PROFICIENCY, TASK-TYPE AND GENDER EFFECTS ON THE USE OF COMMUNICATION STRATEGIES: A REVIEW

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ABSTRACT

It is safe to say that learners are bound to encounter communication problems, based on a target language (TL) deficiency, during their second language (L2) learning process. In order to cope with these situations, students may resort to Communication Strategies (CSs). In recent years, there has been an increasing interest in CSs. Several definitions have been suggested, none of which has become universal. Moreover, two different lines of research on the use of CSs can be distinguished: interactional, and psycholinguistic. This has resulted in several taxonomies, out of which two have received the greatest attention: Tarone's (1983) taxonomy –which follows an interactional perspective–, and the Nijmegen project's (Poulisse et al, 1990) taxonomy –which takes a psycholinguistic approach–. Additionally, several factors have been suggested to influence CS use. This paper reviews research conducted on the effect of proficiency, task-type, and gender on EFL learners' strategic behavior.

Concerning proficiency, two lines of research can be distinguished according to the methodology used: production-based research and self-reported questionnaire-based research. Findings are mixed in terms of quantity and types. While some findings report a lower use of CSs by advanced students, others observed a similar use of strategies across different proficiency groups. As for types, while some evidence points to a higher use of avoidance and first language (L1)-based strategies in less proficient learners, other studies have shown that low proficient learners favor TL-based strategies. Furthermore, on occasions, L1-based strategies' reduction is compensated with TL-based strategies, although this seems not to always be the case.

Focusing on task-type, studies have mainly explored production-based data. Different investigations seem to point that task-type influence CS use, although results for types seem to be inconclusive. Different task-related features have been suggested to influence strategic behavior, for example time constraints or the role of the interlocutor.

Lastly, gender has also been looked into though participants' production and self-reported questionnaires. Three features have been highlighted as regards the relationship between gender and CSs: quantity, choice, and effectiveness. Regarding quantity, two perspectives have been taken into account: interlocutor's and students' gender. The former appears to affect CS use while the latter has not been reported to exert an

influence. In terms of types, findings seem to be mixed since some studies revealed the use of different categories across tasks while others did not. Lastly, some investigations have shown that female students use CSs more effectively.

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1. Introduction

When trying to communicate in the target language (TL), one may encounter some troubles based on the insufficient knowledge of the TL. To cope with these situations, mechanisms such as Communication Strategies (CSs) tend to be employed.

Selinker (1972) coined the concept of "communication strategies" when he distinguished five central processes in language acquisition, one of them being 'strategies of second-language communication'. Nevertheless, no specific description of these strategies was provided. Over the years, despite further research conducted on CSs (e.g. Bialystok, 1990; Færch & Kasper, 1983; Poulisse, Bongaerts, & Kellerman, 1990), no definition has gained universal acceptance, which has resulted in different ways of classifying them.

Research on CSs has mainly focused on the effect of proficiency on these strategies (e.g. Bialystok, 1990; Poulisse et al., 1990). Other factors have been considered, although to a lesser extent, such as gender (e.g. Kocoglu, 1997; Lai, 2010), task-type (e.g. Fernández Dobao, 2001; Poulisse et al., 1990) or the influence of the native language (e.g. Fernández Dobao, 2001; Si-Qing, 1990, as cited in Martínez-Adrián, Gallardo-del-Puerto, & Basterrechea, 2019). Findings regarding the effect of these factors, however, tend to be rather inconclusive because of the mixed results or the scarce research conducted. A slightly different line of research has looked into the impact of teaching CSs on students' performance (Dörney, 1995, as cited in Martínez-Adrián et al., 2019; Nakatani, 2005). Although overall, students who are taught CSs have been found to improve their utterances (Nakatani, 2005), further research would be convenient.

