. For girls, figures look as follows: a maximum production of 44 instances per composition and a minimum of 1 occurrence in 4th grade. At T2 in 6th grade the girl that most lexical errors displayed produced 37 instances in her composition, and the one that least committed produced no lexical error (S122).

TABLE 7. TOTAL MEANS FOR LEXICAL ERRORS PER COMPOSITION, LENGTH OF COMPOSITION, ACCURACY RATIO, AND PERCENTAGE OF LEXICAL ERRORS PER COMPOSITION FOR BOYS AND GIRLS AT T1

	N	Lexical error production	sd	Length of composition (in words)	sd	Accuracy ratio	sd	% of lexical errors	sd	% of compositions not analysed
Grade 4										
Boys	141	10.08	7.18	86.77	55.44	12.33	12.42	14.42	10.35	8.51
Girls	108	12.54	8.42	98.22	49	12.07	11.14	14.32	8.96	11.11

Note: All measures are expressed in means

TABLE 8. TOTAL MEANS FOR LEXICAL ERRORS PER COMPOSITION, LENGTH OF COMPOSITION, ACCURACY RATIO, AND PERCENTAGE OF LEXICAL ERRORS PER COMPOSITION FOR BOYS AND GIRLS AT T2

	N	Lexical error production	sd	Length of composition (in words)	sd	Accuracy ratio	sd	% of lexical errors	sd	% of compositions not analysed
Grade 6										
Boys	149	8.25	5.53	125.03	69.08	21.87	24.15	7.99	8.86	0
Girls	114	9.51	6.15	147.04	70.37	21.49	21.11	7.22	4.7	0

Note: All measures are expressed in mean

When relative measures of lexical error production are considered, the picture changes in favour of females. This is to say, differences are reduced to minimum levels. Girls write longer compositions than boys and this is true for both T1 and T2. On average girls write 98.22 words per composition in 4th grade and 147.04 words per composition in 6th grade. These figures are considerably higher than those for boys with 86.77 words per composition in 4th grade and 125.03 words in 6th grade.

Length of composition for girls ranged from 19 to 262 words at T1 and between 12 and 334 words per composition at T2. By contrast, boys wrote compositions between 3 and 277 words at T1 and between 2 and 423 words per composition at T2. These figures suggest that the sample of female learners is more homogenous than that of males. There are some male learners who write very long compositions, in fact the longest in the sample population, but also some other who write very short ones, the shortest from the whole sample population. Among females these differences are not so acute³².

Accuracy ratios were very revealing, since they provided a more reliable measure of sex differences in lexical error production. As could be reasonably expected from the results on mean lexical error production by boys and girls, and on length of composition, accuracy ratios reveal almost no perceptible difference between male and female error production. With accuracy ratios of 12.33 and 21.87 at T1 and T2, respectively, boys slightly outperform girls who write 12.07 words between two consecutive lexical errors in 4th grade and 21.49 words between two lexical errors in 6th grade³³.

The highest accuracy ratio for boys was 91 in 4th grade and 182 in 6th grade, the lowest accuracy ratio was between 1.5 in 4th grade at T1 and 1 in 6th grade at T2. For girls, these figures are again more homogenous ranging from 70 on the upper margin to 2.65 on the lower margin at T1 and from a maximum of 183 to a minimum of 3.8 at T2. Results show once more, that girls are more similar among them than boys among them.

The same pattern of scant sex differences applies for the percentage of lexical error found in male and female compositions at both testing times. For T1 boys produce on average 14.42 lexical errors every 100 words, but girls stay short of this figure with 14.32 instances of lexical error per 100 written words. Somehow less are the percentages for T2 two years later with 7.99 and

32. Statistical analyses of non-parametric means comparison indicate that boys and girls produce significantly longer compositions at T2 than at T1. For boys, $Z = -7.41$, $p < .000$, for girls, $Z = -7.05$, $p < .000$ (Wilcoxon signed-ranks test).

33. Statistical analyses of non-parametric means comparison indicate that boys and girls produce significantly more accurate compositions at T2 than at T1. For boys, $Z = -5.59$, $p < .000$, for girls, $Z = -6.35$, $p < .000$ (Wilcoxon signed-ranks test).

7.22 lexical errors per 100 words for boys and girls, respectively. The highest percentages are 37.70 % at T1 and 26.32 % at T2 for girls and 66.67 % at T1 and 100 % at T2 for boys. The lowest percentages are 1.43 % at T1 and 0 % at T2 for girls; and 0 % at T1 and 0 % at T2 for boys. Once more, boys show more extreme percentages among the members of the group than girls.

The last measure considered to test sex differences regarding writing ability and lexical error production was the percentage of compositions that had to be excluded from analysis for being written in Spanish. According to this, for T1 in 4th grade, a total of 12 male compositions had to be discarded, which makes up 8.51 % of the total of available written work. For girls this proportion is superior with 11.11 % of compositions, 12 compositions in total, not being suitable for analysis. At T2 in grade 6 all compositions were liable to undergo the analysis.

Figures 3. to 6. illustrate these results in a graphical way.

FIGURE 3. MEAN LEXICAL ERRORS PER COMPOSITION FOR BOYS AND GIRLS AT T1 AND T2

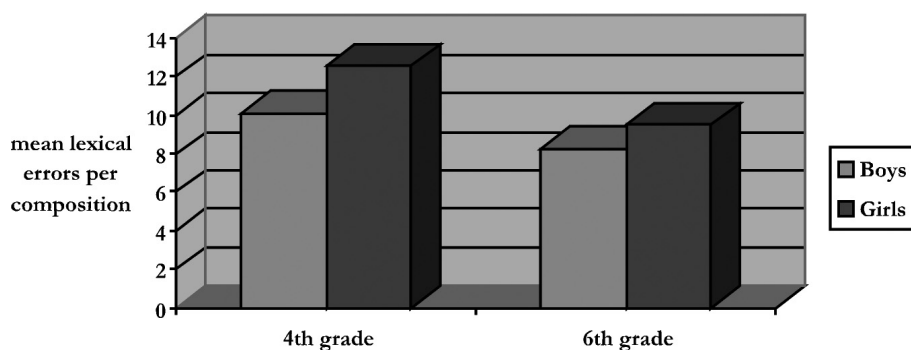


FIGURE 4. MEAN LENGTH OF COMPOSITION FOR BOYS AND GIRLS AT T1 AND T2

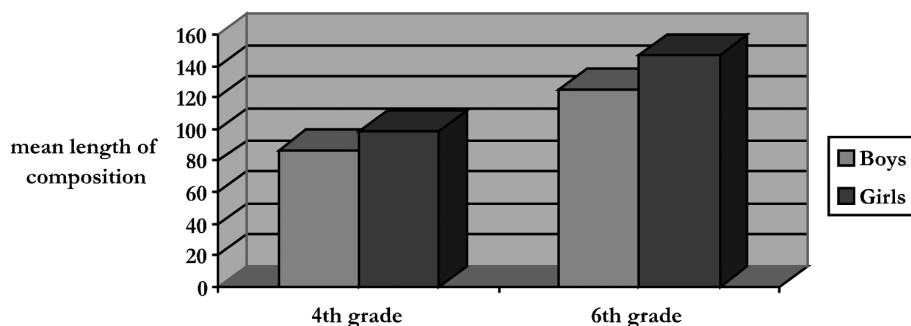


FIGURE 5. MEAN ACCURACY RATIO FOR BOYS AND GIRLS AT T1 AND T2

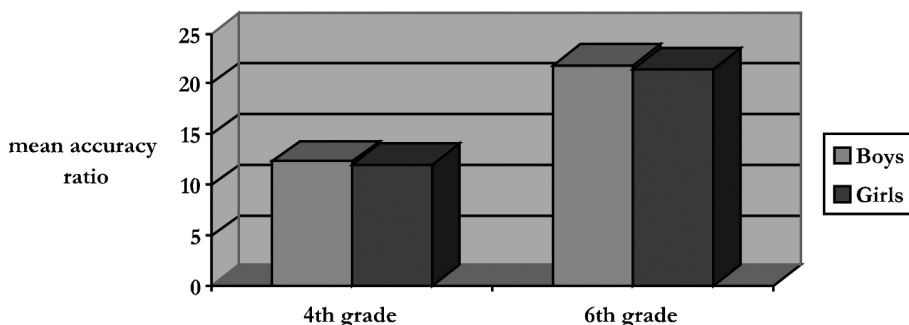
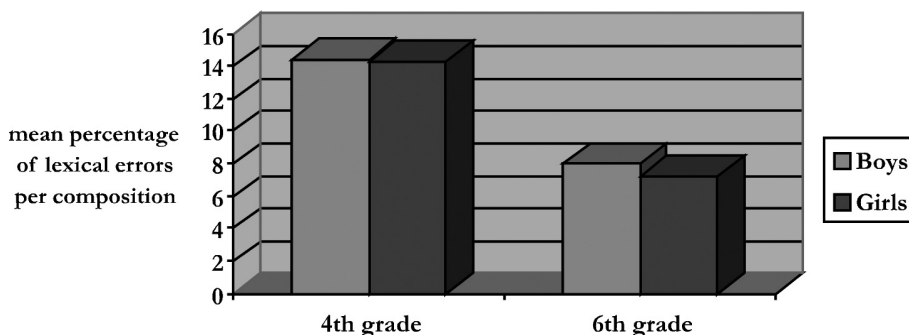


FIGURE 6. MEAN PERCENTAGE OF LEXICAL ERRORS PER COMPOSITION FOR BOYS AND GIRLS AT T1 AND T2



Sex differences in all measures analysed were small. Nevertheless, statistical tests of means comparison were performed to find out whether any of these differences was significant. The distribution of the samples did not meet the critical assumption of normality, therefore non-parametric means comparison tests for independent samples were used. More specifically, the Mann-Whitney test (U), the Wilcoxon test (W), and the two-sample Kolmogorov-Smirnov test were implemented several times to test for significant differences between two independent samples. Here, for clarity's sake, and to simplify understanding, the Z value³⁴ will be given along the U value. Results are presented in Table 9.

34. The smaller the Z value, i.e. the more it approaches 0, the lower will be the significance of the differences between two samples.

Taking a closer look at the figures in the table, it can be observed that regarding their proficiency level (scores in cloze and reading comprehension tests) although boys were superior to girls in 4th grade at T1, and girls displayed better language knowledge than male peers at T2 in 6th grade, these differences were not significant either for the cloze test ($U = 8101.5 / Z = -1.48$ at T1, and $U = 7757 / Z = -0.47$ at T2), nor for the reading comprehension test ($U = 8758.5 / Z = -0.25$ at T1 and $U = 7284.5 / Z = -1.36$ at T2).

Regarding the mean production of lexical errors per subject and composition without consideration of length of composition, results revealed that at both testing times girls produce more lexical errors than boys. For 4th grade at T1 this difference resulted to be significant at $p < .05$ ($U = 6312 / Z = -2.31$). At T2 sex differences in lexical error production were not significant ($U = 7398 / Z = -1.79$).

