Gender-based Differences in EFL Learners’ Language Learning Strategies and Productive Vocabulary

Abstract

Gender is a key factor in the field of Second Language Acquisition (SLA), where its impact on language learning strategies (Aslan, 2009; Oxford & Nyikos, 1989; Sumarni & Rachmawaty, 2019) and productive vocabulary (Canga Alonso & Arribas García, 2014; Fleckenstein, 2018; Jiménez Catalán & Moreno Espinosa, 2004) has been investigated. However, to our knowledge, there is a lack of research on gender and language learning strategies in relation to productive vocabulary in English as a Foreign Language (EFL). The present study aimed to pursue three objectives. The first one was to ascertain whether male or female learners employed more language learning strategies. The second objective was to determine whether male or female learners had more productive vocabulary. Finally, the third objective was to investigate whether there was a statistically significant relationship between language learning strategies and productive vocabulary. The sample consisted of 51 EFL learners (20 males and 31 females) in the second year of Spanish non-compulsory secondary education (equivalent to the 12th grade). The Strategy Inventory for Language Learning (SILL) questionnaire (Oxford, 1990) and the Productive Vocabulary Levels Test (PVLT) (Laufer & Nation, 1995, 1999) were the instruments employed in order to measure the informants’ language learning strategies and controlled productive vocabulary respectively. Afterwards, students’ answers were processed electronically and analyzed quantitatively. Results revealed that females used language learning strategies significantly more than males, but there were not statistically significant differences between them regarding productive vocabulary. Moreover, a positive correlation was found between language learning strategies and productive vocabulary.

Keywords: gender-differences, language learning strategies, productive vocabulary, EFL learners, second year of Spanish non-compulsory secondary education
Since the 1970s, research in the field of second language acquisition focused on the differences between males and females in language use: vocabulary, grammar, and speech. Indeed, women’s language was considered inferior to the language use of their male counterparts (Lakoff, 1973; Pavlenko, 2001).

Concerning SLA and FLA, a traditional concern was to ascertain whether males or females were better language learners. At first, the informants were only considered as males or females, referring to their biological characteristics (Ehrlich, 1997; Sunderland, 2000). Afterwards, other differences were analyzed (Ekstrand, 1980; Norton & Pavlenko, 2004), such as motivation or context, which is the view that predominates nowadays. Those gender differences, which can be physical, social, cultural or a combination of them, have been the focus of research in different areas of SLA and FLA, such as listening comprehension (Boyle, 1987; Namaziandost, Savzevar, & Hashemifardnia, 2018), vocabulary and learning strategies (Noprianto & Purnawarman, 2019; Oxford & Nyikos, 1989), or learning styles (Lau & Gardner, 2019; Reid, 1987).

Regarding the field of vocabulary acquisition, there is scarcity of research respecting gender and vocabulary. Some aspects measured were vocabulary size (Gu, 2010), vocabulary level (Harji, Balakrishnan, Bhar, & Letchumanan, 2015), or receptive vocabulary (Agustín Llach & Terrazas Gallego, 2012; Jiménez Catalán & Terrazas Gallego, 2005–2008). There are inconclusive results because no research has been found that measures the same aspects employing the same test, methodology and educational level, from which objective outcomes could be determined.

The aim of this study is to account for the role of gender in both language learning strategies and productive vocabulary in EFL learners in the second year of Spanish non-compulsory secondary education. The first section provides an overview on gender and its relationship with SLA or FLA, focusing more on the influence of gender on language learning strategies and productive vocabulary. A report of the study conducted with its methodology, main findings found and interpretation of the same follows. This paper concludes by pointing out the limitations of the study and some lines for further research.

An Overview of Gender

Gender and Second/Foreign Language Acquisition

The field of gender and SLA or FLA has been the focus of research since the 1970s. At first, studies focused exclusively on sex as a male/female binary opposition, only considering it as a biological category (Ehrlich, 1997; Sunderland,
2000). The center of attention was sex differences in language use (vocabulary, grammar, and speech), which usually implied female disadvantage. Accordingly, individual differences (e.g., social and cultural factors) have been left behind. These individual differences seem essential to ascertain why a person is a better language learner than another, since sex does not assure that.

From 1990 onwards, only individual differences were included in subsequent studies because they were thought to have a significant impact on the acquisition of a second or foreign language. Those divergences, that could be physical, social, cultural or a combination of them, were highly relevant for second and foreign language teachers, as they let them know how diverse their students were (Hugar, 1982). This means that learners differ from one another because of the internal (e.g., motivation, emotion) and external factors (e.g., context, type of test) that surround them. Therefore, this approach completely excludes sex as a biological category. Another viewpoint is to consider gender as both a biological category and a psychological, social, and cultural factor to ascertain its role in the acquisition of a SL or FL. However, as Hugar (1982) and Saville-Troike (2006) claim, there is no research about how sex, recognized as a biological factor, influences second or foreign language acquisition. Studies might have focused and still focus on gender as a social and cultural factor because it gives more enriching results for SLA and FLA. The sole consideration of biological differences only reveals sex-related differences and excludes other significant factors (physical, social, cultural) that contribute to learning.

