

MOTIVATION AND GENDER-RELATED VARIATION IN EFL RECEPTIVE VOCABULARY ACQUISITION IN PRIMARY EDUCATION

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Abstract

This paper examines the relationship between the receptive vocabulary size and the motivation towards EFL of a group of CLIL primary learners. The gender variable is particularly addressed here. Specifically, we aim at exploring (1) gender variation in EFL receptive vocabulary size, (2) gender variation in motivation towards EFL, and (3) whether there exists any relationship between motivation towards EFL and the scores obtained by males and females in receptive vocabulary. No significant differences in general motivation and in extrinsic motivation are reported, although females are more motivated. Significant differences are found in intrinsic motivation in favour of females. Also, females overcome boys in receptive vocabulary size but this difference is not significant. Finally, there exists a significant positive correlation between girls' performance in the 2K VLT and their extrinsic motivation. Some reasons are provided for these results.

Keywords: Receptive vocabulary, motivation, gender, English as a Foreign Language (EFL), primary education,

Resumen

Este artículo examina la relación entre el tamaño de vocabulario receptivo y la motivación hacia ILE de un grupo de alumnos/as AICLE de educación primaria. Prestamos atención a la variable género. En particular exploramos (1) las posibles diferencias de género en la adquisición del tamaño de vocabulario receptivo de ILE; (2) las posibles diferencias de género en la motivación hacia ILE y (3) si existe alguna relación entre el grado de motivación hacia ILE y las puntuaciones de chicos y chicas en vocabulario receptivo. No hay diferencias significativas en motivación general ni en motivación extrínseca, aunque las chicas están más motivadas. Se observan diferencias significativas a favor de las chicas en la motivación intrínseca. Las chicas también superan a los chicos en tamaño de vocabulario receptivo pero esta diferencia no es significativa. Finalmente, existe una correlación positiva entre los resultados en el test de vocabulario receptivo y la motivación extrínseca de las chicas. Se apuntan diferentes razones para argumentar estos resultados.

Palabras clave: Vocabulario receptivo, motivación, género, Inglés como Lengua Extranjera (ILE), educación primaria,

Content and Language Integrated Learning (CLIL). Aprendizaje Integrado de Contenidos y Lengua Extranjera (AICLE).

1. INTRODUCTION

A long history of foreign language (FL) learning research has covered the effect of learner related variables such as gender and motivation in language achievement. In general, research has reported that females are better than males in language tasks; yet inconclusive results are observed in foreign language learning, although some female advantage also looms. As regards motivation, a large number of studies report a positive connection between motivation and FL learning. However, research is scarce on exploring the nature of the relationship between motivation and each FL component and skill. In the present paper, we set out to investigate the way motivation and gender interact with the number of English words a 4th primary education CLIL (Content and Language Integrated Learning) group of Spanish girls and boys know receptively. Following, we will briefly explain the main terms involved in this study and offer a summary of research conducted on these topics.

2. REVIEW OF THE LITERATURE

2.1. MOTIVATION IN FOREIGN LANGUAGE LEARNING

Motivation is one of the factors that most influences foreign language learning and teaching. There are different models in the literature that have addressed the issue of L2 motivation: e.g., Gardner and Lambert's (1972) Socio-Psychological Model, Self-Determination Theory (Noels 2001; Noels, Pelletier, Clément and Vallerand 2000; Deci and Ryan 1985), or Dörnyei's (2009, 2005) L2 Motivational Self System. The pioneering work by Gardner and Lambert (1972) postulated the definition of motivation towards language learning as the desire to achieve a language by means of effort, want or desire, and affect or attitude. Based on this idea of motivation, the authors introduce the notion of orientation, or the ultimate goals or reasons behind learning a foreign language, and they pointed to two types of orientations: integrative, i.e., learners' willingness to learn the language to become part of the target language community, and instrumental, i.e. learners' desire to command the foreign language for utilitarian and external reasons. In further models of motivation, other constructs

have emerged. For example, Deci and Ryan (1985) in the Self-Determination Theory referred to extrinsic motivation, a type of motivation based on the external factors that guide the learning of a foreign language, and intrinsic motivation, which relies on the interest that foreign language learning awakes. If some parallelism is to be established between the conceptualizations of these terms, caution must be applied, as these are multifaceted notions whose boundaries are not clear at all (Carreira 2005).