Girls produce more lexical errors than boys in absolute terms, but they also write significantly longer compositions both at T1 ($U = 6137 / Z = -2.26$, $p < .009$) and two years later at T2 ($U = 6772 / Z = -2.81$, $p < .005$). The Mann-Whitney test and the other tests of means comparison³⁵ for accuracy ratio at T1 and T2 revealed no significant differences for boys and girls in the lexical errors committed per composition considering the length of compositions in number of words ($U = 7483 / Z = -0.23$ for T1 and $U = 8324 / Z = -0.27$ for T2). Similarly, the nonparametric test for two independent samples performed for the proportion of lexical errors per composition showed that the differences between male and female learners regarding the number of lexical errors committed every 100 words were not significant at any of both testing times ($U = 7478 / Z = -0.24$ for 4th and $U = 8227 / Z = -0.43$ for 6th grade).

TABLE 9. NONPARAMETRIC TESTS FOR BOYS AND GIRLS AT T1 AND T2 REGARDING THEIR LEXICAL ERROR PRODUCTION

Grade	Cloze	Reading	Mean lexical errors per composition	Mean length of composition	Accuracy ratio	% of lexical errors
4 th	$U = 8101.5 / Z = -1.48$	$U = 8758.5 / Z = -0.25$	$U = 6312^* / Z = -2.31$	$U = 6137^{**} / Z = -2.26$	$U = 7483 / Z = -0.23$	$U = 7478 / Z = -0.24$
6 th	$U = 7757 / Z = -0.47$	$U = 7284.5 / Z = -1.36$	$U = 7398 / Z = -1.79$	$U = 6772^{**} / Z = -2.81$	$U = 8324 / Z = -0.27$	$U = 8227 / Z = -0.43$

*significant at $p < .05$

** significant at $p < .01$

35. We also used the Wilcoxon W and Kolmogoriv-Smirnoff Z.

In summary, our first hypothesis must be accepted. We could not prove that girls produced fewer lexical errors than their male peers. Results show that, on average, males commit fewer lexical errors than females, although these differences are not significant, but for mean lexical error production in 4th grade at T1. Boys have better language command at T1, but two years later girls are ahead of their male peers in their performance of the cloze and the reading comprehension tests. These differences are not significant, though. A further absolute measure is length of composition, which revealed that girls produce significantly longer compositions than their male peers at both testing times. To put it in a different way, they wrote more words per composition. From the relative measures (accuracy ratio and percentage of lexical errors per composition), the tests conducted show that there are unsubstantial, inappreciable, and non-significant sex differences regarding lexical error production. In a nutshell, from the results presented above it can be concluded that boys and girls show similar writing performance as lexical error production is regarded.

4.2. SEX DIFFERENCES IN THE PRODUCTION OF LEXICAL ERROR CATEGORIES

This section will give an account of the frequency of production of the different categories of lexical errors by boys and girls at T1 and T2. Results will be presented separately for both testing times comparing the sexes each time. First, the male and female lexical errors will be presented in order of frequency for 4th grade and then for 6th grade. Individual reports for each category of lexical error and for the two main groupings of these categories (formal versus semantic lexical errors and L1- versus L2- oriented lexical errors) will follow concentrating the description on sex differences. The main findings will be summarized at the end of the section.

Tables 10 and 11 show the results for boys and girls at T1 and T2, respectively.

TABLE 10. SEX DIFFERENCES IN LEXICAL ERROR TYPES IN 4TH GRADE

Sex	N	Misspellings	sd	Borrowings	sd	Semantic confusion	sd	coinages	sd	calques	sd	misselection	sd
Boys	141	6.56	5.3	1.40	2.1	0.57	0.88	0.65	1.34	0.53	0.93	0.36	0.67
Girls	108	8.06	6.06	2.27	3.51	0.66	0.96	0.54	1.24	0.59	0.99	0.42	0.73

Note: All measures are expressed in means.

TABLE 11. SEX DIFFERENCES IN LEXICAL ERROR TYPES IN 6TH GRADE

Sex	N	Misspellings	sd	Borrowings	sd	Semantic confusion	sd	coinages	sd	calques	sd	misselection	sd
Boys	149	4.28	3.48	0.76	1.56	0.79	1.16	0.83	1.75	1.17	1.6	0.42	0.69
Girls	114	4.92	3.81	1.11	2.21	0.82	1.38	0.73	1.19	1.3	1.51	0.64	1.01

Note: All measures are expressed in means.

TABLE 12. ORDER OF FREQUENCY OF LEXICAL ERROR CATEGORIES
ACCORDING TO SEX DIFFERENCES IN 4TH GRADE

Order of frequency	Boys	% over total	Girls	% over total
1	Misspelling	65.09	Misspelling	64.33
2	Borrowing	13.86	Borrowing	18.09
3	Coinage	6.47	Semantic confusion	5.24
4	Semantic confusion	5.7	Calque	4.72
5	Calque	5.28	Coinage	4.28
6	Misselection	3.59	Misselection	3.32

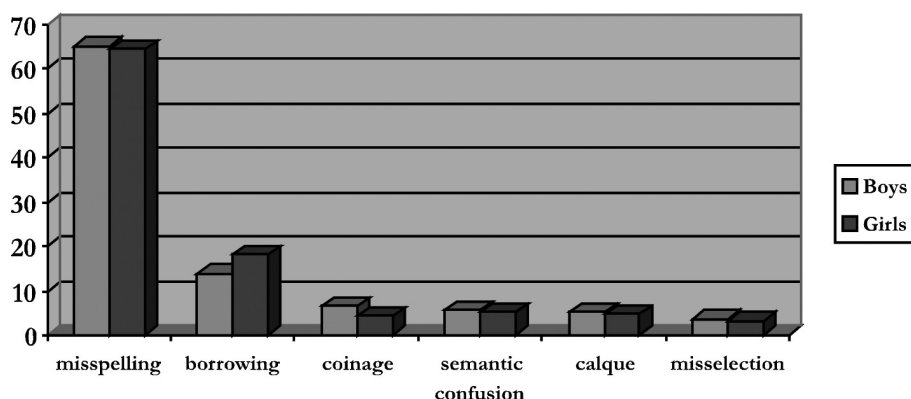
TABLE 13. ORDER OF FREQUENCY OF LEXICAL ERROR CATEGORIES
ACCORDING TO SEX DIFFERENCES IN 6TH GRADE

Order of frequency	Boys	% over total	Girls	% over total
1	Misspelling	51.91	Misspelling	51.75
2	Calque	14.24	Calque	13.65
3	Coinage	10	Borrowing	11.62
4	Semantic confusion	9.52	Semantic confusion	8.57
5	Borrowing	9.2	Coinage	7.65
6	Misselection	5.12	Misselection	6.73

As Table 10. shows, boys and girls commit the same type of lexical errors in a very similar order of frequency at T1. The most frequent lexical error category for both males and females is misspellings with a mean production of 6.56 for boys and 8.06 for girls. The second most common lexical error is borrowing with average productions for males and females of 1.40 and 2.27, respectively. Misselection is the category that accumulates the least instances in the sample with 0.36 occurrences for boys and 0.42 for girls. The remaining categories vary their order of frequency for boys and girls, but they are so similar that these differences are very small. For boys the order of frequency is coinage (0.65), semantic confusion (0.57), and calque (0.53); girls on the contrary produce semantic confusion (0.66), calque (0.59), and coinage (0.54), in this order.

Further data to this respect is presented in Table 12. The order of frequency of the lexical error categories, and the proportions they represent over the total of lexical errors reveal strong similarities among boys and girls at T1. For boys, from the total 1421 lexical errors produced in 4th grade: 925 (65.09 %) are misspellings, 197 (13.86 %) are borrowings, 92 (6.47 %) are coinages, 81 (5.7 %) are semantic confusions, 75 (5.28 %) are calques, and 51 (3.59 %) are misselections. Very similar percentages can be observed for girls at T1. From 1354 total errors 871 (64.33 %) are misspellings, 245 (18.09 %) are borrowings, 71 (5.24 %) are semantic confusions, 64 (4.72 %) are calques, 58 (4.28 %) are coinages, and 45 (3.32 %) are misselections. Figure 7. presents this comparison between sexes at T1 graphically.

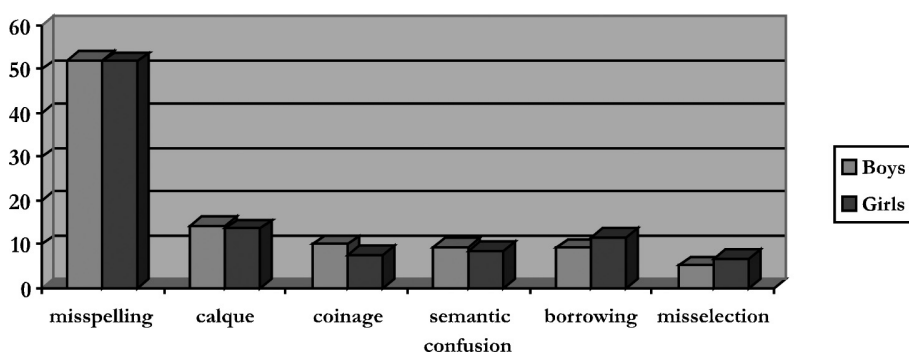
FIGURE 7. PERCENTAGE OF LEXICAL ERROR CATEGORIES FOR BOYS AND GIRLS IN 4th GRADE



From the data in Table 11., it can be inferred that at T2 male and female learners also produce very similar frequencies of lexical error types. On average boys display 4.28 misspellings and girls 4.92. Calques follow in frequency with 1.17 and 1.3 instances for male and female learners, respectively. The third most frequent category is coinages for boys with 0.83 instances, and borrowings for girls with 1.11 occurrences. Semantic confusion is for both sexes the fourth most frequent type of lexical error with 0.79 examples for boys and 0.82 for girls. In fifth place of production is borrowing for boys with 0.76 occurrences and coinage for girls with 0.73 example of this type of lexical error in every female composition at T2. Finally, for boys and girls misselections are the least frequent category with 0.42 and 0.64 instances for male and female subjects, respectively.

The figures in Table 13 indicate that, in fact, the order of frequency hardly changes between sexes. For boys, from the total 1229 lexical errors produced in 6th grade: 638 (51.91 %) are misspellings, 175 (14.24 %) are calques, 123 (10 %) are coinages, 117 (9.52 %) are semantic confusions, 113 (9.2 %) are borrowings, and 63 (5.12 %) are misselections. Very similar percentages can be observed for girls at T2. From 1084 total errors 561 (51.75 %) are misspellings, 148 (13.65 %) are calques, 83 (7.65 %) are coinages, 93 (8.57 %) are semantic confusions, 126 (11.629 %) are borrowings, and 73 (6.73 %) are misselections. Figure 8. presents this comparison between sexes at T2 graphically.

FIGURE 8. PERCENTAGE OF LEXICAL ERROR CATEGORIES FOR BOYS AND GIRLS IN 6TH GRADE



Now, we turn to the exploration of sex differences for each particular type of lexical error. Furthermore, boys and girls will also be compared on the basis of their production of formal versus semantic lexical errors and L1- versus L2-oriented lexical errors.

4.2.1. Sex differences in Misspellings

General results have shown that there are very slight sex differences, with girls committing more misspellings than boys, in the production of misspellings regarding the mean production of misspellings. This is true for 4th and 6th grade. In order to attest these results, several further measures were calculated for boys and girls at T1 and T2: a) mean production of misspellings by subject, b) the percentage of misspellings per total number of words, and c) the percentage of subjects who commit spelling errors.