The purpose of this paper is to review recent research on the factors of procifiency, task-type and gender and how these features may influence the use of CSs in the case of English as a foreign language (EFL) learners. To this end, this paper is organized as follows. First, Section 2 will provide a definition of CSs from different perspectives. Next, Section 3 will deal with the different CS taxonomies proposed, focusing on two of the most prevalent taxonomies. Then, Section 4 will center on the factors that could affect strategic behavior. Due to space constraints, out of the wide array of aspects affecting strategy use, only those three factors that have received the greatest attention will be tackled. More specifically, Section 4.1 will be devoted to the

effect of proficiency, while sections 4.2 and 4.3 will focus on the impact of task-type and gender, respectively.. The last section (Section 5) concludes the paper by summarizing the main ideas and offering possible pedagogical implications.

2. Defining Communication Strategies (CS)

Since this paper will focus on CSs, the following lines will explain what this term entails. In the field of second language (L2) learning, a generally accepted definition of CSs is lacking. Nonetheless, researchers seem to agree that CSs are employed to deal with problems derived from the lack of knowledge in the TL (Dörnyei & Scott, 1997). Two features appear to characterize CSs: *problem-orientedness* (Færch & Kasper, 1983; Dörnyei & Scott, 1997) or *problematicity* (Bialystok, 1990), and *consciousness* (Færch & Kasper, 1983; Bialystok, 1990; Dörnyei & Scott, 1997).

To begin with, *problematicity* "is the idea that strategies are used only when a speaker perceives that there is a problem which may interrupt communication" (Bialystok, 1990, p.3). However, Dörnyei and Scott (1997) point out that this description "leaves undefined the exact *type of problem*" (p. 182) we are referring to. In their review article, Dörnyei and Scott (1997) distinguish three types of problems: own-performance problems, other-performance problems, and processing time pressure.

Firstly, *own-performance problems* refer to the mistakes learners make, and notice, and, therefore, try to correct or clear. Self-repair, self-rephrasing and self-editing are mechanisms closely linked to this type of problem. Secondly, *other-performance problems* are the ones detected on the interlocutor, and they are associated with negotiation strategies. Lastly, *processing time problems* refer to the fact that L2 learners often need more time to process the interlocutor's utterance as well as their own answer. These problems are often dealt with time-fillers, hesitation devices, and self-repetitions (Dörnyei & Scott, 1997).

Bialystok (1990) pointed out that problematicity is a dispensable feature of CSs since even native speakers rely on them despite encountering no (TL-based) problems during communication. For example, when native speakers provide a lengthy explanation to make sure that the hearer has understood the message. Nevertheless, it

could be argued that CSs have been adopted due to other-performance problems. This example, however, proves that CSs (at least some of them) are not only used by learners of a foreign language but also by native speakers.

Consciousness is the second criterion when defining CSs. Scholars have offered different points of views on how this feature is relevant to CSs and, bearing all those proposals in mind, Dörnyei and Scott (1997) concluded that there are three levels of consciousness related to CSs: consciousness as awareness of the problem, consciousness as intentionality and consciousness as awareness of the strategic language use. Moreover, they add a fourth one that is not necessarily a defining principle: consciousness as control which refers to the automatized strategies.

In short, up to the present date there has been little agreement on what exactly constitutes a CS. There seem to be two criteria (problematicity and consciousness) that frequently appear when trying to describe a CS. Nevertheless, these parameters' influence also seems to remain unspecific. The absence of a fixed definition has resulted in the existence of different taxonomies, which will be further explained in the following section.

2. CS taxonomies

Due to the lack of consensus, several taxonomy proposals have been suggested, each including a different set of communication devices. Furthermore, not all taxonomies conceive CSs the same way. There are two main views: interactional and psycholinguistic.

The interactional perspective conceives CSs "as tools used in a joint negotiation of meaning where both interlocutors are attempting to agree as to a communicative goal" (Tarone, 1980, as cited in Dörnyei & Scott, 1997, p. 178). On the other hand, the psycholinguistic approach perceives CSs as inherent mental procedures. Consequently, this point of view holds that CSs should be analyzed taking into account the hidden psychological processes (Dörnyei & Scott, 1997).