A considerable volume of published studies has found a positive correlation between motivation and foreign language attainment (e.g., Bernaus and Gardner 2008; Yu and Watkins 2008; Csizér and Dörnyei 2005; Masgoret and Gardner 2003; Schmidt and Watanabe 2001). These studies have also explored the relationship between the different types of motivation and foreign language learning, and their interaction with other variables, such as age or gender. Yet, a general trend is hard to find. For example, as regards age, Eccles, Wigfield and Schiefele (1998) noted that intrinsic motivation decreases with schooling time whilst extrinsic motivation increases. Similarly, in a study with groups in 1st and 3rd Secondary education, Doiz, Lasagabaster and Sierra (2013) found that the youngest learners had greater intrinsic motivation and the oldest were more instrumentally motivated. On the other hand, Lepper, Sethi, Dialdin, and Drake (1997) detected a decrease in intrinsic motivation but not in the extrinsic one, while Carreira (2010, 2006) found that both types decrease with age. In addition, research has proved that nowadays the original conceptualization of some of these types presents some problems. This is the case of the Gardnerian concept of integrativeness, which cannot correspond anymore to the learner's identification with native speakers of the target language community as today English is understood as a global lingua franca used not only by native speakers but also by a community of non-native speakers in a diversity of contexts and with multiple purposes (Kormos and Csizér 2008).

Whilst research on the interaction between motivational factors and variables that define the language learner is extensive, research on this relationship and a particular component or skill of language is scarce. In the following lines, we attempt to provide some background for the relationship of foreign vocabulary learning and motivation, on the one hand and, on the other, for the connection between foreign vocabulary learning and gender.

2.2. FOREIGN VOCABULARY LEARNING AND MOTIVATION

Foreign vocabulary learning is often classified in two types of processes: productive and receptive. The former refers to the production of words so as to match the speaker's intention in speaking and writing. The latter addresses the perception of a linguistic form as well as the understanding of its meaning in listening and reading.

While productive vocabulary learning is traditionally conceived as an active skill, receptive is understood as a passive one.

This productive-receptive distinction is particularly relevant in understanding the effect of motivation on vocabulary knowledge. Paul Nation (2001) concludes that in productive vocabulary, to convey a message we need to have a sense of wanting to do it. Laufer and Paribakht (1998) and Webb (2008) also note that knowing a word productively is a more demanding task than recognizing it. Then, each type seems to require a different level of motivation. So far, however, there has been little discussion about the connection of motivation and this specific component of foreign language learning (Kim 2008; Laufer and Husltijn 2001; Gardner and MacIntyre 1991).

2.3. FOREIGN VOCABULARY LEARNING AND GENDER

With regard to gender, it is difficult to ignore its role in language learning. A considerable amount of literature has identified a female advantage in language tasks (Kiss and Nikolov, 2005; Maitland, Scott, Herlitz, Nyberg, Bäckman, and Nilsson, 2004). This advantage emerges early in first language acquisition but it often disappears with age (Wallentin, 2009). In studies on foreign language acquisition, to be precise, inconclusive results are obtained (e.g., Spellerberg 2011; Brantmeier 2003).

Several studies have produced estimates of the effect of gender on foreign language vocabulary acquisition, but there is still insufficient data for establishing clear patterns in the findings. Girls seem to obtain better results in productive tasks (e.g., Fernández Fontecha 2010; Jiménez Catalán and Ojeda 2008; Jiménez Catalán and Moreno 2005; Meara and Fitzpatrick 2000) but no evidence is found on receptive vocabulary tasks. Among the reasons for this variation, one might point to the type of the task and its demands, and to the idea that girls are traditionally considered more talkative than boys, yet serious systematic research is needed on this issue. As examples of this array of findings, we note the longitudinal study by Agustín Llach and Terrazas Gallego (2012), who found no differences in the number of words receptive boys and girls knew in a receptive vocabulary task. Further, girls showed higher vocabulary gains in the first years and boys were superior in the last ones. In a study conducted by Jiménez and Ojeda (2008) a female superiority in types of words, semantic fields and in the quantity of words known receptively and productively is reported. In contrast, Scarcella and Zimmerman (1998) reported that males outperformed females in an academic vocabulary task. Phakiti (2003) found no effects in terms of gender variation on a reading comprehension task, and Jiménez Catalán and Terrazas Gallego (2005-2008) performed a longitudinal study on the receptive vocabulary size of a group of 4th primary school students and identified very small but

non-significant differences between boys and girls. Many of these studies on receptive vocabulary learning made use of the Vocabulary Levels Test (VLT) by Schmitt, Schmitt, and Clapham (2001), version 2, the same test we use in the present study and that is described below in the methodology.