As Table 14. shows, the number of misspellings produced by female subjects is higher than that produced by male learners at T1. Nevertheless, in raw terms

boys produce more spelling errors than girls with 925 instances versus 871. But when the mean number of misspellings per subject is calculated, results reveal that it is girls who display more misspellings in their compositions, with an average of 8.06 misspellings versus the 6.56 instances of their male peers.

However, contrary to this, the proportion of misspellings per total number of words came to be higher for boys than for girls in 4th grade. Meanwhile boys produced 9.31 misspellings every 100 words, girls wrote 9.10 spelling errors per 100 written words.

Similar results as for mean misspellings in absolute terms were obtained when the percentage of subjects who committed misspellings was calculated. Just one girl did not produce misspellings from which it can be observed that 99.07 % of all girls produced spelling errors. For boys, figures are a bit different with a total of 9 boys who did not commit any misspelling, and in turn, 93.61 % of male subjects displaying instances of misspelling. With 7 instances per male subject and 8.14 occurrences of misspelling for female learners these averages confirm general results explained above.

TABLE 14. SEX DIFFERENCES IN MISSPELLINGS IN 4th GRADE

Sex	n	Raw number of misspellings	Mean misspellings	% misspellings/ total words	% subjects who produce misspellings	Mean misspellings only subjects who produce misspellings
Boys	141	925	6.56	9.31	93.61	7
Girls	108	871	8.06	9.10	99.07	8.14

As figures in Table 15. indicate, boys and girls produce very similar numbers of misspellings at T2, although girls commit slightly more spelling errors than their male counterparts. In raw numbers, boys commit 638 misspellings in 6th grade, and girls 561 instances. As mean figures show, males produce on average 4.28 misspellings and girls a bit more with 4.92 occurrences. Nevertheless, boys produce 4.59 misspellings every 100 words, but girls' production is little under this figure with 3.85 spelling errors per 100 words. Differences are too small to be considered important.

In a like way, a total of 12 boys produced no spelling errors, what implies that a total 91.94 boys did in fact write some misspelling. Also 8 girls did not produce any misspellings, in other words 92.1 % of all girls committed some

spelling error. This means that on average the boys who produced misspellings in 6th grade committed 4.65 instances per compositions, a slightly inferior figure to that of girls at 6th grade with a mean production of 5.29 occurrences of misspellings per composition of those girls who committed misspellings.

In order to ascertain whether sex differences in misspelling production were significant at T1, non-parametric tests for two independent samples were performed (Mann-Whitney³⁶). These tests revealed no significant differences with $Z = -0.325$ ($U = 7431$) for boys and girls in their relative production of misspellings, i.e. in the misspellings over the total number of words. Non-parametric tests show that at T2 boys and girls commit misspellings in comparable amounts and there is no evidence to conclude that there are any significant differences ($Z = -0.220$, $U = 8358$).

TABLE 15. SEX DIFFERENCES IN MISSPELLINGS IN 6th GRADE

Sex	n	Raw number of misspellings	Mean misspellings	% misspellings/total words	% subjects who produce misspellings	Mean misspellings only subjects who produce misspellings
Boys	149	638	4.28	4.59	91.94	4.65
Girls	114	561	4.92	3.85	92.1	5.29

4.2.2. Sex differences in Borrowings

Following the line of previous sections, here we will deal with the differences in the production of borrowings by boys and girls. As has already been seen there are very faint sex differences that point to girls producing some more borrowings than boys. Here, we will examine these differences in more detail for T1 and T2 with the same tests as used in the previous section.

Table 16. presents the results for borrowing production in 4th grade. Girls borrow more words from their L1 than boys both in raw terms and on average. Thus, male learners produce 197 borrowings, and female learners no less than 245. The mean figures for both sexes are 1.4 instances per composition for boys and 2.26 occurrences of borrowing for girls. In similar

36. Further non-parametric tests of means comparisons were also performed: Moses, Kolmogorov-Smirnoff, and Wald-Wolfowitz test.

terms, males resort to their mother tongue words 2.37 times every 100 words, and girls use L1 words in their English compositions 2.70 times per 100 written words.

Around half the subjects produce borrowings in 4th grade. A total of 53.19 % of all male learners borrow L1 words. This led to a mean production of 2.62 borrowing per composition and male subject from those who produce some borrowing. In the case of female learners, 50.92 % of all girls wrote Spanish words in their English compositions resulting in an average production of 4.45 occurrences of borrowing per composition of those females who in fact produced borrowings.

TABLE 16. SEX DIFFERENCES IN BORROWINGS IN 4th GRADE

Sex	n	Raw number of borrowings	Mean borrowings	% borrowings/ total words	% subjects who produce borrowings	Mean borrowings only subjects who produce borrowings
Boys	141	197	1.4	2.37	53.19	2.62
Girls	108	245	2.26	2.70	50.92	4.45

Detailed examination of the borrowings produced in 6th grade at T2 by boys and girls reveals that although differences are very small, girls write more borrowings than their male peers. In this sense, girls borrow Spanish words a total of 126 times versus the slightly lower figure for boys: 113 instances of borrowings in absolute terms. Thus, girls produce 1.1 borrowings as a mean measure, whereas boys stay a bit below with a mean of 0.75 instances of borrowing per composition. Likewise, exploration of the proportion of borrowing per total number of words shows that boys recur to their L1 0.73 times every 100 words, and girls a bit oftener: 0.82 times per 100 words.

Less than half of all boys, specifically 38.92 % insert L1 words in the L2 syntax giving an average production of borrowings of 1.95 per subject of those who produce borrowings. For girls figures are somehow higher with 44.73 % of all girls recurring sometime to Spanish L1 producing a mean outcome of 2.47 borrowings per female composition from those girls who actually borrow from the mother tongue. Results are presented in Table 17.

Regarding production of borrowings, statistical tests of non-parametric means comparison show no significant differences between the borrowings produced by boys and girls over total number of words at either testing time ($Z = -0.181$, $U = 7518$ for T2 and $Z = -0.762$, $U = 8076$ for T2).

TABLE 17. SEX DIFFERENCES IN BORROWINGS IN 6th GRADE

Sex	n	Raw number of borrowings	Mean borrowings	% borrowings/ total words	% subjects who produce borrowings	Mean borrowings only subjects who produce borrowings
Boys	149	113	0.75	0.73	38.92	1.95
Girls	114	126	1.1	0.82	44.73	2.47

4.2.3. Sex differences in Calques

There were no large sex differences in the production of calques either in 4th grade at T1 nor in 6th grade at T2. Nevertheless, female production of calques was slightly superior to that of male peers. Different measures were calculated to examine this matter in more detail: raw number of calques produced by members of both sexes, mean number of calques per composition and subject, proportion of calques per total number of words, percentage of subjects who produce calques, and mean number of calques produced only by those subjects who produce calques.

The data concerning sex differences in the production of calques in 4th grade are presented in Table 18. The results are roughly similar for both sexes. Boys produce in raw terms 75 calques what throws a mean production per subject of 0.53 calques. Male learners produce 0.64 calques every 100 words. The corresponding figures for female learners are 64 calques in absolute terms, and 0.59 instances of calque per composition. Similarly to boys, girls produce 0.59 occurrences of calque per 100 written words.

A total of 39 % of boys and 37.04 % of girls in 4th grade produced a calque. From this figure it could be then calculated the mean calques per subject of those who produced calques, that is, 1.36 instances for boys and 1.6 examples of calque for only those girls who committed a calque in their writings.

TABLE 18. SEX DIFFERENCES IN CALQUES IN 4th GRADE

Sex	n	Raw number of calques	Mean calques	% calques/ total words	% subjects who produce calques	Mean calques only subjects who produce calques
Boys	141	75	0.53	0.64	39	1.36
Girls	108	64	0.59	0.59	37.04	1.6

An inspection of Table 19. shows that at T2 results are also very alike for boys and girls regarding their production of calques. In absolute numbers boys produce 175 calques in 6th grade and girls 148 instances of this category of lexical error. Consistently, mean productions result in 1.17 calques per male learners and 1.3 calques per female learner. Girls produce almost 1 calque (0.91) every 100 words, meanwhile boys stay little below this figure with 0.89 calques per 100 written words.

In this sense, slightly over half of the male learners, specifically 57.72 % produce calques. From these, on average each male subject is responsible for 2.03 calques per composition. The figure for female learners is practically the same with 2.08 calques per composition written by those females belonging to the 62.28 % of the total who in fact committed calques.

TABLE 19. SEX DIFFERENCES IN CALQUES IN 6th GRADE

Sex	n	Raw number of calques	Mean calques	% calques/ total words	% subjects who produce calques	Mean calques only subjects who produce calques
Boys	149	175	1.17	0.89	57.72	2.03
Girls	114	148	1.3	0.91	62.28	2.08

From the results of the statistical analyses it can be concluded that either at T1 nor at T2 are there significant sex differences in the production of calques over total number of words per composition ($Z = -0.263$, $U = 7484$ for T1 and $Z = -0.374$, $U = 8272$ for T2).

4.2.4. Sex differences in Semantic confusions

The category of semantic confusions reveals small sex differences for both testing times. Following the line of previous sections, here we will explore different measures directed to find out the extent of those differences.

The figures in Table 20. reveal that boys commit a total of 81 semantic confusions at T1 versus the 71 instances of semantic confusions for girls. However, on average girls produce more semantic confusions than their male peers with 0.66 and 0.57 occurrences per composition, respectively. Regarding the proportion of semantic confusions produced per total number of words, almost identical figures can be observed. Boys produce 0.73 semantic confusions every 100 words, whereas girls produce 0.77 semantic confusions per 100 words in their compositions.

In 4th grade 37.6 % of all boys commit at least one semantic confusion, for girls this percentage goes up to 45.3 % of the total of female learners. Bearing these proportions in mind, mean production of semantic confusions only for those subjects who in fact commit semantic confusions is 1.53 instances per male learner and 1.45 per female learner. This is an inversion in the general tendency observed that girls commit very slightly more lexical errors of all categories than boys.

TABLE 20. SEX DIFFERENCES IN SEMANTIC CONFUSIONS IN 4th GRADE

Sex	n	Raw number of semantic confusions	Mean semantic confusions	% semantic confusions/ total words	% subjects who produce semantic confusions	Mean semantic confusions only subjects who produce semantic confusions
Boys	141	81	0.57	0.73	37.6	1.53
Girls	108	71	0.66	0.77	45.3	1.45

In an analogous way as can be observed in Table 21., for 6th grade at T2 girls also produce more lexical errors of the semantic confusion type than boys, although this advantage is very small. In raw terms, boys produce 117 semantic confusions which throws a mean production of 0.79 semantic confusions per male subject. Girls display a total of 93 semantic confusion giving an average production of 0.82 instances per each female learner. A slightly superior mean to that of boys. When the percentage of semantic confusions per total number of words is calculated, we obtain that boys commit 0.72 semantic confusions in

every 100 words, and girls a bit fewer: 0.59 instances of semantic confusion per 100 words.