Gender differences have been investigated in several areas in SLA and FLA, such as listening comprehension (Boyle, 1987; Namaziandost et al., 2018), language achievement (Burstall, 1975; Ekstrand, 1980), vocabulary and learning strategies (Noprianto & Purnawarman, 2019; Oxford & Nyikos, 1989), or learning styles (Oxford & Ehrman, 1995; Reid, 1987). The general belief is that females are better language learners, but this is not always the case. In a nutshell, there are inconclusive findings because some scholars declare the superiority of females over males (Ekstrand, 1980; López-Rúa, 2006), others claim that males are better language learners than females (Andreou, Vlachos, & Andreou, 2005; Boyle, 1987), and no significant differences have been disclosed (Bacon, 1992).

**Gender and Language Learning Strategies**

The first research on language learning strategies dates back to the mid-1970s, when an approach was adopted to determine why some learners were more successful than others in learning a second language. Some scholars (Naiman, Frohlich, Stern, & Todesco, 1978; Rubin, 1975; Stern, 1975) drew attention to good language learners to determine their characteristics in second
language learning. According to Rubin (1975, pp. 45–47), a good language learner: (1) was a great guesser; (2) had an urge to communicate; (3) was willing to apply his/her knowledge; (4) focused on form; (5) practiced the language; (6) observed both his/her and others’ speech; and (7) focused on meaning. Since then, language learning strategies have been thoroughly investigated (Cohen, 1998; O’Malley & Chamot, 1990; Oxford, 1990, 2011) because they have been considered as influencing the way learners learn a SL or FL.

Several definitions have been proposed during the 1980s and 1990s. Oxford (1990, p. 8) defines language learning strategies as “steps taken by the learner to make learning easier, faster, more enjoyable, more self-directed, more effective, and more transferrable to new situations.” For Chamot (1987, p. 71), they refer to the “techniques, approaches or deliberate actions students take in order to facilitate the learning, recall of both linguistic and content area information.” However, there appears to be no consistency among scholars concerning the nature of these strategies, that is, whether they are mental, behavioral, or both mental and behavioral. Regarding the mental component, Cohen states that they are “the steps or actions consciously selected by learners either to improve the learning of a second language, the use of it, or both” (1998, p. 5). Oxford only considers behavior, and describes them as “behaviours or actions which learners use to make language learning more successful, self-directed and enjoyable” (1989, p. 235). On the other hand, O’Malley and Chamot (1990) and Oxford (1990) declare that they are both thoughts and behaviors that learners apply to understand, learn, and retain new information. It should be considered that not only are language learning strategies mental and behavioral processes, but they also depend on other variables, such as age, gender, proficiency, personality, context, and purpose of learning. These factors will influence learners’ choice of these strategies, which would allow teachers and researchers to acknowledge the way learners learn a second or foreign language. Through strategy training, teachers could instruct learners in these strategies so that they could become more independent in the learning process. Other features of learning strategies are that they are problem-oriented, flexible, and support learning both directly and indirectly (Oxford, 1990).

Concerning taxonomies, scholars have proposed many classifications (Cohen, 1998; O’Malley & Chamot, 1990; Oxford, 1990, 2011; Wenden, 1983) (See Table 1). Oxford divides learning strategies into two classes: direct and indirect. Direct strategies involve “working with the target language itself in a variety of specific tasks and situations.” They comprise memory, cognitive and compensation strategies. Memory strategies help learners “store and retrieve new information,” cognitive strategies allow learners to manipulate or transform the target language, and compensation strategies “enable learners to use the new language for either comprehension or production despite limitations in knowledge” (Oxford, 1990, pp. 14, 37, 47). Indirect strategies “support and manage
language learning without directly involving the target language.” They include metacognitive, affective, and social strategies. Metacognitive strategies “provide a way for learners to coordinate their own learning process,” while affective strategies refer to the positive emotions and attitudes that are produced in the learning process, and social strategies involve the use of language for communication and interaction (Oxford, 1990, pp. 15, 136). The Strategy Inventory for Language Learning (SILL) (Oxford, 1990), as it will be discussed in the methodology, considers the strategies proposed by Oxford in 1990. These are the strategies that are going to be analyzed in this study because they seem to be more detailed and inclusive.