This counter-evidence to some female advantage pattern should be taken to question whether gender is a distinguishing construct in language learning (Schmenk 2004: 517-518). In this line, Norton and Pavlenko (2004: 504) point out that “gender is not always relevant to understanding language learning outcomes” but it is considered one of many important facets of social identity.

2.4. MOTIVATION AND GENDER IN FOREIGN LANGUAGE LEARNING

From the previous discussion, we can nonetheless conclude that motivation and gender separately help understand some results in the field of foreign language learning. We shall now briefly explore their role together.

Over the past few decades, gender has been acknowledged as a major factor in the study of motivation towards foreign language learning. Salient differences have been identified. Overall, girls have been reported to be more motivated than males in a myriad of studies (e.g., Henry 2012; Dabbagh and Khajehpour 2011; Henry and Apelgren 2008; Mori and Gobel 2006; Dörnyei and Csizér 2002; Wright 1999; Sung and Padilla, 1998). An exception to this trend is the study conducted by Azarnoosh and Birjandi (2012), who found no significant differences between the attitudes toward learning English of male and female junior high school students. On the other hand, the gender-related variation concerning different components and types of motivation has also received considerable attention in this type of studies. In general, girls score higher in integrative and instrumental motivation, among other motivational dimensions (e.g., Dörnyei, Csizér and Németh 2006; Dörnyei and Csizér 2002; Dörnyei and Clement 2001). With respect to the investigation on these two variables and foreign vocabulary learning, research is still meagre. Recent studies that have focused on EFL in the Spanish context reveal that girls’ higher levels of motivation correlate with their outcomes in productive vocabulary tasks (Fernández Fontech 2010). In this same study, both intrinsic and extrinsic types of motivation have a stronger effect on females’ production of EFL vocabulary.

2.5. MOTIVATION, GENDER AND CLIL

The last part of this state of the art offers an overview on the findings on motivation and gender in CLIL (Content and Language Integrated Learning). CLIL is the type of instruction to which the subjects of the present study belong. It is a European term that covers a dual-focused approach that entails the joint learning of a subject and foreign language by using the latter as the means of instruction of the former (Marsh 2002). The variable of type of instruction plays a secondary role in this research, as it is not our aim to compare the results obtained here with results in a traditional EFL class, where the foreign language is the object of study. It is, however, useful to outline the main findings on learners' motivation and gender in a CLIL context to help contextualize the results obtained in this study.

With regard to learners' motivation in CLIL settings, in general, secondary learners in CLIL are more motivated than learners in non-CLIL settings (Lasagabaster 2011; Lasagabaster and Sierra 2009; Murtagh 2007; Seikkula-Leino 2007). These results are in line with one of the strongest ideas behind CLIL is its positive influence on affective factors, as learners seem to lose their inhibitions to use the foreign language (Dalton-Puffer 2008).

As for research on gender and motivation in CLIL, studies grounded in the Canadian immersion context, considered the origin of CLIL, point to certain kind of levelling effect on gender-related variation in FL achievement, which favours boys' FL achievement and motivation (Baker and MacIntyre 2000). This result is supported by Merisuo-Storm's (2007) investigation with primary graders in the Finnish context. In contrast, some other studies conducted in the Basque Country, (e.g. Lasagabaster and Sierra 2009) concurred in finding that female secondary learners outperformed male learners in a CLIL setting. As these authors note (op. cit. 2009:13), weaker versions of CLIL do not have the same waning effect as strongest versions such as Canadian immersion.

Finally, turning now to the vocabulary learning outcomes under this type of instruction, with certain restrictions due to the different learning conditions under which CLIL is implemented, research has proved that CLIL students have a larger receptive and productive vocabulary, know more low frequency words, have a wider stylistic range and use vocabulary more appropriately, as Dalton-Puffer notes in her review of CLIL outcomes (2011).