At T2 a total of 48.32 % of boys produce semantic confusions which throw a mean production of 1.62 semantic confusion per every boy who commit at least one semantic confusion. Likely, 37.71 % of all girls also produce at least one semantic confusions, specifically 2.16 instances of semantic confusion per composition.

TABLE 21. SEX DIFFERENCES IN SEMANTIC CONFUSIONS IN 6TH GRADE

Sex	n	Raw number of semantic confusions	Mean semantic confusions	% semantic confusions/ total words	% subjects who produce semantic confusions	Mean semantic confusions only subjects who produce semantic confusions
Boys	149	117	0.79	0.72	48.32	1.62
Girls	114	93	0.82	0.59	37.71	2.16

In the same line as previous cases, boys and girls commit comparable numbers of semantic confusions, and no significant sex differences were found upon performance of statistical analyses, either at T1 ($Z = -0.714$, $U = 7255$) nor at T2 ($Z = -1.749$, $U = 7523$).

4.2.5. Sex differences in Coinages

Sex differences are scarcely perceivable for coinages. In the production of this category of lexical error, boys display higher figures than girls, reverting thus, the general tendency observed until the present in this study. Several different tests were carried out to confirm this result.

As the figures in Table 22. indicate, in absolute and in relative terms boys commit more lexical errors of the coinage type than their female peers at T1 in 4th grade. This is an exception to the general tendency observed all over the results shown in the present section. In total boys commit 92 coinages and girls 58. On average, male learners produce 0.65 instances of coinage per composition, whereas female learners stay below this figure with 0.54 occurrences of coinage per female composition. Similarly, regarding the proportion of coinages per total number of words, boys produce 0.88 coinages per 100 words, and girls 0.67 instances of coinage every 100 words.

A small proportion of subjects in 4th grade commits coinages, specifically 34.04 % of male learners and 28.7 % of female learners produce at least one coinage in their compositions. Consequently, from these learners, each male subject commits 1.91 coinages in the written composition, and each female subject produces a slightly lower number: 1.87 occurrences of coinage per composition.

TABLE 22. SEX DIFFERENCES IN COINAGES IN 4th GRADE

Sex	n	Raw number of coinages	Mean coinages	% coinages/ total words	% subjects who produce coinages	Mean coinages only subjects who produce coinages
Boys	141	92	0.65	0.88	34.04	1.91
Girls	108	58	0.54	0.67	28.7	1.87

Closer examination of Table 23. evidences for T2 that the tendency observed in 4th grade for boys to commit more coinages than girls persists two years later in 6th grade. With absolute production of coinages of 123 instances for boys and 83 occurrences for girls, means stay below the one coinage per composition, specifically male subjects produce 0.83 coinages per composition, and female learners 0.73. Boys also produce more coinages per 100 words than their female peers with 0.69 instances versus the 0.52 coinages that female learners produce every 100 words. To say it in a different way, females write 200 words before producing a coinage.

At T2 39.6 % of all boys and 42.1 % of all girls commit a coinage. This gives average productions of 2.08 coinages per male learner and 1.73 for every female learner from those who actually produce coinages.

TABLE 23. SEX DIFFERENCES IN COINAGES IN 6th GRADE

Sex	n	Raw number of coinages	Mean coinages	% coinages/ total words	% subjects who produce coinages	Mean coinages only subjects who produce coinages
Boys	149	123	0.83	0.69	39.6	2.08
Girls	114	83	0.73	0.52	42.1	1.73

No significant differences between the production of coinages of boys and girls were found with the non-parametric tests of means comparison ($Z = -0.939$, $U = 7177$ for T1 and $Z = -0.063$, $U = 8458$ for T2). For T1 and T2 it can be concluded that male and female learners produce similar amounts of coinages over total number of words.

4.2.6. Sex differences in Misselections

The category of misselections is the one that collects the least number of instances at both testing times and for member of both sexes. In the same line as for previous and more frequent lexical error categories, there are no considerable sex differences in the production of misselections. Several tests conducted attest this fact.

From the information contained in Table 24. it can be concluded that boys and girls display similar misselection production behaviour. In absolute terms, boys produce a total of 51 misselections versus the 45 instances of misselection displayed by girls. Nevertheless, on average girls produce more misselections than boys with 0.42 and 0.36 occurrences, respectively. When the proportion of misselections per total number of words is calculated almost identical percentages can be appreciated with 0.47 misselections per 100 words in male compositions and 0.48 misselections every 100 words of each female composition.

Very low percentages of subjects committed misselections: 28.36 % of all boys and 29.62 % of all girls. Considering this, the means among the subjects who produced misselections are the following: 1.28 misselections per male composition and 1.4 misselections per female composition. Here again, we can see that females commit more misselections than their male peers.

TABLE 24. SEX DIFFERENCES IN MISSELECTIONS IN 4TH GRADE

Sex	n	Raw number of misselections	Mean misselections	% misselections/ total words	% subjects who produce misselections	Mean misselections only subjects who produce misselections
Boys	141	51	0.36	0.47	28.36	1.28
Girls	108	45	0.42	0.48	29.62	1.4

Looking at Table 25., we realize that the same pattern can be observed for the production of misselections at T2 in 6th grade. Boys produce a total of 63

misselections and girls some more: 73 instances. Girls also commit more misselections than boys in relative terms, since the mean number of misselections produced by female learners is 0.64 occurrences per composition, and boys produce 0.42 misselections on average. Similarly, male learners commit 0.35 misselections every 100 words, and females 0.50 per 100 words. To put it in a different way, learners write more than 200 words before producing a misselection.

No more than 31.54 % of all male learners commit at least a misselection, some fewer than girls, of which 39.47 % show at least one misselection in their compositions. On average, the male subjects who produce misselections commit 1.34 instances per composition, a slightly inferior figure to that of girls who produce misselections, who display 1.62 occurrences in their written compositions.

TABLE 25. SEX DIFFERENCES IN MISSELECTIONS IN 6th GRADE

Sex	n	Raw number of misselections	Mean misselections	% misselections/ total words	% subjects who produce misselections	Mean misselections only subjects who produce misselections
Boys	149	63	0.42	0.35	31.54	1.34
Girls	108	73	0.64	0.50	39.47	1.62

Finally, for misselections no significant sex differences were found at T1 ($Z = -0.183$, $U = 7531$) nor at T2 ($Z = -1.341$, $U = 7795$).

4.2.7. Sex differences in formal versus semantic lexical errors

This section will focus on the description of the results for sex differences regarding the production of formal and semantic lexical errors. Special emphasis will be given to the examination of the comparison of the production of formal and semantic lexical errors by boys and girls at T1 and T2. First, account will be given of the results of descriptive statistics concerning these comparisons, and then inferential statistics will be dealt with to try to find the significance of the difference, if any, between the male and the female production of these two main categories of lexical errors.

Table 26. and Table 27. present the data for the production of formal and semantic lexical errors for boys and girls in 4th grade at T1 and in 6th grade at

T2, respectively. Girls show higher frequencies of both formal and semantic lexical errors in their compositions at T1. Specifically, male learners produced a mean of 8.97 formal errors per composition, whereas female learners display a higher mean: 11.28 instances of formal errors. More similar means are observed for semantic errors with boys producing 1.1 semantic errors per composition on average, and girls 1.25 instances. When misspellings are excluded from the counts of formal lexical error, means resemble more those of semantic errors with 2.41 and 3.22 for male and female subjects, respectively. Nevertheless, in terms of percentages means are extremely similar with male learners producing 13.05 formal errors every 100 words versus the 12.96 instances of females. 1.37 and 1.36 instances of semantic lexical errors every 100 words per male and female learner, respectively. And 3.73 and 3.86 occurrences of formal errors without misspellings per 100 written words each boy and girl, respectively.

The same pattern of females producing more formal and semantic lexical errors also applies for T2 data when absolute means are concerned. Nevertheless, sex differences in 6th grade are much smaller. Males commit 6.28 formal lexical errors on average, and females 7.39. Almost identical differences can be appreciated in the production of semantic errors with means of 1.96 instances for boys and 2.11 semantic errors per female composition. Additionally, male learners commit on average 2 formal errors, without misspellings, and females 2.11 instances of formal errors without misspellings. Even smaller are these differences when percentages of formal and semantic lexical errors per 100 words are examined. On average, males commit 6.37 formal errors per 100 words, and females 5.7 instances of formal errors. Much fewer semantic errors are counted: 1.61 every 100 words for boys and 1.51 per 100 words for girls. Similar figures can be observed when misspellings are not included in the counts of formal errors, with males producing 1.78 instances every 100 words, and females 1.85 occurrences over 100 words. Figure 9. offers these comparisons graphically for T1 and Figure 10. for T2.

FIGURE 9. SEX DIFFERENCES IN FORMAL VERSUS SEMANTIC LEXICAL ERRORS IN 4TH GRADE

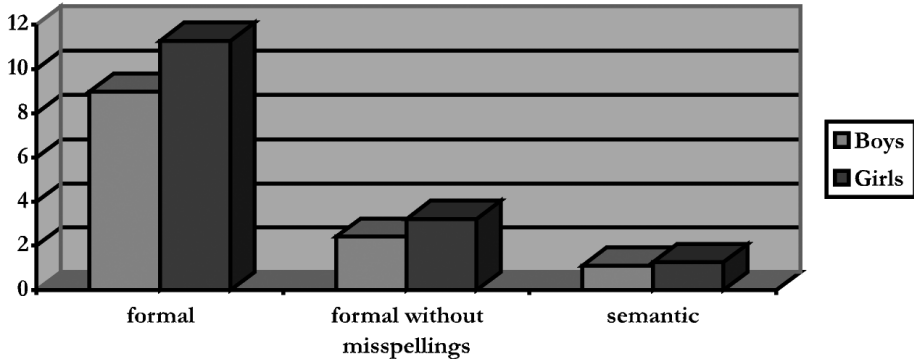


FIGURE 10. SEX DIFFERENCES IN FORMAL VERSUS SEMANTIC LEXICAL ERRORS IN 6TH GRADE

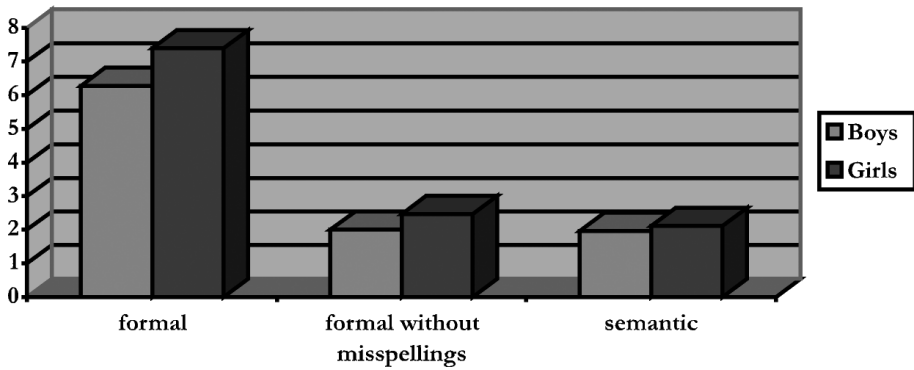


TABLE 26. FORMAL AND SEMANTIC LEXICAL ERRORS COMPARED FOR BOYS AND GIRLS IN 4th GRADE

Sex	N	Mean formal errors per subject	sd	Mean % formal	sd	Mean formal errors without misspelling	sd	Mean % formal without misspelling	sd	Mean semantic errors per subject	sd	Mean % semantic	sd
Boys	141	6.56	5.3	1.40	2.1	0.57	0.88	0.65	1.34	0.53	0.93	0.36	0.67
Girls	108	8.06	6.06	2.27	3.51	0.66	0.96	0.54	1.24	0.59	0.99	0.42	0.73