Table 1

<table>
<thead>
<tr>
<th>Scholars</th>
<th>Taxonomies of language learning strategies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wenden (1983)</td>
<td>self-directing strategies: knowing about language, planning and self-evaluation</td>
</tr>
<tr>
<td>O’Malley and Chamot (1990)</td>
<td>cognitive, metacognitive and social/affective</td>
</tr>
<tr>
<td>Oxford (1990)</td>
<td>direct strategies: memory, cognitive, and compensation</td>
</tr>
<tr>
<td></td>
<td>indirect strategies: metacognitive, affective, and social</td>
</tr>
<tr>
<td>Cohen (1998)</td>
<td>cognitive, metacognitive, affective, and social</td>
</tr>
<tr>
<td>Oxford (2011)</td>
<td>strategies: cognitive, affective, and sociocultural-interactive</td>
</tr>
<tr>
<td></td>
<td>metastrategies: metacognitive, meta-affective, and meta-sociocultural-interactive</td>
</tr>
</tbody>
</table>

Research has correlated language learning strategies with several different variables, such as age (Griffiths, 2003; Sepasdar & Soori, 2014), course level (López Aguado, 2011; Yaacob et al., 2019), cultural background (El-Dib, 2004; Oxford & Ehrman, 1995), learning styles (Baltaoğlu & Güven, 2019; Oxford & Ehrman, 1995; Tabanlioğlu, 2003), proficiency (Mutar, 2018; Oxford & Nyikos, 1989), vocabulary size (Gorevanova, 2000; Rahimi & Allahyari, 2019), or years of study (Oxford & Nyikos, 1989). Nevertheless, the relationship between language learning strategies and gender has not been as widely researched as the above-mentioned variables. Part of this study will be devoted to this issue because it is believed to be advantageous for teachers and researchers to acknowledge the types of learning strategies that both male and female learners employ so that more instruction could be given in the strategies that students do not use that often.

Scholars have mostly explored the relationship between language learning strategies and gender in primary, secondary, and university EFL learners world-wide (see Table 2). Therefore, this section will analyze a summary of studies throughout history to ascertain whether male or female learners use more language learning strategies.
In Oxford and Nyikos (1989), and Oxford and Ehrman’s research (1995) in the USA, female university students were reported to use more language learning strategies than males. The same occurs with Turkish EFL learners (Aslan, 2009; Oflaz, 2019; Salahshour, Sharifi, & Salahshour, 2013; Yilmaz, 2010), whose studies proved female advantage. The disparity in these investigations was that all accounted for university students, except Salahshour et al. (2013) whose sample comprised high school learners. Along the same lines, research with Spanish and Polish university informants (García Herrero & Jiménez Vivas, 2015; López Aguado, 2011; Pawlak, 2013) concluded that females make a larger use of learning strategies. Similarly, investigations conducted with Asian learners (Ghadessy, 1998; Goh & Foong, 1997; Khan, Shah, & Ahmad, 2018; Lan & Oxford, 2003; Tamada, 1996) purported that women employ more learning strategies than men. The only difference was that Lan and Oxford’s (2003) sample was composed of 6th graders, instead of university students. Alhaisoni (2012) and Alhaysony (2017) focused on Saudi Arabian university learners, but no significant differences in these strategies were encountered between males and females. In the same manner, Nisbet, Tindall, and Arroyo (2005), Marzban and Barati (2016), and AlSohbani (2018) concurred with these outcomes, but their samples came from Chinese, Iranian, and Turkish students, respectively. However, the first two studies dealt with university learners, whilst AlSohbani (2018) examined 10th, 11th, and 12th graders. By contrast, research conducted in Singapore by Wharton (2000), in Turkey by Tercanlioglu (2004), and in Indonesia by Sumarni and Rachmawaty (2019) demonstrated that men exceed women in their use of language learning strategies.

Table 2

<table>
<thead>
<tr>
<th>Study</th>
<th>Instruments</th>
<th>Participants’ background</th>
<th>Findings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oxford and Nyikos (1989)</td>
<td>SILL</td>
<td>University students</td>
<td>Females</td>
</tr>
<tr>
<td>Oxford and Ehrman (1995)</td>
<td>SILL</td>
<td>N 1200 (m: 600; f: 600) USA</td>
<td></td>
</tr>
<tr>
<td>Tamada (1996)</td>
<td>SILL</td>
<td>University students</td>
<td>Females</td>
</tr>
<tr>
<td>Goh and Foong (1997)</td>
<td>SILL</td>
<td>N 520 (m: 273; f: 247) USA</td>
<td>Females</td>
</tr>
<tr>
<td>Ghadessy (1998)</td>
<td>SILL</td>
<td>N 24 (m: 10; f: 14) Japan</td>
<td>Females</td>
</tr>
<tr>
<td>Warton (2000)</td>
<td>SILL</td>
<td>University students</td>
<td>Males</td>
</tr>
<tr>
<td>Lan and Oxford (2003)</td>
<td>SILL</td>
<td>N 602 (m: 284; f: 318) Hong Kong</td>
<td>Females</td>
</tr>
<tr>
<td></td>
<td></td>
<td>6th grade students</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>N 379 (m: 202; f: 177) Taiwan</td>
<td></td>
</tr>
</tbody>
</table>
Gender and Productive Vocabulary

Vocabulary plays a crucial role in SLA and FLA (Laufer, 1998; Meara, 1990; Nation, 1990) because knowing the vocabulary of a language, learners would be able to communicate effectively. Consequently, examining learners’ vocabulary size would allow both teachers and researchers to ascertain learners’ threshold vocabulary level and whether more instruction is needed so that students can read and comprehend texts (Laufer, 1998). It would also be helpful for learners to know the aspects in which they need to improve to make their learning more successful.
The studies that have investigated the relationship between gender and vocabulary acquisition in SL or FL learning are not only scarce but also dispersed. Outcomes are inconclusive since some studies reveal female superiority (Nyikos, 1990; Scarcella & Zimmerman, 1998), whilst others identify a male advantage (Lin & Wu, 2003; Lynn, Fergusson, & Horwood, 2005).