Dörnyei and Scott (1997) refer to at least nine taxonomies; however, due to space constraints, only two taxonomies will be explained, one representing each line of

though: Tarone's taxonomy (1997), which follows an interactional approach; and the Nijmegen group's taxonomy (Poulisse et al., 1990) that poses a psychological approach. These taxonomies have been selected because of their constant presence in the area of CS research.

2.1. Interactional approach: Tarone's taxonomy (1983)

Tarone (1983) identifies five main strategies (avoidance, paraphrase, conscious transfer, appeal for assistance, and mime), out of which three are further subdivided, as Table 1 shows.

Communication Strategies (CSs)
1. Avoidance
    i.   Topic avoidance
    ii. Message abandonment
2. Paraphrase
    i.   Approximation
            'pipe' for 'waterpipe' (from Tarone, 1983)
    ii. Word coinage
            'airball' for 'balloon' (from Tarone, 1983)
    iii. Circumlocution
            'a little wooden chair' for 'bench' (from Bialystok, 1990)
3. Conscious transfer
    i.   Language switch
            'balon' for 'ballon' (from Tarone, 1983)
    ii. Literal translation
            'He invites him to drink' for 'They toast one another' (from Tarone, 1983)
4. Appeals for assistance
        "how do you say *buho*?" (Arratibel-Irazusta and Martínez-Adrián, 2018)
5. Mime

Table 1. Tarone's (1983) taxonomy

Avoidance strategies consist of topic avoidance and message abandonment (Tarone, 1983). *Topic avoidance* is the total evasion of communication through topic changes or non-verbal responses. On the other hand, *message abandonment* occurs when the learner starts to utter a message but, due to linguistic difficulties, gives up (Tarone, Cohen, & Dumas, 1983).

Paraphrase strategies refer to the rewording of a message in a different way (Tarone et al., 1983). These are based on the TL and three strategies can be named: approximation, word coinage, and circumlocution. *Approximation* takes place when the unknown word the learner is trying to use is replaced by another one that shares enough

semantic features to communicate the message intended, for instance 'pipe' for 'waterpipe' (from Tarone, 1983). *Word coinage* is the making up of a new word to convey the wanted message, e.g. 'airball' for 'balloon' (from Tarone, 1983). Lastly, *circumlocution* is the description of the elements or properties of the unknown word, for example, 'a little wooden chair' for 'bench' (from Bialystok, 1990).

Conscious transfer strategies refer to utterances based on the speaker's first language (L1) which results in an odd word or structure of the TL (Tarone et al., 1983). We can find two strategies: language switch (or code-switch) and literal translation. *Language switch* is the transfer of a term of the native language into the target language, without translation. For instance Turkish 'balon' for 'ballon' (from Tarone, 1983). Similarly, *literal translation* consists of an utterance that has been translated word by word from the native language (NL). For example, 'He invites him to drink' for 'They toast one another' (from Tarone, 1983).

Appeals for assistance can be observed when the learner asks for the correct word or expression. For instance, "how do you say *buho*?" (Arratibel-Irazusta and Martínez-Adrián, 2018).

Finally, *mime* refers to "non-verbal strategies in place of a lexical item or action (e.g. clapping one's hands to illustrate applause)" (Tarone, 1983, p.62)

2.2. Psycholinguistic approach: Nijmegen project's taxonomy (Poulisse et al., 1990)

The Nijmegen project (Poulisse et al., 1990) distinguishes two main archistrategies: Conceptual and Linguistic. Similarly, in both groups we can find a subdivision into two, as can be observed in Table 2.