TABLE 27. FORMAL AND SEMANTIC LEXICAL ERRORS COMPARED FOR BOYS AND GIRLS IN 6th GRADE

Sex	N	Mean formal errors per subject	sd	Mean % formal	sd	Mean formal errors without misspelling	sd	Mean % formal without misspelling	sd	Mean semantic errors per subject	sd	Mean % semantic	sd
Boys	149	6.28	4.84	6.37	8.83	2	2.89	1.78	2.34	1.96	2.12	1.61	1.53
Girls	114	7.39	5.72	5.7	4.55	2.47	3.5	1.85	2.4	2.11	1.92	1.51	1.47

Closer examination of the previous tables reveals that considering absolute means, girls produce more lexical errors of the formal and of the semantic category, but when considering percentage of lexical errors, males display higher means of formal and semantic lexical errors. However, differences were very small. In order to establish whether these differences were significant or not, we performed several Mann-Whitney tests for two independent samples. The tests for mean comparisons reveal that for formal errors there is a significant difference at T1 ($Z = -2.321$, $U = 6.308.5$, $p < .05$), but not at T2 ($Z = -1.429$, $U = 7622.5$). In other words, girls commit significantly more lexical errors of the formal type than their male peers at T1, but not at T2. Differences are not significant when percentage of formal errors per 100 words is measured ($Z = -0.338$, $U = 7423.5$ at T1 and $Z = -0.379$, $U = 8261.5$ at T2).

When misspellings are subtracted from the general count of formal errors, sex differences turn out to be non significant for both testing times with $Z = -0.484$, $U = 7346$ at T1 and $Z = -0.960$, $U = 7919$ at T2. When percentages are considered differences are not significant either ($Z = -0.167$, $U = 7521$ at T1, and $Z = -0.007$, $U = 8489$ at T2).

Similar results are obtained for the Mann-Whitney test conducted for semantic errors. Sex differences are not significant in the absolute mean production of semantic errors neither at T1 ($Z = -0.797$, $U = 7187.5$) nor at T2 ($Z = -1.124$, $U = 7820.5$). Neither are these differences significant when the number of semantic errors per 100 words is counted ($Z = -0.121$, $U = 7547.5$ at T1, and $Z = -0.258$, $U = 8336$ at T2). To put it differently, in absolute terms, girls commit more semantic errors than boys, and in relative terms boys commit more semantic errors than girls, but the differences are too small to be significant. Consequently, it can be concluded, that in general male and female learners display the same lexical error behaviour with no important differences in the frequencies with which they produce formal and/or semantic lexical errors.

TABLE 28. MANN-WHITNEY TESTS FOR SEX DIFFERENCES FOR FORMAL AND SEMANTIC ERRORS

		Mean formal errors per subject	Mean % formal	Mean formal errors without misspellings	Mean % formal without misspellings	Mean semantic errors per subject	Mean % semantic
U value	4 th grade	6308.5*	7423.5	7346	7521	7187.5	7547.5
	6 th grade	7622.5	8261.5	7919	8489	7820.5	8336

* Significant at $p < .05$

4.2.8. *Sex differences in L1- versus L2-oriented lexical errors*

The present section will address the issue of sex differences regarding the influence of the mother tongue and of the target language in the production of lexical errors. More specifically, special emphasis will be put on in examining the production of lexical errors by boys and girls distinguishing them depending on whether they come from the L1 or from the L2. First, descriptive statistics will be presented for learners in 4th and 6th grade including sex comparisons, then inferential statistics will be accounted for in order to find out whether differences are statistically significant or not.

The figures in Table 29. show the same general pattern observed before with girls committing more lexical errors than boys. In the present analysis, girls commit a mean figure of 3.39 L1-oriented lexical errors at T1 in 4th grade, whereas boys commit 2.58 instances of lexical errors influenced by the target language. Similarly, for lexical errors deriving from target language influence girls display a slightly superior mean, with 9.13 versus the 7.49 occurrences per male composition. When misspellings are excluded from the counts of L2-oriented lexical errors, the figures reduce, but the tendency observed is the same with girls producing 1.07 lexical errors and boys 0.93 instances of lexical errors influenced by English, the target language. In relative terms, when the percentage of L1-oriented lexical errors per 100 words is considered we found that boys commit 3.9 instances versus the 3.97 instances of girls. Similarly, for L2-oriented lexical errors, males produced 10.52 instances per 100 words, and females 10.35. Finally, when misspellings were not included within the L2-oriented lexical errors, males produced 1.2 occurrences and females 1.25. As we can see from the figures, differences are so small that they are almost inexistent.

TABLE 29. L1- AND L2-ORIENTED LEXICAL ERRORS COMPARED FOR BOYS AND GIRLS IN 4th GRADE

Sex	N	Mean L1-oriented errors per subject	sd	Mean % L1-oriented	sd	Mean L2-oriented errors per subject	sd	Mean % L2-oriented	sd	Mean L2-oriented errors without misspellings	sd	Mean % L2-oriented without misspellings	sd
Boys	141	2.58	2.93	3.9	5.07	7.49	5.67	10.52	8.47	0.93	1.14	1.2	1.66
Girls	108	3.39	4.38	3.97	5.05	9.13	6.42	10.35	6.99	1.07	1.13	1.25	1.54

TABLE 30. L1- AND L2-ORIENTED LEXICAL ERRORS COMPARED FOR BOYS AND GIRLS IN 6th GRADE

Sex	N	Mean L1-oriented errors per subject	sd	Mean % L1-oriented	sd	Mean L2-oriented errors per subject	sd	Mean % L2-oriented	sd	Mean L2-oriented errors without misspellings	sd	Mean % L2-oriented without misspellings	sd
Boys	149	2.75	3.29	2.32	2.48	5.49	3.83	5.67	8.6	1.2	1.42	1.08	1.2
Girls	114	3.13	3.4	2.26	2.32	6.37	4.23	4.96	3.75	1.45	1.77	1.1	1.6

The same pattern applied two years later in 6th grade at T2, namely, girls still commit more lexical errors than boys of the both categories considered when absolute means are regarded, as can be seen in Table 30. On average, girls recur to Spanish, their mother tongue, 3.13 times per composition, and boys 2.75 times. Regarding lexical errors originating in the L2, girls also display more instances of this category with 6.37 instances versus the 5.49 instances of their male peers. The same occurs when misspellings are discarded from the general count of L2-oriented lexical errors, with 1.45 and 1.2 average productions, for girls and boys, respectively. In terms of percentage of L1-oriented lexical errors per 100 words boys produce 2.32 instances versus 2.26 instances produced by girls. Similarly, for L2-oriented lexical errors, male learners produce 5.67 occurrences per 100 words, and females slightly fewer with 4.96 occurrences every 100 words. Finally, for L2-oriented lexical errors without misspellings, boys commit 1.08 instances and girls 1.1 instances per 100 words. Figures 11. and 12. illustrate the results of sex differences for both testing times.

FIGURE 11. SEX DIFFERENCES IN L1- AND L2-ORIENTED LEXICAL ERRORS IN 4th GRADE

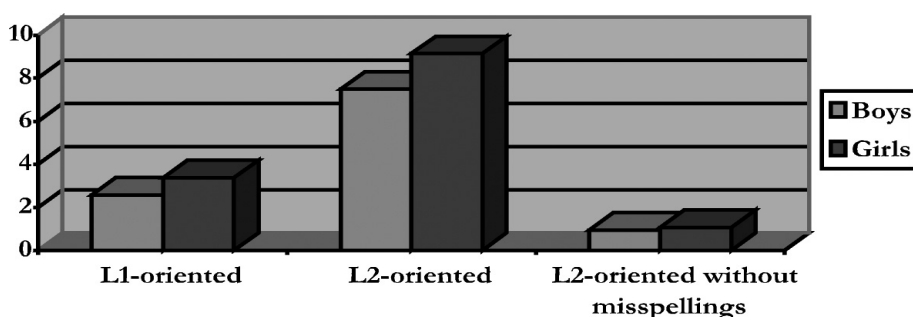
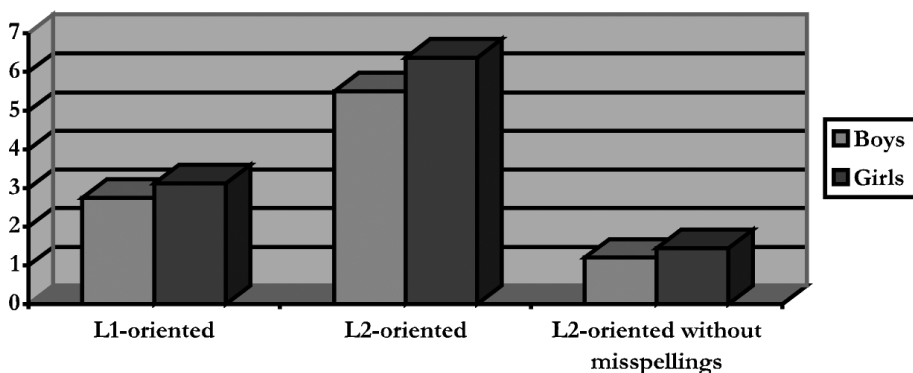


FIGURE 12. SEX DIFFERENCES IN L1- AND L2-ORIENTED LEXICAL ERRORS IN 6th GRADE



Sex differences are very small for L1- and L2-oriented lexical errors. Nevertheless, in order to obtain statistical reliability, we decided to perform several Mann-Whitney tests for two independent samples for both testing times. Results appear in Table 31.

TABLE 31. MANN-WHITNEY TESTS FOR SEX DIFFERENCES FOR L1- AND L2-ORIENTED LEXICAL ERRORS

		Mean L1-oriented errors per subject	Mean % L1-oriented	Mean L2-oriented per subject	Mean % L2-oriented	Mean L2-oriented without misspellings	Mean % L2-oriented without misspellings
U value	4 th grade	7424	7533.5	6346*	7486	6895.5	7155
	6 th grade	7829	8381.5	7363	8284.5	8200	8177

* Significant at $p < .05$

Results for the non-parametric means comparison revealed that with the only exception of the absolute mean production of L2-oriented lexical errors at T1, sex differences are not significant. Differences are not significant for L1-oriented lexical errors at T1 ($Z = -0.343$, $U = 7424$), and T2 ($Z = -1.102$, $U = 7829$). Neither for L1-oriented lexical errors per 100 words ($Z = -0.144$, $U = 7533.5$ at T1 and $Z = -0.183$, $U = 8381.5$ at T2). When lexical errors derive from L2 influence girls commit significantly more lexical errors per compositions than their male counterparts at T1 in 4th grade ($Z = -2.256$, $U = 6346$, $p < .05$), but not at T2 in 6th grade ($Z = -1.856$, $U = 7363$). In relative terms with percentage of L2-oriented lexical errors, differences are significant ($Z = -0.227$, $U = 7486$ at T1, and $Z = -0.341$, $U = 8284.5$ at T2). In a like way, when misspellings are not counted, sex differences are not significant either at T1 ($Z = -1.354$, $U = 6895.5$) nor at T2 ($Z = -0.501$, $U = 8200$), nor in terms of percentages ($Z = -0.846$, $U = 7155$ at T1, and $Z = -0.528$, $U = 8177$ at T2).