Vocabulary can be classified into two types: receptive and productive. Receptive vocabulary relates to the perception of a linguistic form and the understanding of its meaning in both listening and reading (Meara, 1990). Productive vocabulary, in its turn, concerns the production of words in speaking and writing to convey meaning (Nation, 2001). Two types of productive vocabulary can be distinguished: controlled and free types. Controlled productive vocabulary refers to the production of words when they are triggered by a task. As Laufer (1998, p. 257) puts it, it is just to complete the following sentence: “[T] he garden was full of fra—flowers” with the word “fragrant.” On the contrary, free productive vocabulary alludes to the use of words at one’s free will (Laufer & Nation, 1999). This research is dedicated to the study of controlled productive vocabulary, which is what the instrument Productive Vocabulary Levels Test (PVLT) (Laufer & Nation, 1995, 1999) measures, as it will be explained in the methodology. Research on productive vocabulary is necessary to acknowledge the amount of words a learner knows in each educational level and context. Its relationship with gender would allow us to explore gender-based divergences in the acquisition of vocabulary. Therefore, part of this study will be devoted to this issue.

Little research has been conducted about productive vocabulary and gender (see Table 3). Scholars (Harji et al., 2015; Jiménez Catalán & Moreno Espinosa, 2004; Moyo, 2018; Scheepers, 2014) agreed with females as being the ones who had a higher productive vocabulary. They differ in the sample of informants, background, and instruments employed. Jiménez Catalán and Moreno Espinosa (2004), Scheepers (2014), and Harji et al. (2015) focused on Spanish, South African, and Malaysian university students respectively, whilst Moyo’s (2018) sample was composed of South African 6th graders. Another divergence was the instrument employed because all of them made use of the PVLT, except Jiménez Catalán and Moreno Espinosa (2004) who used Lex30. The studies conducted by Moreno Espinosa (2010), Canga Alonso and Arribas García (2014), and Fleckenstein (2018) came to the conclusion that there were no significant differences between males and females in productive vocabulary. Both Canga Alonso and Arribas García (2014) and Fleckenstein (2018) dealt with Spanish and Icelandic 10th graders respectively and employed the PVLT to measure their productive vocabulary. However, Moreno Espinosa’s (2010) sample was constituted by Spanish 4th, 5th, and 6th graders, and she used the Lex30. On the contrary, Castro García’s (2017) research
revealed that males outperformed females in productive vocabulary. In this case, she investigated 11th graders’ productive vocabulary in Costa Rica using the PVLT.

Table 3

*Studies on gender and productive vocabulary*

<table>
<thead>
<tr>
<th>Study</th>
<th>Instruments</th>
<th>Participants’ background</th>
<th>Findings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jiménez Catalán and Moreno Espinosa (2004)</td>
<td>Lex30</td>
<td>University students N 19 Spain</td>
<td>Females</td>
</tr>
<tr>
<td>Moreno Espinosa (2010)</td>
<td>Lex30</td>
<td>4th, 5th and 6th grade students N 225 (m: 124; f: 101) Spain</td>
<td>No significant difference</td>
</tr>
<tr>
<td>Canga Alonso and Arribas García (2014)</td>
<td>PVLT</td>
<td>10th grade students N 38 (m: 26; f: 12) Spain</td>
<td>No significant difference</td>
</tr>
<tr>
<td>Scheepers (2014)</td>
<td>PVLT</td>
<td>University students N 298 (m: 123; f: 175) South Africa</td>
<td>Females</td>
</tr>
<tr>
<td>Harji et al. (2015)</td>
<td>PVLT</td>
<td>University students N 120 (m: 60; f: 60) Malaysia</td>
<td>Females</td>
</tr>
<tr>
<td>Castro García (2017)</td>
<td>PVLT</td>
<td>11th grade students N 180 (m: 84; f: 96) Costa Rica</td>
<td>Males</td>
</tr>
<tr>
<td>Fleckenstein (2018)</td>
<td>PVLT</td>
<td>10th grade students N 75 (m: 40; f: 35) Iceland</td>
<td>No significant difference</td>
</tr>
<tr>
<td>Moyo (2018)</td>
<td>PVLT</td>
<td>6th grade students N 66 (m: 33; f: 33) South Africa</td>
<td>Females</td>
</tr>
</tbody>
</table>