Archistrategies	Strategies	Encoding level	Examples, from Poulisse et al. (1990)
Conceptual	Analytic	Circumlocution, Description, Paraphrase	'erm, a device to uh to kill flies with' for 'flyswat'
	Holistic	Superordinates, Coordinates, Subordinates	'vegetables' for 'peas' or 'things like a hammer' for 'tools'
Linguistic	Morphological creativity		'representator' for 'representative'
	Transfer	Borrowings, Foreignizings, Literal translation	'I'd written uh, we say, *voorwoord* before the article' meaning 'preface' 'cuffer' from French 'coiffeur' 'my elders', meaning 'parents', from dutch 'ouders'

Table 2. The Nijmegen project's taxonomy (Poulisse et al., 1990)

Conceptual strategies tend to be employed to refer to an item through different concepts. They are subdivided into *Analytic* and *Holistic strategies* which are broken down into further categories. *Analytic strategies* allow the listener to infer the concept by listing to (some of) its properties. Within this definition-like utterances, strategies such as circumlocution, description or paraphrase can be found. For example, 'erm, a device to uh to kill flies with' meaning 'flyswat' (from Poulisse et al., 1990). *Holistic strategies*, on the other hand, are based on the substitution of the word for a related concept. They are further broken down into superordinates, coordinates and subordinates. For instance, 'vegetables' for 'peas' (from Poulisse et al., 1990).

In the case of *linguistic strategies*, the speaker compensates for a missing word by manipulating their linguistic knowledge. Two categories are found in this group of strategies: morphological creativity and transfer. *Morphological creativity* is the process of adding L2 morphemes to L2 words, resulting in an erroneous word form. For example, 'representator' instead of 'representative' (from Poulisse et al., 1990). *Transfer* is based on the speaker's L1 and includes three types of strategies: borrowings, foreignizings, and literal translation. In the case of *borrowings*, a L1 word is used without adapting the phonology or morphology, such as "'I'd written uh, we say, *voorwoord* before the article" meaning 'preface' (from Poulisse et al., 1990). Secondly, *foreignizings* stand for words of the L1 that are adapted phonologically or morphologically, such as 'cuffer' from French 'coiffeur' (from Poulisse et al., 1990). Lastly, *literal translation* (or calques) is defined as "the word by word translation of an

L1 (or Ln) word or phrase into the target language" (Poulisse et al., 1990, p. 112), such as 'my elders' for 'parents', from Dutch 'ouders' (Poulisse et al., 1990).

Even if these CSs have been widely explored in the literature, studies investigating communication strategies have also tackled other categories as will be observed in the review of empirical findings offered in the next section.

4. Factors

Several factors have been attested to influence the use of CSs such as proficiency level (e.g. Bialystok, 1983), the influence of the native language (eg. Si-Qing, 1990, as cited in Martínez-Adrián et al., 2019), task-type (e.g. Poulisse et al., 1990) or gender (Lai, 2010). This paper will review three of the factors that have received the gratest attention in the literature concerning EFL settings: proficiency (e.g. Lázaro Ibarrola & García Mayo, 2012), task-type (e.g. Fernández Dobao, 2001) and gender (e.g. Lai, 2010).

4.1. Proficiency

Much of the current literature on CSs pays particular attention to the proficiency factor. We may consider three early studies in this respect: Tarone (1977, as cited in Bialystok 1990), Bialystok (1983), and the Nijmegen project (Poulisse et al., 1990).

Tarone (1977, as cited in Bialystok 1990) conducted an informal examination with nine subjects. She noticed different CS selection patterns according to their estimated proficiency, although she acknowledges that personal traits may have influenced the results. In more elaborated research, Bialystok (1983) observed that students' TL proficiency influenced the nature of the CS selected since more proficient learners relied more on TL-based CSs while less proficient learners employed more L1-based CSs. Similarly, the Nijmegen project (Poulisse et al., 1990) attested how less proficient learners relied more on linguistic transfer strategies (L1-based strategies). Additionally, in the Nijmegen project (Poulisse et al., 1990) it was observed that an increase in proficiency resulted in a reduction of CS use. Furthermore, the Nijmegen project

observed that proficiency seemed to affect the type of strategy choice (i.e. analytic, holistic, transfer, or morphological creativity), but not the realization (i.e. the encoding level). Similarly, Bialystok (1983) concluded that "target language proficiency biases the learner to select deferentially between L1- and L2-based strategies, but does not predict the selection of specific strategies" (Bialystok, 1983, p. 110).