In summary, results have revealed, that boys and girls display similar behaviours as the production of lexical error categories is concerned. In other words, the order of frequency of the lexical error types produced by male and female learners is very similar. Nonetheless, the categories of coinage, calque, and semantic confusion present some inconsistencies in their order of frequency. But the percentages are so alike to one another that these differences are merely anecdotic. With all, female learners produce more lexical errors of all categories than boys, with the only exception of coinages. This is true for data from both testing times when absolute figures are considered. If the number of

lexical errors belonging to the different categories per 100 written words is considered, then we notice that differences are too small to be worth considering. In fact, we found no significant sex differences in the relative production of lexical errors of either type over total number of words in composition. When grouping the different categories of lexical errors in the dichotomies of formal versus semantic, and of L1-versus L2-oriented lexical errors some significant differences appear regarding production of formal and of L2-oriented lexical errors at T1 when absolute figures are taken into account, with girls in 4th grade producing significantly more formal and L2-oriented lexical errors than their male peers. However, when the percentage of lexical errors produced every 100 words is examined, then boys display slightly more lexical errors per 100 words than girls in nearly all categories, but in no cases are these differences significant. Yet, we cannot simplistically express these differences for the entire EFL population, because the differences and relationships between male and female production are neither uniform, nor stable.

5. INTERPRETATION OF THE FINDINGS

The present section will discuss the results reported above in light of previous findings of related research. We have divided the discussion of the data into two different sections corresponding each to the hypotheses that lead the study. The first one explains and interprets the results regarding quantitative production of lexical errors by male and female students. The second section deals with the production of lexical errors from a qualitative perspective, i.e. alluding to the different categories of lexical errors produced by male and female participants. Interpreting the results regarding sex differences in lexical error production is not an easy task, but some explanations can be put forward.

5.1. SEX DIFFERENCES IN LEXICAL ERROR PRODUCTION

This section will try to explain the results relative to sex differences in lexical error production. In other words, here we try to elucidate who commits more lexical errors, and why. Results revealed that although there are some differences in proficiency level between boys and girls at both T1 and T2, these are not significant. However, girls write significantly longer compositions than boys for which in absolute terms they commit more lexical errors. Nevertheless, when length of composition is considered, female learners produce slightly fewer lexical errors than their male peers. These differences are not significant either at T1 nor at T2. For both sexes we observe a significant increase in the length of compositions and a significant decrease in the number of lexical errors produced.

Careful analysis of the data leads to the consideration that girls progress more or quicker than boys, since the increase in the number of words per composition is bigger than in boy's compositions. Likewise, the decrease in the production of lexical errors is also higher for females than for males. This

together with the fact that their progress in general language proficiency is also bigger drives us to the conclusion that female learners have a faster learning rate (see also San Mateo Valdehita 2003/2004). This finding concurs with previous research on sex differences, especially in language learning, because although no differences in intelligence could be found between male and female learners, girls were observed to learn at a faster rate, especially at the early stages of language acquisition (Halpern 1996).

The fact that girls showed a faster rate of foreign language acquisition did not have any influence on lexical accuracy in writing. Nor did the fact that girls produced significantly longer compositions than their male peers. They wrote longer compositions, but they also produced more lexical errors in absolute terms. From these two result sets we can conclude that writing fluency, i.e. writing longer compositions does not necessarily imply higher lexical accuracy, i.e. producing fewer lexical errors.

Still another result obtained in the present study refers to the evolution in the production of lexical errors over two years time. We could establish that both male and female learners produce significantly fewer lexical errors in 6th grade than in 4th grade. Likewise, we observed that the reduction in the production of lexical errors was higher for female participants than for their male counterparts. This result comes to support the claim that girls are faster learners than boys. We may dare speculate that if writing ability and lexical competence of the participants develops at the same pace in further stages of acquisition, then we might find boys with higher proficiency levels producing more lexical errors than girls in a significant way. This would confirm previous findings where informants were older and more advanced learners than the participants in the present study.

However, some researchers have claimed for sex differences to decrease with time (Casey 1996) and proficiency in the foreign language (Brantmeier 2004). In order to harmonize the three research trends: a) intermediate foreign language learners show gender differences, b) gender differences tend to decrease with time and proficiency level, and c) as revealed by the present study in the written production of beginner learners no sex differences could be observed, we may argue that at the very earliest stages of lexical acquisition, as shown by the present data, sex differences are inexistent, but that they appear at intermediate levels of proficiency to end disappearing at more advanced stages.

The results of the present research are in line with the findings of previous research on sex differences in second language acquisition, where girls' dominance is very slight or either non-existent. There are not conclusive results in the literature regarding sex differences in language acquisition in general or error production in particular. Research concerning the influence of the sex variable in second language acquisition has yielded controversial results (see, e.g. Grace 2000,

Scarcella and Zimmerman 1998, Alcon and Codina 1996, Bacon 1992, Boyle 1987). However, the bulk of those studies are for girls' advantage in general second language learning and performance (see, e.g. Sunderland 2000). Here, we found insignificant sex differences for which reason we can positively conclude that regarding lexical error production male and female learners are comparable.

Regarding the particular issue of error production some studies have found that boys commit more errors than girls. The sex factor has not been frequently treated in research on error analysis, nonetheless, Jiménez Catalán (1992) comments on a series of studies that found female superiority in second language use, measured as frequency of errors and absolute lexical production (number of words). Nevertheless, our data shows conflicting results, because, on the one hand, they go counter to these findings, since we could not find any differences in lexical error production; but, on the other hand our results support previous findings in that girls outperform male peers in lexical production. The few studies that deal with sex differences in error analysis point to general academic achievement, attitudes toward the target language, basically interest and motivation to learn the language, and societal expectations as factors that explain the differences in performance between boys and girls.

From the results of the present study, we dare speculate that girls have a better knowledge of the language and show a greater fluency in the use of the English language, because they write longer compositions than boys. Several studies have proved that higher proficiency learners write longer compositions, so that text length becomes an indicator of proficiency level in the foreign language (Hawkey and Barker 2003, Jarvis et al. 2003, Grant and Ginther 2000). Producing more written language might also point to a more risk-taking behaviour on part of the female learners, probably to a higher interest both in English as a foreign language and as a school subject, and in the very tests they were taking. As evidence of this, we found that girls produced lexical errors in words that were "sophisticated". No instances of such lexical errors or in other equally "sophisticated" words could be attested in essays written by boys. The following lexical errors illustrate this point:

- *magacine* for "magazine" (S206, 4th, S228, 4th),
- *campsaits* for "campsite" (S210, 4th),
- *comerce center* for "shopping center" (S265, 4th),
- *litter-bings* for "litter-bin" (S214, 4th),
- *guatermelon* for "watermelon" (S217, 4th), and
- *lentigues* for "lentils" (S233, 4th),
- *townball* for "town hall" (S 60, 6th).

This interpretation contrasts with some studies carried out for performance differences in the mother tongue, where females reported higher levels of anxiety in test taking situations (Rozendaal et al. 2003), and lower levels of self-confidence (Furnham 2004, Rozendaal et al. 2003). Furthermore, females were found to avoid answering if they were not sure, while males preferred to guess (Prieto and Delgado 1999). Our results contradict this, since female learners managed to complete the task successfully writing significantly more than boys and committing comparable number of lexical errors every hundred words written in the foreign language.

Nevertheless, this interpretation of the results of girls performing slightly better than boys in writing production with longer compositions and the similar amounts of lexical errors every hundred words, seems to concur with the findings that girls show higher levels of motivation and interest in the process of foreign language learning (MacIntyre, et al. 2002, Kaylani 1996, Powell and Baters 1985). In this sense, Ágreda (2006), who uses a very similar sample of subjects to ours, shows that girls are more motivated than their male peers. Therefore, we may conclude that girls are more willing to learn the foreign language and this fact may be responsible for differences in writing performance (MacIntyre et al. 2002).

The issue of females writing more “original” words than their male counterparts, either containing an error or not may be the result of female preference for rote learning of isolated facts as their main general learning style³⁷ (Andreou et al. 2004). The isolated facts in this case would be the lexical items, since as Gu (2003: 12) defends, vocabulary learning is essentially a memory issue. The same interpretation can be brandished for the fact that girls produce more words than boys in their compositions. It seems arguable that girls may have learned more words in English than male learners and that is why they are able to use more words in their compositions. However, this interpretation is merely speculative and further research in this respect is warranted.

5.2. SEX DIFFERENCES IN THE PRODUCTION OF LEXICAL ERROR CATEGORIES

Once we have seen that there are no quantitative differences in the production of lexical errors by male and female learners either in 4th or in 6th grade, we intend to explain the frequencies of production of lexical errors of the different types. In general terms, no qualitative differences were found among sexes, so that we can conclude that boys and girls produce the same type of lexical errors as frequency is concerned.

37. By contrast, males are more prone to relate ideas to a wider context and to examine them critically before accepting them (Andreou et al. 2004).

Sex resulted to have no influence in the type of lexical errors produced by young beginner learners. For both testing times in 4th and 6th grade no significant difference was found relative to the lexical error type(s) of learners of both sexes. Furthermore, male and female learners displayed the same type of lexical errors in similar order and similar proportions. Consequently, these results can be seen as support of the idea that male and female learners undergo similar and comparable lexical acquisition processes, and have, by implication, similar learning styles, since lexical errors reflect the vocabulary learning process and the lexical communication strategies applied by young learners of English as a second language. Further evidence for this contention is provided by the results in the production of formal and semantic lexical errors. Analysis of the data reveals that there are no sex differences in the frequencies of formal and semantic lexical errors in the writings of our informants.

From this finding we can speculate that the nature of the lexicon is comparable in males and females. In addition to this, and continuing with this idea, from our data we observe that girls and boys commit similar proportions of L1- and L2-oriented lexical errors, suggesting that male and female learners of EFL with Spanish L1 might go through the same stages of lexical acquisition, at least at the earliest phases.

However, this contention would contradict the findings of previous studies on vocabulary learning strategies that showed the existence of differences in the use of lexical strategies depending on the sex of the second language learner (see e.g. Jiménez Catalán 2003, Phakiti 2003, Young and Oxford 1997, Oxford et al. 1993, Oxford et al. 1988). It is essential to note, at any event, that the different age and proficiency level in English of the subjects in Jiménez Catalán's study (2003) and in this study may play a determinant role in the learning style and type of vocabulary strategies used. We are unaware of the existence of evidence that adds support to the claim that young girls and boys at the earliest stage of acquisition use different lexical strategies and follow different vocabulary acquisition paths. The results of this study, actually, rather point in the other direction. Moreover, those studies were concerned with vocabulary learning strategies and not with communication strategies that would affect the way learners perform their writing tasks.