In broad terms, the review of literature displayed on both language learning strategies and productive vocabulary has revealed gender-based divergences. As commented before, most investigations concluded that females outperformed males in the use of language learning strategies. Similarly, studies conducted on productive vocabulary also acknowledged female superiority. There are several studies who have researched gender, vocabulary, and strategies in SLA and FLA (e.g., Gu, 2002; Lee, 2007). Nonetheless, no research has been found that correlates language learning strategies with productive vocabulary in Spanish EFL learners. It could be interesting to explore whether the more language learning strategies informants employ, the larger their productive vocabulary will be, to determine whether the most frequent use of language learning strategies implies a better productive vocabulary knowledge.
The present research investigates the relationship between gender, language learning strategies, and productive vocabulary in EFL learners. Language learning strategies were selected, instead of vocabulary learning strategies, because our purpose was to ascertain EFL learners’ general approach to learning and if that general approach had an impact on their productive vocabulary. In fact, vocabulary learning strategies are a subgroup of language learning strategies. To our knowledge, there is a lack of investigations with regards to EFL learners in the second year of Spanish non-compulsory Secondary Education. They are students who are between the stages of older adolescence and early adulthood (mean age 17.43), and in the last year of education in the high school, some of them about to apply for university. With the instruments explained in the following section, we will be able to acknowledge the aspects in which the instruction of English as a foreign language could be improved and ascertain gender-based differences. As noted earlier, research revealed female advantage in both language learning strategies and productive vocabulary. Therefore, based on previous findings, this study aims to investigate the reply to the following research questions:

1. Do males and females employ the same amount of language learning strategies?
2. Do males and females have the same amount of productive vocabulary?
3. Is there a statistically significant relationship between language learning strategies and productive vocabulary?

In respect of the aforementioned research questions, the following hypotheses were tested:

- **H\text{\_}01:** Females make more use of language learning strategies than males.
- **H\text{\_}02:** Females possess more productive vocabulary than their male counterparts.
- **H\text{\_}03:** There is a statistically significant relationship between language learning strategies and productive vocabulary.

### Methodology

The present study is a quantitative, cross-sectional, descriptive, and correlational research.
Informants

The sample was constituted by fifty-one EFL learners. This group was composed of 20 boys and 31 girls, and their mean age was 17.43. They were enrolled in the last course of Spanish post-secondary education (equivalent to the 12th grade) in a state school in La Rioja (Spain), a monolingual autonomous community. Teachers reported that informants’ level of English was B1, which is the level assigned to the 12th grade by the educational board of La Rioja. However, the sample differed in the kind of instruction they had received. 5.88% of students had taken Content and Language Integrated Learning (CLIL), 23.53% of learners had studied English with a program of the Official School of Languages, 27.45% had taken both CLIL and English with the Official School of Languages, and the remaining 43.14% had learnt English as a curricular subject. Therefore, the number of hours of exposure to EFL learning varied. Both the English with the Official School of Languages and the English as a curricular subject groups had received 1,546 hours of instruction in EFL, whereas the CLIL group had received 2,989 hours. These were the hours accumulated after six years of primary education, four years of compulsory secondary education and two years of non-compulsory secondary education. The difference is that Official School of Languages group focuses more on preparing students for their exams, but the hours of exposure to English are the same for the curricular subject and this group. Although the CLIL group had received the same hours of English (1,546) as the other two groups, they had studied other subjects in English (e.g. Social Sciences, Physical Education, Geography and History, Music, Mathematics, Technology, Philosophy), whilst their peers of the other groups had studied them in Spanish.

The headmaster of the participating school signed a written consent form so that the tests explained in the next section could be administered to students. In addition, students’ parents and tutors were also informed of this administration and its voluntary basis.

Instruments and Data Collection

Strategy Inventory for Language Learning (SILL). The Strategy Inventory for Language Learning (SILL) questionnaire was designed by Rebecca L. Oxford (1990) and it was employed to identify the use of language learning strategies. It is made up of fifty items and it is aimed at learners of English as a SL or FL. This questionnaire makes use of the following five Likert-scale factors: never or almost never true of me (1), usually not true of me (2), somewhat true of me (3), usually true of me (4), and always or almost always true of me (5). Learners have to indicate their answer (1, 2, 3, 4, 5) in each state-
ment. For instance, “I use rhymes to remember new English words” (Oxford, 1990, p. 294). Moreover, it is divided into six subscales: memory strategies (nine items), cognitive strategies (fourteen items), compensation strategies (six items), metacognitive strategies (nine items), affective strategies (six items), and social strategies (six items).