More recent investigation comprises two different lines based on the methodology employed: production-based research, and self-reported questionnaire-based[1] research. As a result, this part will be divided into two main sections: language production-based studies (Arratibel-Irazusta & Martínez-Adrián, 2018, 2019; Fernández Dobao, 2001; Lázaro Ibarrola & García Mayo, 2012; Martínez-Adrián, 2020a, 2020b; Pladevall-Ballester & Vraciu, 2017; Rosas Maldonado, 2016) and self-reported questionnaire-based investigations (Gallardo-del-Puerto, Basterrechea, & Martínez-Adrián, 2019; Ollo Jiménez & Martínez-Adrián, 2020). The selected papers will be presented as regards participants' age, from younger to older.

4.1.1. Production-based research

A large number of production-based studies can be found concerning CS use and proficiency. Some of the recent findings are included in this section. Studies conducted with primary-school learners will be presented in the first place (Martínez-Adrián, 2020a; Pladevall-Ballester & Vraciu, 2017). Subsequently, studies with secondary-school learners (Arratibel-Irazusta & Martínez-Adrián, 2018, 2019; Lázaro Ibarrola & García Mayo, 2012) and university learners will be tackled (Fernández Dobao, 2001; Rosas Maldonado, 2016).

To begin with, in the field of Primary Education, Martínez-Adrián (2020a) aimed to observe the use of the L1 in interactional strategies by Content and Language Integrated Learning (hence, CLIL) and NON-CLIL[2] learners. Two questions were addressed: whether CLIL and NON-CLIL students differed a) in their use of L1-based interactional strategies, and b) in their L1 or TL preference for interactional strategies. To this end, participants were asked to narrate a story, and their production was analyzed in terms of appeals for assistance, clarification requests, and metacomments.

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1   This line of research is justified on the grounds that what learners do does not necessarily agree with what they think they do since students may not be fully aware of their CS use.
2   Since this section deals with the influence of proficiency, it should be taken into account that CLIL students have been found to be more proficient than their NON-CLIL counterparts.

CLIL participants, who were more proficient than their NON-CLIL counterparts, used their L1 for interactional strategies significantly less than NON-CLIL groups. Nevertheless, the lower use of the L1 in CLIL learners did not result in higher use of the TL, which contrasts with previous findings (Bialystok, 1983). In addition, CLIL students were found to differ from NON-CLIL learners in their use of their L1 in the different strategies.

Similarly, Pladevall-Ballester and Vraciu (2017) explored L1 use in CLIL and NON-CLIL primary-school learners in terms of code-switching, transfer (borrowings and foreignizings), and interactional strategies (metacognitive, meta-talk, task-related strategies and private speech). Two groups of subjects (CLIL and NON-CLIL) were interviewed four times over a period of two years. Data were collected by means of a narration story. Results indicated an overall decrease in L1 use in both groups as learners became more proficient. In contrast to Martínez-Adrián (2020a), however, no differences between CLIL and NON-CLIL were detected in terms of the amount of L1 employed. Intragroup and intergroup comparisons were run in search of specific patterns of L1 use in transfer strategies (borrowings and foreignizings), code-switching, and interactional strategies. Regarding borrowings and code-switching, both groups revealed a decreasing tendency on the use of these categories as they improved their English knowledge. Furthermore, no significant differences were found between CLIL and NON-CLIL learners for these strategies. In terms of foreignizings, each group displayed a different evolution on the use of this strategy. On the one hand, CLIL students revealed a higher use of foreignizings as their proficiency increased. On the other hand, the NON-CLIL group first manifested a decrease in the use of this category whereas, at the last stage of the study, the decreasing tendency turned into an increasing one. In other words, the increasing tendency seemed to take longer to appear in the NON-CLIL, probably due to the type of instruction (Pladevall-Ballester & Vraciu, 2017). Additionally, when CLIL and NON-CLIL students were compared, significant differences arose between the two groups in the use of foreignizings during the middle stages of the study, which disappeared towards the study. Taking borrowings and foreignizings together, both groups favored transfer strategies over code-switching. Focusing on L1-based interactional strategies, the use of this category was low in both groups and NON-CLIL learners revealed a sharper drop than their CLIL counterparts.