3. PURPOSE

In broad terms, the review of the literature above has revealed that gender and motivation have been widely studied in foreign language learning and are relevant variables to this field. As regards foreign vocabulary learning, however, more systematic studies that explore the relationship between learners' gender and motivation as well as their learning outcomes in different vocabulary tests are required. Thus, based on previous findings, in the present study we intend to provide an answer to the following questions:

RQ1. Are there any gender differences in learners' achievement in the version 2 of the 2,000-word frequency-band from the receptive version of the Vocabulary Levels Test (2K VLT)?

RQ2. Are there any gender differences in learners' motivation - general motivation (GMot), extrinsic motivation (EMot), and intrinsic motivation (IMot) - towards EFL learning?

RQ3. Is there any relationship between general motivation and types of motivation (GMot, EMot, IMot) towards EFL learning and the scores obtained by male and female learners in the 2K VLT?

4. METHOD

4.1. PARTICIPANTS

The participants were 58 4th primary education Spanish students (33 boys and 25 girls) – aged around 9-10 years old. They were randomly selected from a mixed-gender school located in the north of Spain. These students were part of a PILC project (*Proyectos de Innovación Lingüística en Centros* - School Language Innovative Projects), a CLIL regional project in which part of a content subject is taught through English. Thus, at time of testing, they had received 734 hours of instruction in English as a foreign language: 419 hours of instruction in the class of English as a foreign language plus 315 hours through English as a vehicular language in the subject of Natural Sciences.

4.2. DATA GATHERING INSTRUMENTS, PROCEDURES, AND ANALYSIS

Schmitt, Schmitt and Clapham's (2001) version 2 of the 2,000-word frequency-band from the receptive version of the Vocabulary Levels Test (2K VLT) (Appendix 1) is used to measure learners' receptive vocabulary size. This test covers ten groups of six words and three definitions per group. Testees have to match each target word to its corresponding definition. The maximum score is 30 points, correct matching is given one point. Students' word estimates are calculated by applying Nation's (1990:78) formula: "Vocabulary size = N correct answers multiplied by total N words in dictionary (the relevant word list) divided by N items in test". Test-takers had 10 minutes to complete the test. This test has been extensively used and validated in research (Agustín Llach and Terrazas Gallego 2012; Mokhtar *et al.* 2010; Cameron 2002; Schmitt, Schmitt and Clapham 2001; Laufer and Paribakht, 1998; Schmitt and Meara 1997; Read, 2000). With a word-definition matching format, it assesses receptive vocabulary size or breadth based on the subjects' recognition of words of graded frequency lists of 2,000, 3,000, 5,000, The Academic Word List and the 10,000 most frequent words in English. Knowing words in a frequency band implies knowing words in all lower bands. In general, VLT studies conclude that the L2 proficiency level or the time of exposure to the foreign language affects the number of words learners know receptively.

With respect to general, intrinsic and extrinsic motivation, they are assessed by means of a part of questionnaire adapted from Gardner's (1985) Attitude/Motivation Test Battery (A/MTB) (Appendix 2). This part consists of a semantic differential technique of 7-point bipolar rating Likert scale using the following 7 pairs of bipolar adjectives: 'necessary' / 'unnecessary', 'ugly' / 'nice', 'attractive' / 'unattractive', 'pleasant' / 'unpleasant', 'important' / 'unimportant', 'useful' / 'useless', and 'interesting' / 'boring'. These adjectives are introduced with the Spanish phrase "*Considero que el inglés es...*" ("I consider English to be..."). Intrinsic motivation is measured through the pairs 'ugly' / 'nice', 'attractive' / 'unattractive', 'pleasant' / 'unpleasant', and 'interesting' / 'boring'; the extrinsic motivation is measured through the pairs 'necessary' / 'unnecessary', 'important' / 'unimportant', and 'useful' / 'useless'. General motivation is tested through the 7 pairs of adjectives. It is important to note here that in this study we make use a simplified version of intrinsic and extrinsic motivation, i.e., one in which intrinsic is defined by learners' opinions on endogenous factors of EFL, and extrinsic refers to exogenous factors of learning a foreign language. Other aspects related to motivation are not considered here.

Data from the VLT and the motivation scale were computer coded and analyzed through SPSS (Statistical Package for Social Sciences) (version 19.0).

5. RESULTS

Research question 1. Are there any gender differences in learners' achievement in the version 2 of the 2,000-word frequency-band from the receptive version of the Vocabulary Levels Test (2K VLT)?