**Productive Vocabulary Levels Test (PVLT).** Another instrument used was the Productive Vocabulary Levels Test (PVLT) proposed by Laufer and Nation (1995, 1999) to measure the controlled productive vocabulary knowledge of the same informants. This tool is a quantitative measure which explores vocabulary growth by means of analyzing discrete, selective and context dependent vocabulary (Moreno Espinosa, 2010). The two-thousand-word parallel version (version A + version C) of this test was selected because the knowledge of the two thousand most frequent words is thought to enable learners to communicate both orally and in written form in a foreign language (Nation & Waring, 1997). In this version, informants have to complete the missing word that appears in thirty different sentence contexts. To do so, they are provided with the first letters of the target words. For example, in the sentence “He was riding a bic__,” they have to complete it with the word “bicycle.”

**Procedure and Analysis**

Data were collected in one session during school time. Students were presented with a background questionnaire, the SILL and the PVLT tests. The background questionnaire was administered to get information about their age, sex, nationality, mother tongue, other languages spoken at home, their instruction in EFL, and their previous experience with English. The time assigned to complete both tests, SILL and PVLT, was twenty and ten minutes respectively. At the beginning of the tests, apart from written instructions in English, they were also given both orally and in written form in Spanish to clarify what students were being asked to do. Once data were collected, responses were coded and entered into an Excel file.

For scoring the SILL, a five-point Likert scale which ranged from “never or almost never true of me” (1) to “always or almost always true of me” (5) (Oxford, 1990) was employed. Afterwards, items were summed and the average of use of language learning strategies for each informant was calculated. All PVLT tests were corrected and marked: zero was the lowest score and 30 was the highest. To calculate the productive vocabulary size, Nation’s formula was applied: the number of correct answers multiplied by the total number of words of the test (two thousand) and divided by the number of items (30) (Nation, 1990, p. 78). We decided that a word was correct if it was well written both
grammatically and orthographically. The first letters and context are given as a clue, so it is easier to find out to which word it refers.

The sample was also analyzed with SPSS 21 to perform descriptive and inferential statistics and explore whether statistically significant differences arose regarding language learning strategies, productive vocabulary and gender. Spearman’s correlation was also implemented to determine whether the relationship between language learning strategies and productive vocabulary was statistically significant.

## Results

### Gender and Language Learning Strategies

Table 4 shows the descriptive statistics for gender in the study of language learning strategies, revealing a higher means for females than for males. It can be stated that females use language learning strategies slightly more than males, although the difference in mean values between males and females is only 0.50. As depicted in Table 4, both male and female respondents coincide with the most and least learning strategy used. Social strategies appear to be the most employed, whereas affective strategies seem to be the least used by both groups. Therefore, the most and least used learning strategies by male and female respondents are indirect strategies.

### Table 4

Descriptive statistics and classification for gender in language learning strategies

<table>
<thead>
<tr>
<th>Males</th>
<th>Females</th>
</tr>
</thead>
<tbody>
<tr>
<td>Learning strategies</td>
<td>Mean</td>
</tr>
<tr>
<td>Memory</td>
<td>2.583</td>
</tr>
<tr>
<td>Cognitive</td>
<td>2.578</td>
</tr>
<tr>
<td>Compensation</td>
<td>3.03</td>
</tr>
<tr>
<td>Metacognitive</td>
<td>2.95</td>
</tr>
<tr>
<td>Affective</td>
<td>2.43</td>
</tr>
<tr>
<td>Social</td>
<td>3.24</td>
</tr>
<tr>
<td>Total</td>
<td>2.80</td>
</tr>
</tbody>
</table>

Then, Kolmogorov-Smirnov test was implemented to ascertain if our sample met the normality assumption. As depicted in Table 5, the male and female
groups did not meet normality. Therefore, a non-parametric test for two independent samples was applied.

Table 5

*Normality test for gender-based differences*

<table>
<thead>
<tr>
<th>Gender</th>
<th>D</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Males</td>
<td>.230</td>
<td>.007</td>
</tr>
<tr>
<td>Females</td>
<td>.163</td>
<td>.036</td>
</tr>
</tbody>
</table>

The U Mann-Whitney test was implemented to test whether there were inferential statistical differences between both groups. As shown in Table 6, there are statistically significant gender divergences in the use of language learning strategies.

Table 6

*Inferential statistics for gender in language learning strategies*

<table>
<thead>
<tr>
<th>U Mann-Whitney</th>
<th>Z</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>114</td>
<td>-3.783</td>
<td>.0001612</td>
</tr>
</tbody>
</table>

**Gender and Productive Vocabulary**

Table 7 displays a higher means and better maximum scores for females in productive vocabulary (27 vs. 25) out of 30 items. Both males and females obtained the same minimum score (four points) in the PVLT. Females are somewhat beyond the half of corrected words (fifteen) in the aforementioned test, whereas males are a little bit below it.