Lastly, significant differences between CLIL and NON-CLIL learners only arose in one stage of the study, which differs from Martínez-Adrián (2020a). In short, an increase in proficiency revealed a decrease in L1 use; however, CLIL and NON-CLIL students seem to display different strategic behavior.

In another study, Martínez-Adrián (2020b) explored the use of the L1 (Basque and Spanish) and TL English in 90 Basque-Spanish bilingual CLIL learners in primary-education (5th and 6th grades) by means of story narration. Appeals for assistance, metacomments, clarification requests, discourse markers, and private speech were considered. Results revealed that overall older students relied on L1s more than their younger counterparts. As for the TL use, both groups made similar use of English, except for metacomments. Additionally, both groups showed a preference for L1s-based strategies over TL-based ones, except for metacomments. Metacomments, discourse markers, and appeals for assistance were the categories most commonly served by the L1s, while in the case of TL use, metacomments presented greater use than the rest of the categories

In the case of Secondary Education, Lázaro Ibarrola and García Mayo (2012) explored L1 use together with the morphosyntactic development in two different proficiency groups. 15 Spanish-Basque bilingual CLIL students from Secondary Education, in their 2nd and 4th grade, were examined. Both groups were asked to narrate a story, and their production was analyzed in search of a) L1 use in discourse markers (Spanish or Basque) and L1-based repair sequences[3], and b) the use of TL in English discourse markers, paraphrase, and TL-based repair sequences[4]. Results showed a low use of L1s. Moreover, there was a reduction of L1-based discourse markers and L1-based repair sentences in the older group, compared to the younger one. Nonetheless, as in Martínez-Adrián (2020a), there was no increase of TL-based CSs associated with the decrease of L1 use since there were almost no instances of English discourse markers, TL-based repair sequences, and paraphrase.

In the same vein, Arratibel-Irazusta and Martínez-Adrián (2018) studied the use of the L1 in 48 Basque-Spanish secondary-school CLIL students in their 2nd and 3rd year.

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3   Lázaro Ibarrola and García Mayo (2012) offer the following example: "appear and take him to to a *acantilado* [Spanish word: cliff]" (p. 146), which could be considered either a borrowing according to Poulisse et al. (1990) (see Section 2.2), or an implicit appeal for assistance.

4   Learners repeat or include the English word, translated by the interviewer, in their speech (Lázaro Ibarrola & García Mayo, 2012).

All participants were asked to narrate a story. Four L1-based CSs were taken into account: interactional strategies (explicit and implicit), transfer lapses (borrowings and foreignizings), code-switching, and discourse markers. The study aimed to see whether older and more proficient students would employ more CSs, and which CS category would generate the greatest influence of L1. Quantitative results showed that both groups used a similar amount of L1-based CSs, except for foreignizings, which contradicts previous findings that reported a reduction of L1 influence in more proficient learners (e.g. Bialystok 1990; Poulisse et al., 1990). This discrepancy, Arratibel-Irazusta and Martínez-Adrián (2018) argue, could be attributed to a lack of a sufficient proficiency gap between the two groups. If we turn to the types of CSs employed, significant differences arose in the categories of interactional and transfer strategies. The examination of interactional strategies revealed younger learners' preference for implicit strategies over explicit strategies. In contrast, their older peers yielded no statistically significant differences between those two categories. Regarding transfer lapses, older learners favored borrowings over foreignizings, whilst younger students employed these strategies similarly. These findings do not support Pladevall-Ballester and Vraciu (2017), who reported a decreasing tendency for borrowings as learners became more proficient. Lastly, both groups used L1 with a greater frequency in discourse markers than in some other categories which align with other investigations (such as Lázaro Ibarrola & García Mayo, 2012).