Notwithstanding this caveat, we may dare put forward one possible interpretation for this finding, which refers to the homogeneity of the groups under examination. Participants are homogeneous in a number of ways:

- a) they are learning English as a foreign language in a formal environment, and have therefore been exposed to the same instructional approaches and vocabulary learning techniques
- b) they have a limited language competence and a short age,

c) they all have the same mother tongue,

d) they are exposed to the same or very similar input or language samples.

Because of their limited competence in the foreign language, participants in this study may be strongly influenced by classroom instruction which may determine their knowledge of the language and their performance in English. In this sense, it seems quite reasonable to believe that male and female learners may be using the same communication strategies, e.g. recourse to their mother tongue in the form of borrowings, calques, or coinages. Likewise, because of the common characteristics of the sample, learners may experience the same difficulties with the foreign language words, and may enjoy similar levels of lexical knowledge, and very likely they may even know the same words.

Evidence for this is that the subjects all commit the same lexical errors, e.g.:

- *mather* in 4th grade: boys: S8, S10, S23, S48, S53, S56, S72, S134, S135, S212, S225, S238, S241, S242, S247, S254, S255, S266, S268, S278, S280, S282; girls: S1, S24, S28, S36, S41, S52, S75, S76, S94, S103, S206, S211, S214, S232, S233, S243, S274, in 6th grade: boys: S23, S33, S44, S48, S116, S124, S125, S126, S146, S158, S164, S167, S182, S280; girls: S11, S27, S32, S75, S98, S166, S198, S199, S211.
- *swiming* in 4th grade: boys: S56, S208, S215, S257, S261, S271; girls: S75, S76, S99, S177, S209, S220, S244, in 6th grade: boys: S120, S140, S266, S277; girls: S2, S118, S143, S166, S190, S201, S204.
- *My fathers are Ana and Luis*.³⁸ In this sentence *fathers* is used for “parents”. The Spanish word is translated literally and the word *padre* is extended semantically and the same semantic distribution in English as in Spanish is applied. In 4th grade the following subjects commit this error: boys: S8, S15, S168, S225; girls: S70. In 6th grade: boys: S5, S15, S30, S91, S92, S185, S213, S215, S218, and girls: S11, S50, S100, S147.

However, there are two main aspects worth further commenting. First, we have observed that coinages are more frequent in the production of males at T1 and T2 than in that of their female peers. These differences are not significant, though. We believe that the fact that female learners produce fewer coinages in favour of semantic confusions or borrowings may be traced back to findings reporting girls to be more anxious than boys in testing situations and preferring to avoid any guessing and playing safe on their part (Furnham 2004, Rozendaal et al.

38. This is just an example sentence in the data the same lexical error of literal translation appears in other contexts, too.

2003, Prieto and Delgado 1999). According to this, girls would avoid coining new words in English, since this involves the clear risk of having them wrong.

On the other hand, and this is our second point, they would prefer using borrowings, especially in 6th grade. Although the insertion of the L1 word without any tailoring will quite surely be conceived as an error, it is the safest strategy for female learners, since it may be viewed as a kind of avoiding responding to the task. Meanwhile, producing a coinage would be a real attempt at complying with the requirements of the writing task, i.e. writing in English.

Both sex groups, male and female, were found to commit the same type of lexical errors and in very similar frequencies. Consequently and consistently, this result leads us to the conclusion that, at least at the earliest stages of SLA and as far as this writing task is concerned, there is no evidence of different vocabulary learning processes in male and female learners. It seems, then, that boys and girls may be following the same stages in their vocabulary acquisition process, though this may happen at different rates.

6. CONCLUDING REMARKS

The study reported here has yielded very interesting results and research-relevant conclusions can be drawn. The interest to find out gender differences in writing and vocabulary acquisition has guided the present research. More specifically, our interest in disclosing the patterns of lexical error production in the written performance of male and female primary school goers in Spain lies on the genesis of this study. We wanted to inquire into the vocabulary acquisition process in English as a foreign language as it manifests in the lexical errors produced by low proficiency learners and to explore the role of gender in lexical errors in writing. This final section pulls together the central issues and findings of the study.

The main objective of this study was to identify the categories of lexical errors committed by 4th and 6th graders and to examine how these changed in quantitative and qualitative terms by virtue of the gender of the participants, i.e. female and male learners. In order to accomplish this objective we had learners produce a written essay and complete two tests of general language proficiency and a questionnaire. After typing in compositions, lexical errors were identified and classified into a taxonomy that distinguished formal from semantic errors and L1- and L2-oriented lexical errors. Using this etiological criterion to classify lexical errors had the aim of gaining insights into the foreign language vocabulary acquisition process. This methodology was designed to obtain the best operationalization of the variable “lexical error production” and thus capture the notion of lexical competence from the perspective of lexical errors.

Despite the numerous research studies devoted to establish gender differences in the various areas of second language acquisition, we have noted a dearth of research studies addressing sex differences in lexical error production in writing. The present research has intended to cover this gap. In light of the observation from research that vocabulary is a central component in developing the foreign

language, we set to examine whether there are any differences in the way that female and male learners acquire and use the foreign language vocabulary as manifested by their lexical errors in writing. We, therefore, believe that the findings of the present research may have some implications in the instruction of foreign language vocabulary in the Spanish primary school context.

This is a preliminary study that tries to shed some light to the field of sex differences related to lexical error analysis and vocabulary acquisition processes by Spanish young beginner learners of English. This research aims to be comprehensive but not exhaustive. Because we focus on the earliest stages of vocabulary acquisition and on learners of a young age, we agree with Meara (1984) and Ellis and Beaton (1993: 609) that “one cannot assume that learning occurs in similar ways at different stages of proficiency”. Further research studies that deal with this issue with learners at this and more advanced stages of acquisition are called for.

After giving account of the main conclusions drawn from the results, we will suggest some future lines of inquiry in the field of sex differences, lexical error production and vocabulary acquisition.

The main observation that can be drawn from this study has to do with lack of quantitative and qualitative sex differences in lexical error production. Male and female learners were found to commit lexical errors in similar quantities and the lexical error categories were also similar in frequency for members of both sexes. Female learners wrote significantly longer compositions than their male peers, although no significant differences were found regarding general language proficiency.

Considering that the decrease in lexical error production in relative terms is higher for females, i.e. their increase in composition length is higher and the decrease in the mean production of lexical errors is also higher, and that their increase in language proficiency is higher, too, we can conclude that girls progress at a faster rate than boys at this stage of acquisition, i.e. from 4th to 6th grade.

Our results contribute to shed some light to the field of sex differences in vocabulary acquisition pointing to comparable lexical error production behaviours for male and female learners at the beginning stages of learning when writing in the foreign language.

In addition to this, the findings derived from the present study put forward that there may be a single lexical acquisition route for the male and female young beginner learners of this study. The frequency of the presence of the different lexical error categories resembles very much in boys' and girls' production. Moreover, the change experienced by the categories from T1 to T2 is also very much similar.

In short, male and female learners displayed the same lexical error types in similar order and in similar proportions. From, this we can conclude that the processes of lexical acquisition may be the same for male and female learners. Furthermore, boys and girls show similar use of communicative strategies, e.g. recourse to the mother tongue in the same proportion, in the same way, and for the same purposes. Moreover, it follows from these results that male and female learners in our study and for the composition task used might be organizing their lexicons in similar ways, going from formal to semantic networks. This implies, as hinted above, that they may go through the same early stages of lexical acquisition.

Probably the high homogeneity of the learners, their young age, their low competence, and the consequent great impact of classroom instruction on their lexical learning process explains this lack of difference between sexes found in other domains of lexical competence, such as the choice of vocabulary learning strategies, in which male and female learners differ (Jiménez Catalán 2003).

In light of the results we can accept both hypothesis stated here, since we could not find any quantitative or qualitative differences in the lexical error production of young Spanish male and female beginner learners of English in primary school.

From this finding we can derive a series of pedagogical implications. First of all, the most conspicuous of all implications for instruction is that there is no need to design different vocabulary teaching approaches for male and female learners. From our data, we also believe that training learners in the use of different vocabulary learning and communicative strategies is not necessary, but that both boys and girls would benefit from training in the same communication strategies.

In general terms, we believe that learners should be provided with explicit vocabulary instruction and in particular with formal spelling instruction. Extensive practice of writing in the foreign language classroom should be introduced and fostered. By practicing writing learners are expected to improve their general language skills, and in particular, their writing of lexical items. We also believe that learners should be offered direct instruction of orthography, so that they learn how to pronounce new words and render them in spelling.

Taking into account that girls avoid inventing words in the foreign language, but that they tend to confuse words that have similar meanings, we should act upon this behaviour by teaching them the semantic links between words and the exact meanings and uses of words. Encouraging learners to work on semantic relations among words and to make their own lexical associations when learning new words aided and fostered by activities in which vocabulary is presented in semantic fields (Channell 1988: 94) may have positive consequences on the

vocabulary knowledge of female learners and may improve their lexical use in written compositions. We believe in line with Channell (1988: 93) that establishing both formal (phonological) and semantic associations would be the most helpful method to recall vocabulary and reduce misselections, calques and semantic confusions. However, this claim is in want of empirical testing.

Finally, the present research has arisen a number of questions that should be answered in future studies dealing with sex differences and lexical errors. First, sex differences in lexical error production should be examined for learners at more advanced stages of acquisition. From results of previous studies and from the evidence hinted in the present study, it seems reasonable to believe that as learners get more proficient girls will surpass male learners in their lexical accuracy rates, since they turned to be faster learners. We are also interested in comparing our results in the present study with data from oral samples to find out if the same similarity in production of lexical errors can be attested. The effect of exercises of semantic associations on the lexical accuracy of male and female learners is also a research issue worth further investigation.

In order to obtain more reliable and richer interpretations and explanations of the data, analysis of the lexical knowledge of male and female learners is called for. Knowing the word knowledge levels of subjects will allow for comparisons regarding sex differences in lexical error production. It will reveal for example whether there is any relationship between vocabulary knowledge and lexical errors and which is the direction of this relationship, e.g. higher vocabulary knowledge implies more lexical errors, or *vice versa*.

The motivation of this study lies in our interest to find out more about the processes of lexical acquisition and the variables that influence those processes. In the present study we have addressed one of those influencing factors: the gender of the learners. Through the examination of gender differences in the production of lexical errors by Spanish learners at the beginning levels, we can obtain further information about how learners acquire, store, and retrieve new words while producing written texts in the foreign language. This study is preliminary and does not claim for exhaustiveness, but it establishes the foundations to further works on vocabulary acquisition and use in EFL.

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APPENDIXES

APPENDIX 2. CLOZE TEST

Fuente: Cambridge English Key Test 1. Examination papers from University of Cambridge ESOL examinations 1.

Cloze Test

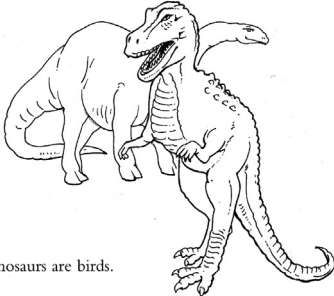
COLEGIO _____ CURSO _____ FECHA _____
 APELLIDOS _____ NOMBRE _____

- 1) Lee la información sobre los dinosaurios.
- 2) Elige la palabra que crees más adecuada (A, B ó C) para cada hueco.
- 3) Marca la respuesta correcta con un círculo en la parte de respuestas.