A Shapiro-Wilk normality test is applied concerning results on gender and VLT but normal distribution cannot be accepted neither for the group of boys nor for the group of girls (p-value < 0.05) (see Table 2). The Mann-Whitney-Wilcoxon test is used instead. It can be seen from the data in Table 1 that while boys know 452.48 words, girls know 496.04 words. So a female superiority is identified although it is not significant (p-value > 0.05), as shown in Table 3. Figure 1 presents the median values per sex for the 2K VLT.

Groups	Min.	Max.	Mean	SD	Word estimates
All	1	17	7.07	3.67	471.26
Boys	1	14	6.79	3.74	452.48
Girls	2	17	7.44	3.63	496.04

Table 1. 2K VLT: Descriptive statistics

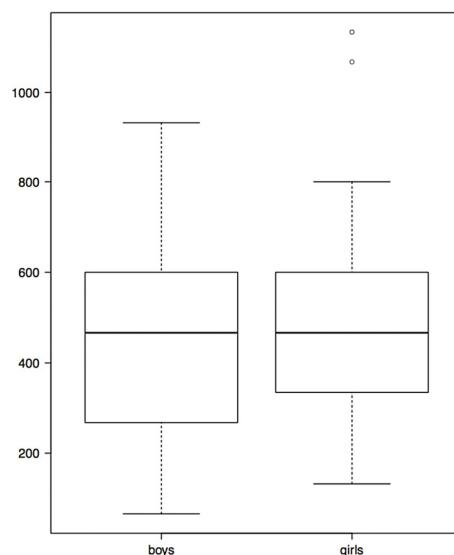


Figure 1. 2K VLT: median values.

	Boys	Girls
Shapiro-Wilk	w = 0.953, p-value = 0.168	w = 0.895, p-value = 0.014

Table 2. Parametric analysis: VLT.

Mann–Whitney–Wilcoxon	(w = 384, p-value 0.658)
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Table 3. Non-parametric analysis: gender and VLT.

Research question 2. Are there any gender differences in learners' general motivation (GMot), extrinsic motivation (EMot), and intrinsic motivation (IMot) towards EFL learning?

In order to answer the second research question of our study, a Shapiro-Wilk normality test is applied first to identify a normal distribution in the sample. No normal distribution is found neither on any motivation value of boys nor girls (p-value < 0.05) (see Table 5). Again, we use the Mann–Whitney–Wilcoxon test instead. We identify a female superiority in all types of motivation (see Table 4) although it is not significant neither in GMot (p-value 0.1127) nor in EMot (0.7703). Yet, girls are significantly more intrinsically motivated than boys (p-value = 0.04063; p-value < 0.05). Both genders follow the same pattern: they are more extrinsically than intrinsically motivated, as displayed in Table 4.

Gender	Motivation	Mean	Max.	Min.	SD
Boys	GMot	5.27	7	1.0	1.28
	IMot	5.00	7	1.0	1.55
	EMot	5.96	7	1.0	1.09
Girls	GMot	5.80	7	3.0	1.10
	IMot	5.78	7	2.5	1.31
	EMot	6.21	7	4.0	1.09

Table 4. Motivation: descriptive statistics.

		Boys	Girls
Shapiro-Wilk	GMot	w = 0.915, p-value = 0.020	w = 0.906, p-value = 0.035
	EMot	w = 0.735, p-value = 5.286e-06	w = 0.862, p-value = 0.004
	IMot	w = 0.900, p-value = 0.008	w = 0.862, p-value = 0.004

Table 5. Parametric analysis: GMot, EMot and IMot.

Mann-Whitney-Wilcoxon	GMot	w = 256.5, p-value 0.112
	EMot	w = 329.5, p-value 0.770
	IMot	w = 231.5, p-value = 0.040

Table 6. Non-parametric analysis: gender and GMot, EMot and IMot.

To provide a deeper understanding of learners' motivation, we established three levels of mean general motivation according to the students' marks obtained in the motivation test. Thus, level 1 comprises low motivation marks: 1.0-3.0, level 2 medium motivation marks: 3.01-5.0, and level 3 high motivation marks: 5.01-7.0. Table 7 provides the arrangement of marks per level. We note that most girls and most boys are placed at level 3 and level 2. A higher percentage of girls (69.56%) vs. boys (56.66%) are highly motivated.