Table 7

*Descriptive statistics for gender in productive vocabulary*

<table>
<thead>
<tr>
<th>Gender</th>
<th>N</th>
<th>Mean</th>
<th>SD</th>
<th>Min.</th>
<th>Max.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Males</td>
<td>20</td>
<td>14.70</td>
<td>5.695</td>
<td>4</td>
<td>25</td>
</tr>
<tr>
<td>Females</td>
<td>31</td>
<td>15.48</td>
<td>7.145</td>
<td>4</td>
<td>27</td>
</tr>
</tbody>
</table>

With reference to the number of known words out of the 2,000 most frequent ones, which was the object of study of this task, the data indicated that females have far more knowledge of these words than males, as can be observed in Table 8.
As for descriptive statistics, the boxplot in Figure 1 reveals that the median value of females is higher than that of their male counterparts. Regardless of the mean difference between males and females (52), it can be asserted that the overall productive vocabulary of this sample of EFL learners is lower than 1,000 words in the case of males, and a little higher concerning female respondents.

Afterwards, Kolmogorov-Smirnov test was applied to determine if our sample met the normality assumption. As can be seen in Table 9, the sample met normality. Therefore, an independent samples test of means comparison was implemented.
The independent samples T-test was conducted to test whether significant statistical differences between males and females arose. As can be observed in Table 10, the \( p \)-value does not reveal statistically significant gender-based divergences in productive vocabulary.

Table 10

*Independent samples T-test*

<table>
<thead>
<tr>
<th></th>
<th>t</th>
<th>df</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(.434)</td>
<td>46.691</td>
<td>(.667)</td>
</tr>
</tbody>
</table>

**Language Learning Strategies and Productive Vocabulary**

Table 11 illustrates the descriptive statistics for language learning strategies and productive vocabulary.

Table 11

*Descriptive statistics for language learning strategies and productive vocabulary*

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>SD</th>
<th>Min.</th>
<th>Max.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Language learning strategies</td>
<td>3.07</td>
<td>.523</td>
<td>1.60</td>
<td>4.06</td>
</tr>
<tr>
<td>Productive vocabulary</td>
<td>15.18</td>
<td>6.566</td>
<td>4</td>
<td>27</td>
</tr>
</tbody>
</table>

Kolmogorov-Smirnov test was implemented. As shown in Table 12, both language learning strategies and productive vocabulary met the normality assumption. Therefore, Spearman’s correlation coefficient was conducted because language learning strategies are measured on an ordinal scale.

Table 12

*Normality test for learning strategies and productive vocabulary*

<table>
<thead>
<tr>
<th>Variables</th>
<th>Kolmogorov-Smirnov</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>D</td>
</tr>
<tr>
<td>Language learning strategies</td>
<td>(.105)</td>
</tr>
<tr>
<td>Productive vocabulary</td>
<td>(.118)</td>
</tr>
</tbody>
</table>

Results show a statistically significant positive correlation between learning strategies and productive vocabulary, being \(.370\) the Spearman’s correlation coefficient (see Table 13). In this case, there is a moderate correlation between these variables, but it is a positive one.
Table 13

<table>
<thead>
<tr>
<th>Spearman’s correlation of learning strategies and productive vocabulary</th>
</tr>
</thead>
<tbody>
<tr>
<td>S</td>
</tr>
<tr>
<td>13914</td>
</tr>
</tbody>
</table>

**Discussion**

Concerning the first research question, our data showed that female EFL learners in the second year of Spanish non-compulsory Secondary Education used language learning strategies significantly more than males, being 0.50 the difference in mean values. Therefore, our first hypothesis was confirmed. This finding concords with previous research conducted (Aslan, 2009; García Herrero & Jiménez Vivas, 2015; Ghadessy, 1998; Goh & Foong, 1997; Khan et al., 2018; Lan & Oxford, 2003; López Aguado, 2011; Oflaz, 2019; Oxford & Ehrman, 1995; Oxford & Nyikos, 1989; Pawlak, 2013; Salahshour et al., 2013; Tamada, 1996; Yilmaz, 2010) (see Table 2). This does not mean that the difference between male and female learners in learning strategies depends on sex, but on other factors. These studies may agree with female learners using more learning strategies than males because they might be more willing to learn English by means of other techniques, such as watching television, reading or talking in English, rather than by traditional learning, which only concentrates on course books. Research proved that female learners have more positive attitudes and higher motivation towards the learning of foreign languages than their male peers (Burstall, 1975; Dörnyei, Csizér, & Németh, 2006; Griffiths, 2008). What this may imply is that men and women adopt different approaches when it comes to learning a language. On the other hand, this gender-related divergence might also be related to the cultural, social and educational context where the foreign language is acquired.

With reference to the learning strategies used by male and female EFL learners, social strategies are the most employed, whilst affective strategies are the least used (see Table 4). However, it is not consistent with the findings of previous studies. Pawlak’s (2013) investigation is the only one which reports that indirect strategies are the most and least employed, as in our study. In this case, metacognitive and affective strategies are the most and least used by male and female respondents. Two more studies coincide with affective strategies as being the least employed by both groups (Aslan, 2009; Yilmaz, 2010). Male and female learners perhaps use affective strategies with less frequency
because they are adolescents and they do not like talking about the feelings they have towards people or a language. Nevertheless, social strategies might be the most employed in our study because both males and females have many opportunities in their EFL class to talk with their classmates and teacher. There are speaking activities in their textbooks which encourage them to discuss issues related to daily life.