Dinosaurs

No one has**0**..... seen a dinosaur. The last dinosaur died about 60 million years ago, a long time**28**..... there were any people on the earth.**29**..... knows for sure why they all died. The nearest living relatives of dinosaurs are birds.

Dinosaurs didn't all look the same. There were more**30**..... 5000 kinds. Some were very small,**31**..... others were giants. The largest were bigger than any other animals that ever lived**32**..... land. The Brontosaurus, for example, was twenty metres long, and it**33**..... plants. The Tyrannosaurus Rex was not as**34**....., but it was stronger. It had sharp teeth for eating meat. Also it could run fast**35**..... it had long back legs.



EJEMPLO			
0	A ever	B never	C yet RESPUESTA A

RESPUESTAS

- | | | | |
|----|-------------|-----------|----------|
| 28 | A that | B when | C before |
| 29 | A everybody | B people | C nobody |
| 30 | A than | B that | C as |
| 31 | A as | B but | C or |
| 32 | A in | B on | C at |
| 33 | A ate | B eat | C eats |
| 34 | A bigger | B biggest | C big |
| 35 | A that | B because | C where |

APPENDIX 3. READING COMPREHENSION TEST

Fuente: KET handbook 2004, Read/Write Sample Test 2.

Cloze Test

COLEGIO _____ CURSO _____ FECHA _____

APELLIDOS _____ NOMBRE _____

- 1) Lee el artículo sobre Ingrid McFarlane y contesta a las preguntas marcando con un círculo la respuesta correcta.

Ingrid McFarlane Zoo Keeper



When I left school at eighteen, I got a job at a zoo as a student keeper. Now, five years later, things have changed – I have passed my exams and I am a full animal keeper.

The money is not good. I only get £9,000 a year. You have to be outside in rain and snow, which is hard work, and you get very dirty. But this doesn't matter to me because animals are the most important thing in my life!

There are a hundred monkeys and fifty deer in my part of the zoo and I give them their food and clean their houses. I also need to watch them carefully to be sure that they are all well. In fact, rhinos are my favourite animals and so last year I went to Africa with a colleague for a month to study them.

The zoo is open every day and I work five different days each week. I live in a small flat twenty minutes away and I get up at ten to seven and start work at eight. The first thing I do when I get home at quarter past five is have a shower!

EJEMPLO

0 Ingrid left school

- A Five years ago.
- B Nine years ago.
- C Eighteen years ago.

RESPUESTA

(A)

RESPUESTAS

- | | | | |
|-----------|--|----------|-----------------------------------|
| 21 | Ingrid would like to | A | take some exams. |
| | | B | earn more money. |
| | | C | change her job. |
| 22 | How does Ingrid feel about working in bad weather? | A | she hates getting dirty. |
| | | B | she doesn't mind it. |
| | | C | she likes the snow. |
| 23 | If Ingrid doesn't check the monkeys, | A | they may become ill. |
| | | B | they may get hungry. |
| | | C | they may run away. |
| 24 | The animals Ingrid likes best are the | A | monkeys. |
| | | B | Deer. |
| | | C | rhinos. |
| 25 | Ingrid travelled to Africa | A | to have a month's holiday. |
| | | B | to visit a colleague there. |
| | | C | to learn more about some animals. |
| 26 | The zoo is open | A | only five days a week. |
| | | B | seven days a week. |
| | | C | on different days every week. |
| 27 | Ingrid arrives at her flat in the evening at | A | five fifteen. |
| | | B | twenty past five. |
| | | C | ten to seven. |

APPENDIX 4. QUESTIONNAIRE

Fuente: Grupo de investigación GLAUR (Universidad de La Rioja).

CUESTIONARIO

COLEGIO _____

CURSO _____ FECHA DE NACIMIENTO _____

APELLIDOS _____ NOMBRE _____

Marca con una cruz la respuesta que corresponda:

1. Sexo Hombre
 Mujer
2. Nacionalidad Española
 Otras. Especifica _____
3. Lengua materna Español
 Otras. Por favor, especifica _____
4. ¿Recibes clases particulares de inglés fuera del colegio?
 Sí No He ido, pero ya no voy

5. En caso de recibas o hayas recibido clases de inglés fuera del colegio, especifica:

> durante cuantos años:

- menos de un año un año dos años tres años
 cuatro años cinco años más de cinco años

> durante cuantas horas a la semana:

- 1 hora 2 horas 3 horas 4 horas 5 horas mas de 5 horas

> cuál ha sido el motivo

- Había suspendido y quería aprobar
 En el colegio saco buenas notas pero quería mejorar
 Me gustan mucho los idiomas y me divierte aprenderlos
 Complacer a mi familia

6. ¿Has estado en algún país de habla inglesa ?

- No
 Sí

> ¿Cuándo? _____

> ¿Durante cuánto tiempo? _____

> ¿Has ido a clases de inglés allí? Sí No

7. ¿Has ido a colonias o campamentos de inglés alguna vez ?

- No
 Sí

> ¿Cuándo? _____

> ¿Durante cuánto tiempo? _____

8. ¿Cuál fue tu nota en inglés el año pasado en tercero de primaria?

- Progresa adecuadamente (P.A.) Necesita mejorar (N.M.)
 Otro. Especifica cual _____

9. INDICA CON UNA **CRUZ** COMO TE RESULTA:

• ***Leer en inglés (entender un texto escrito)***

- Muy difícil Difícil Normal Fácil Muy fácil

➤ En el caso de que hayas respondido difícil o muy difícil, selecciona con una cruz el motivo:

- Por la aparición de vocabulario que no entiendo
 Por la aparición de estructuras gramaticales que no entiendo
 Por la escritura de algunas palabras inglesas
 Otra dificultad: especifica cuál _____

• ***Entender el inglés hablado (personas nativas hablando inglés, tu profesor, cinta, televisión, etc)***

- Muy difícil Difícil Normal Fácil Muy fácil

➤ En el caso de que hayas respondido difícil o muy difícil, selecciona con una cruz el motivo:

- Por la presencia de vocabulario que no entiendo
 Por la aparición de estructuras gramaticales que no entiendo
 Porque los sonidos ingleses son difíciles de entender
 Otra dificultad. Especifica cuál _____

• ***Escribir correctamente en inglés***

- Muy difícil Difícil Normal Fácil Muy fácil

➤ En el caso de que hayas respondido difícil o muy difícil, selecciona con una cruz el motivo:

- Por falta de vocabulario
 Por la aparición de estructuras gramaticales que no entiendo
 Porque no sé escribir ciertas palabras
 Otra dificultad. Especifica cuál _____

• ***Hablar correctamente en inglés***

- Muy difícil Difícil Normal Fácil Muy fácil

➤ En el caso de que hayas respondido difícil o muy difícil, selecciona con una cruz el motivo:

- Por falta de vocabulario
 Por falta de estructuras gramaticales
 Porque no sé pronunciar ciertas palabras
 Otra dificultad. Especifica cuál _____

CUESTIONARIO

2005/2006

10. ¿Cómo describirías tu nivel de inglés?

- Muy bueno Bueno Regular Malo

11. ¿Cuánto tiempo le dedicas al inglés en casa (sin contar las clases de inglés que puedas recibir)?

- Menos de media hora Entre media hora y una hora
 Entre una hora y dos Más de dos horas. Especifica el número _____

12. Ese tiempo que le dedicas al estudio del inglés en casa, ¿en qué lo empleas?

- Leer libros o revistas en inglés Ver la tele en inglés
 Oír música en inglés Estudiar vocabulario
 Hacer los deberes Otros. Especifica _____

13. ¿Sueles leer en inglés en casa ?

- Sí, a diario A menudo Casi nunca Nunca

14. Por favor, pon una 'X' en la casilla que corresponda de entre las siete que te presentamos (incluida la sombreada). La casilla sombreada te guía para que sepas el término medio de las opciones que te presentamos.

El aprender inglés es

Necesario								Innecesario
Feo								Bonito
Difícil								Fácil
Atractivo								No atractivo
Agradable								Desagradable
Poco importante								Importante
Inútil								Útil
Interesante								Aburrido

PON UNA 'X' EN LA CASILLA QUE CORRESPONDA

15. Me gusta aprender inglés

Totalmente de acuerdo	De acuerdo	Ni a favor ni en contra	En desacuerdo	Totalmente en desacuerdo
-----------------------	------------	-------------------------	---------------	--------------------------

16. El aprender inglés es importante

Totalmente de acuerdo	De acuerdo	Ni a favor ni en contra	En desacuerdo	Totalmente en desacuerdo
-----------------------	------------	-------------------------	---------------	--------------------------

17. El aprender inglés es aburrido

Totalmente de acuerdo	De acuerdo	Ni a favor ni en contra	En desacuerdo	Totalmente en desacuerdo
-----------------------	------------	-------------------------	---------------	--------------------------

18. Quiero aprender mucho inglés

Totalmente de acuerdo	De acuerdo	Ni a favor ni en contra	En desacuerdo	Totalmente en desacuerdo
-----------------------	------------	-------------------------	---------------	--------------------------

19. Me gustan las clases de inglés

Totalmente de acuerdo	De acuerdo	Ni a favor ni en contra	En desacuerdo	Totalmente en desacuerdo
-----------------------	------------	-------------------------	---------------	--------------------------

20. Me interesa aprender inglés

Totalmente de acuerdo	De acuerdo	Ni a favor ni en contra	En desacuerdo	Totalmente en desacuerdo
-----------------------	------------	-------------------------	---------------	--------------------------

21. Aprender inglés es una pérdida de tiempo

Totalmente de acuerdo	De acuerdo	Ni a favor ni en contra	En desacuerdo	Totalmente en desacuerdo
-----------------------	------------	-------------------------	---------------	--------------------------

22. Me esfuerzo por aprender inglés

Totalmente de acuerdo	De acuerdo	Ni a favor ni en contra	En desacuerdo	Totalmente en desacuerdo
-----------------------	------------	-------------------------	---------------	--------------------------

23. El inglés me vendrá muy bien para encontrar trabajo cuando sea mayor

Totalmente de acuerdo	De acuerdo	Ni a favor ni en contra	En desacuerdo	Totalmente en desacuerdo
-----------------------	------------	-------------------------	---------------	--------------------------

24. Me gustaría hablar y escribir muy bien en inglés

Totalmente de acuerdo	De acuerdo	Ni a favor ni en contra	En desacuerdo	Totalmente en desacuerdo
-----------------------	------------	-------------------------	---------------	--------------------------

25. En las clases de inglés intento aprender todo lo que puedo

Totalmente de acuerdo	De acuerdo	Ni a favor ni en contra	En desacuerdo	Totalmente en desacuerdo
-----------------------	------------	-------------------------	---------------	--------------------------

26. Quiero dominar muy bien el inglés para poder comunicarme con otros niños que hablan esa lengua

Totalmente de acuerdo	De acuerdo	Ni a favor ni en contra	En desacuerdo	Totalmente en desacuerdo
-----------------------	------------	-------------------------	---------------	--------------------------

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