	GMot	Level 1	Level 2	Level 3
Boys	N	1	12	17
	%	3.33	40	56.66
Girls	N	1	6	16
	%	4.34	26.08	69.56

Table 7. Levels of GMot: Number of learners and percentage.

Research question 3. Is there any relationship between GMot, EMot, and IMot towards EFL learning and the scores obtained by male and female learners in the 2K VLT?

First, we applied a Shapiro-Wilk normality test, but normality cannot be accepted (see Table 8). Therefore we performed a Spearman correlation test for VLT results

and general motivation. As can be seen from Table 9, the correlation between the 2K VLT and GMot is not significant in any case. In the case of girls, *rho* is higher than in the case of boys; this means that although there is a small correlation, this is not significant and therefore we could say this finding could be due to chance.

Shapiro-Wilk	GMot	w = 0.916, p-value = 0.001
	2K VLT	w = 0.961, p-value = 0.060

Table 8. Parametric analysis: GMot and 2K VLT

	rho	p-value
Boys	0.006	0.974
Girls	0.334	0.119

Table 9. Spearman's rank correlation rho: GMot and 2K VLT.

We use again the Shapiro-Wilk normality test to calculate the correlation between the two types of motivation and performance in the 2K VLT. As Table 10 shows, in no case, the normal distribution of the sample can be assumed. Hence, we ran the Spearman correlation test. The results for VLT and intrinsic motivation of boys and girls are presented in Tables 11 and 12.

	Boys	Girls
Shapiro-Wilk	EMot w = 0.735, p-value = 5.286e-06	w = 0.724, p-value = 2.967e-05
	IMot w = 0.900, p-value = 0.008	w = 0.862, p-value = 0.004

Table 10. Parametric analysis: EMot and IMot.

	rho	p-value
Boys	- 0.005	0.978
Girls	0.560	0.005*

Table 11. Spearman's rank correlation rho: EMot and 2K VLT. *p-value < 0.01

	rho	p-value
Boys	0.009	0.958
Girls	0.238	0.272

Table 12. Spearman's rank correlation rho: IMot and 2K VLT.

It is apparent from these tables that in the case of boys none of the types of motivation affect their performance in the 2K VLT. Neither is a correlation between girls' intrinsic motivation and results in the receptive vocabulary test. Interestingly, there exists a significant positive correlation between girls' performance in the 2K VLT and their extrinsic motivation. So, there is substantial evidence that girls' extrinsic motivation has an effect in their performance in the 2K VLT.

6. DISCUSSION

The first research question addresses the issue of learners' gender differences in the size of EFL receptive vocabulary. The findings on this issue indicate that girls know more words than boys although this difference proved to be non-significant. This result is in line with inconclusive findings on gender variation in receptive tasks (e.g. Agustín Llach and Terrazas Gallego, 2012). For instance, and interestingly enough, Canga Alonso (2013) found that our male subjects outperformed girls in the same vocabulary test as they moved up a grade, although again this result was not significant.

As for the second research question, which addresses the issue of gender-related variation in motivation, we have found that (1) both males and females are more extrinsically than intrinsically motivated, and, (2) although both boys and girls are highly motivated for EFL, females' general, extrinsic, and intrinsic motivation values are higher than males', but only the difference between females and males' levels of intrinsic motivation is significant. To put it in other words, (i) most boys

and girls mostly think that English as a foreign language in the Spanish context is necessary, important or useful (EMot), but also also nice, attractive, pleasant or interesting (IMot); (ii) girls find EFL more necessary, important, useful, nice, attractive, pleasant and interesting than boys; and (iii) girls feel that EFL is particularly, and significantly, nice, attractive, pleasant and interesting (IMot).

The fact that girls present higher levels of motivation in all categories – although this is a non-significant outcome for some of these categories – concords with findings of an important body of research (e.g., Dabbagh and Khajehpour 2011; Henry and Apelgren 2008; Carreira 2010; Sung and Padilla 1998). In the particular case of girls' being more intrinsically motivated than boys, this gender divergence is consistent with research (e.g. Dörnyei, Csizér and Németh 2006). In this line, the result supports Fernández Fontecha (2010), who explored the motivation of a group of secondary school Spanish students, aged around 13-14 years old, and found that females reported being more intrinsically motivated than males. Furthermore, this finding accords with the traditionally assumed idea of a gender-role stereotyped socialization according to which male and female students would choose differentiated sets of academic disciplines (Dabbagh and Khajehpour 2011). By way of illustration, the Eurostat Newsrelease (2009) reveals that, in 2006, 17.4 per cent of students in engineering in the EU27 and 75.3 in education were girls. The question here is to discern up to which extent a learner's intrinsic motivation towards foreign language learning is encouraged or fed by social stereotypes or it is the result of biological and cognitive differences. Concerning biological differences, the research conducted by Ullman (2005) and Hartshorne and Ullman (2006) results particularly relevant here. These authors explore the relevance of sex hormones in language and memory. They conclude that, while males are better at the procedural memory, which is responsible for grammar, females have an advantage over males at declarative memory over verbal and spatial aspects of cognition. Lexical knowledge is connected to this declarative memory system, what implies, for example, that females are better at remembering words.