Regarding our second research question, results revealed that there were not statistically significant gender-based divergences in productive vocabulary, which refuted our second hypothesis. Our findings coincide with the studies conducted by Moreno Espinosa (2010), Canga Alonso and Arribas García (2014), and Fleckenstein (2018) (see Table 3). This result might derive from the students being in the same form are exposed to the learning of the same vocabulary throughout their EFL courses. Nevertheless, as in our study, results pointed out to a slightly higher productive vocabulary in females, except Fleckenstein’s (2018), which favored males. This result corroborates the findings of Agustín Llach and Terrazas Gallego (2012) and Jiménez Catalán and Terrazas Gallego’s (2005–2008) studies, which revealed non-significant gender-related differences in the receptive vocabulary of Spanish EFL learners from the 4th to the 9th grade, and in the 4th grade, respectively. The average of known words out of the 2,000 most frequent ones differed in the investigations on productive vocabulary. Canga Alonso and Arribas García’s research (2014) reported that female 10th graders’ average was 661 words, whereas their male respondents knew 636 words. In Fleckenstein’s (2018) study, female learners’ average was 711 words, while male 10th graders had a knowledge of 744 words. However, our findings revealed that 12th grade females knew 1,032 words, whilst males’ mean was 980 words. In the light of our data, it could be stated that there may be differences in learners even if the cultural context is similar. In our view, the better results found in the present study might be due to the difference of two school years among our informants. Twelfth grade students have been more exposed to the English language, which in turn have made them acquire more vocabulary.

In the third research question, Spearman’s correlation coefficient showed a statistically significant, positive and direct relation between language learning strategies and productive vocabulary, which confirmed our third hypothesis. Therefore, it can be inferred that language learning strategies and productive vocabulary are related. This means that the higher the use of learning strategies, the higher the score on productive vocabulary. However, the interpretation of this correlation ought to be taken with caution since it is significant but not strong. Our result does not coincide with any of the studies met so far. In contrast, other research (Gorevanova, 2000; Gu, 2010) found no correlation between vocabulary learning strategies and/or their effect on vocabulary size or productive vocabulary. However, these studies differ from ours since our research examined language learning strategies and productive vocabulary.
As for limitations, the sample of informants (51) was not very numerous and research was only conducted in one school, so results cannot be taken as representative of either the population of 12th grade students or the autonomous community of La Rioja. Another constraint was that the SILL questionnaire reported the learning strategies that students believed they employed when learning English, but they might not be the ones they actually use in the learning process. On the other hand, productive vocabulary was only measured with one instrument, so the type of task might have influenced the results.

With regards to practical implications, the present study reveals the existence of language learning strategies and productive vocabulary in the EFL classroom. It could be useful to train teachers in language learning strategies first so that they can become familiar with them. After this strategy training, teachers could instruct male and female foreign language learners in these strategies so that they know more techniques to deal with the learning of English. Then, teachers could plan their classes and activities according to the learning strategies of their students. More instruction in vocabulary would also be needed because, as our results showed, male and female learners’ productive vocabulary is around 1,000 words. However, the knowledge of the 2,000–3,000 most frequent words is required to communicate both orally and in written form in a foreign language (Nation & Waring, 1997). In doing so, their language learning could be improved, and learners could become more autonomous towards the foreign language.

Conclusions

This research has examined the language learning strategies and productive vocabulary of male and female EFL learners in the second year of Spanish non-compulsory secondary education in La Rioja (Spain). The data analyzed in the present study indicate three main results. First, female EFL learners use language learning strategies significantly more than their male peers. Second, there are no statistically significant gender-based differences in productive vocabulary. Third, language learning strategies are significantly related to productive vocabulary. It should be considered that these gender-related divergences are not due to their sex, but due to the physical, social, and cultural context that surrounds foreign language learners.

As an avenue for further research, longitudinal studies with male and female EFL learners could be helpful to determine whether their use of language learning strategies and their productive vocabulary growth increases from primary education to the second year of non-compulsory secondary education. Future
studies could also include observation and oral interviews to ascertain whether the learning strategies reported by the questionnaire match the strategies students actually use while learning English. As one of the reviewers suggested, further research could also measure free productive vocabulary, apart from controlled productive vocabulary, by means of speaking, writing, or both, to determine whether gender-related differences arise.

In the light of research conducted on both language learning strategies and productive vocabulary, they are two essential components in the learning of a second or foreign language because they enable learners to be in control of their own learning and be more proficient in that language. On account of this, more instruction in these two areas could enhance learners’ language learning.

Acknowledgements

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References


Zusammenfassung


Schlüsselwörter: geschlechtsspezifische Unterschiede, Spracherwerbsstrategien, produktiver Wortschatz, EFL-Lerner, zweites Jahr der spanischen fakultativen Sekundarstufe