The third research question aimed at identifying any possible relationship between males and females' general motivation and types of motivation towards EFL learning and their scores in the 2K VLT. In no case, general and intrinsic motivation were identified as having an effect on performance in the 2K VLT. In contrast to earlier findings that point to intrinsic motivation as a better predictor of FL achievement than extrinsic motivation (Bernaus and Gardner, 2008; Yu and Watkins, 2008), this study found that girls' extrinsic motivation was significantly related to the number of words they knew receptively. The correlation between extrinsic motivation and results in FL vocabulary achievement suggests that girls' conceptualization of English as a necessary, important or useful subject is highly relevant to their receptive vocabulary size. It is somewhat surprising that such a

finding on the impact of extrinsic motivation on learning results is found in primary education graders.

One could expect that, at the age of our learners, language outcomes were due to intrinsic rather than extrinsic motivation, being the latter apparently more decisive in older students' performance. For example, Nikolov (1999) concluded that instrumental motivation emerged at 11 or 12 years old. Jurišević and Pižorn (2013) found also that the primary school students of their sample understood the importance and usefulness of foreign language learning as most of them sustained that they learned English to understand cartoons, books, songs or films, among others. Hence, we should be aware that the instrumental or external motivations could be said to be age- and context-dependent as they do not coincide in younger and older students, and depend on their realities, e.g., to get a job or understand a song.

Last but not least, it is also worth noting that the type of the task might have some effect on the findings. As explained earlier in the review of the literature, differently from receptive tasks, in productive vocabulary tasks a sense of wanting to express a meaning is required. Following Nation (2001), students need to be highly motivated to produce words because this is a more demanding task than recognizing words. Accordingly, these findings are in agreement with Canga Alonso and Fernández Fontecha (in press), who found no significant correlation between results in the 2K VLT and motivation. Furthermore, our results seem to partially support the study conducted by Fernández Fontecha and Terrazas Gallego (2009), which, although showed evidence of a significant relationship in 9th grade between motivation and three receptive vocabulary tests – the VLT 2K among them –, they did not find it in 8th grade. What is surprising, and is consistent with our findings, is that in a study by Fernández Fontecha (2010), the performance of these 8th graders in a productive vocabulary test correlated significantly with their motivation. Moreover, in a study on girls and boys' performance in a series of vocabulary tests, Jiménez Catalán (2010) identifies differences and similarities in boys and girls' performance in vocabulary tests. On the one hand, the author spots a significant differential pattern in boys and girls' vocabulary performance on two receptive vocabulary tests in multiple-choice format (one of them was the 2K VLT), being girls superior to boys. On the other hand, she identifies boys' underachievement in two productive vocabulary tests: a composition and a cue word test. It is interesting to point out that the number of words obtained by both groups of students in the cue word test doubled the number of words produced in the composition, what points to the large influence that the type of test has on the results within the same category of vocabulary assessment, i.e. productive or receptive. This reveals as an important issue in future research.

7. CONCLUSION

The present study was designed to explore the role of learners' motivation and gender in the acquisition of EFL receptive vocabulary in primary education. The following results have been obtained: (1) females have proved to know more words than males in the 2K Vocabulary Levels Test, although this is a non-significant result; (2) females are more motivated than males in general motivation and also in intrinsic and extrinsic types, yet only females' superiority in intrinsic motivation is statistically significant; and (3) only a connection between girls' extrinsic motivation and attainment in the 2K VLT is found.

With utmost caution due to the sample size of this study ($N = 58$), this evidence may suggest at least the following main ideas: first, gender is not having a significant effect on the number of words that primary education learners know receptively; second, girls have a particular internal desire for language learning; and third, external reasons for learning the language correlate significantly with the number of words girls understand. The latter idea suggests that at least in the case of girls, extrinsic motivation seem to be a factor relevant in the results of the receptive vocabulary test, i.e. high scores in the receptive vocabulary test correlate with high levels of extrinsic motivation, and low scores in the receptive vocabulary test are affected by low levels of extrinsic motivation, at least in females.

These ideas throw up many questions in need of further investigation. Among them, we should point out that longitudinal studies would help assess the nature of the relationship between motivation and vocabulary learning in both genders. In this vein, as extrinsic motivation is higher in both genders and has an effect on learning results in the case of girls, it would be interesting to investigate in further work the behaviour over time of the intrinsic and extrinsic types of motivation in both males and females. Moreover, as our study has been conducted with students who had received extra exposure to English through CLIL, future research could address the differences and similitudes in both motivation and vocabulary performance of girls and boys of the same age as the subjects of our sample. Some current studies have already tackled part of this issue under CLIL and non-CLIL instruction but, to our knowledge, no study has compared the relationship between motivation and vocabulary knowledge in girls and boys.

It was also suggested in the review of the literature that the vocabulary task/test administered to measure productive and receptive vocabulary knowledge is reported to have some effect in the results within each type of vocabulary. Research on the effect of different tests/tasks would contribute to shed some light on findings relating the variables at stake as it has been proved that motivation correlates differently with receptive and productive vocabulary learning. The use of different

instruments to measure receptive vocabulary together with a desirable increase in the sample size, and the narrowing of the 7-point rating scale to measure the motivation of primary graders are noted as caveats of the present study.

Finally, although not so clearly to establish patterns, however, this research points to a female advantage in intrinsic motivation and vocabulary size, the reason of which could be a mix of biological, cognitive and socio-cultural aspects. Be that as it may, these findings suggest several courses of action as teaching implications. Since learners' motivation is a very sensitive issue within the field of foreign language learning and it also has some effect on the lexical component, teachers should consider ways of stimulating young foreign language learners' motivation as well as other affective factors. Boys' motivational behaviour should be particularly addressed here. Thus, classroom observation becomes a useful means in detecting motivational features in both genders.

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APPENDIX 1. VOCABULARY LEVELS TEST (VLT) 2,000 (SCHMITT, SCHMITT AND CLAPHAM, 2001).

EXAMPLE

1 business
 2 clock ____ part of a house
 3 horse ____ animal with 4 legs
 4 pencil ____ something used for writing
 5 shoe
 6 wall

EXAMPLE

1 business
 2 clock 6 part of a house
 3 horse 3 animal with 4 legs
 4 pencil 4 something used for writing
 5 shoe
 6 wall

1 coffee
 2 disease ____ money for work
 3 justice ____ a piece of clothing
 4 skirt ____ using the law in the right way
 5 stage
 6 wage

1 choice
 2 crop ____ heat
 3 flesh ____ meat
 4 salary ____ money paid regularly for doing a job
 5 secret
 6 temperature

1 cap
 2 education ____ teaching and learning
 3 journey ____ numbers to measure with
 4 parent ____ going to a far place
 5 scale
 6 trick

1 attack
 2 charm ____ gold and silver
 3 lack ____ pleasing quality
 4 pen ____ not having something
 5 shadow
 6 treasure

1 cream
 2 factory ____ part of milk
 3 nail ____ a lot of money

1 adopt
 2 climb ____ go up
 3 examine ____ look at closely
 4 pour ____ be on every side
 5 satisfy
 6 surround

1 bake
 2 connect ____ join together
 3 inquire ____ walk without
 4 limit ____ keep within a certain size
 5 recognize
 6 wander

1 burst
 2 concern ____ break open
 3 deliver ____ make better
 4 fold ____ take something to someone
 5 improve
 6 urge

1 original
 2 private ____ first
 3 royal ____ not public
 4 slow ____ all added together
 5 sorry
 6 total

1 ancient
 2 curious ____ not easy
 3 difficult ____ very old

4 pupil	____	person who is studying	4 entire	____	related to God
5 sacrifice			5 holy		
6 wealth			6 social		

APPENDIX 2. LIKERT SCALE ADAPTED FROM THE ATTITUDE/MOTIVATION TEST BATTERY (A/MTB) GARDNER'S (1985).

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

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