In a subsequent study, with the same sample, Arratibel-Irazusta and Martínez-Adrián (2019) explored the use of L1-based (appeals for assistance and transfer) together with TL-based strategies (analytic and holistic). This paper addressed whether differences in proficiency influenced the frequency and distribution of CSs. As in Arratibel-Irazusta and Martínez-Adrián (2018), no significant differences were found in the use of CSs between the two groups. As regards the most predominant strategies, holistic strategies (TL-based) were the most employed in both groups which was explained to be an effect of the CLIL context in which they were immersed. When correlations were run between L1-based and TL-based strategies, no significant correlations emerged, which seems to indicate that L1-based strategies still coexist with TL-based strategies at this point of development.

Other studies have examined secondary-school students together with university learners. Fernández Dobao's (2001) investigation aimed to test whether less proficient learners resort more to CSs than more advanced students when performing the same tasks; and whether the choice of CSs would be different depending on participants' language level. To this end, 15 Spanish/Galician students were divided into three groups: elementary level (secondary-school students), intermediate level (1ˢᵗ year English Philology students), and advanced level (4ᵗʰ year English Philology students). Learners were asked to perform three different oral tasks (story narration, description, and conversation), which were codified in terms of avoidance strategies and achievement strategies. The latter was further subdivided into paraphrase (TL-based) and transfer (L1-based). The quantitative results revealed that the number of CSs used by the elementary level group was significantly higher compared to the other two groups, which aligns with Poulisse et al.'s results (1990). However, contrary to Fernández Dobao's expectations, advanced students resorted to CSs more than intermediate participants. The author suggests that this discrepancy could be attributed to a) an insufficient level contrast between intermediate level and the advanced level participants, or/and b) the higher communicative goals of the advanced learners. With reference to the types of strategies used, elementary learners relied on avoidance strategies significantly more than their more advanced counterparts. In addition, when analyzing achievement strategies, the youngest group was found to employ transfer (L1-based) more than the older groups. Lastly, no significant differences were found in the CS choice between intermediate and advanced level learners.

Lastly, a number of researchers have focused on university learners. For instance, Rosas Maldonado (2016) investigated the relationship between CS use and learners' proficiency level. To do so, 9 students from a Chilean university took part in the study. Three different groups were formed according to their English level: beginner, pre-intermediate, and intermediate. All participants were asked to hold a conversation with a native speaker of English, with little knowledge of Spanish. As for the CSs, Dörnyei and Körmos' Framework was used (Dörnyei and Körmos, 1998, as cited in Rosas Maldonado, 2016). Results revealed that while beginners resorted to CSs more than their more proficient counterparts, the intermediate group relied more on strategies than the pre-intermediate learners, as it was attested in Fernández Dobao (2001). Moreover,

each group presented a preference for different strategies. The beginner group, as in Fernández Dobao (2001), relied on avoidance and L1-based strategies the most.

After examining the effect of proficiency in the use of CSs, results for production-based research seem to be mixed. Concerning quantitative results, while some researchers found that an increase of proficiency conveys a CS decrease (Fernández Dobao, 2001; Poulisse et al., 1990; Rosas Maldonado, 2016), others have not (Arratibel-Irazusta & Martínez-Adrián, 2018, 2019). These differences in results have been suggested to be due to an insufficient proficiency gap between the groups (Arratibel-Irazusta & Martínez-Adrián, 2018, 2019) or the cognitively more demanding utterances of more proficient learners (Fernández Dobao, 2001).

Turning now to the types of CSs employed, numerous studies display a tendency by which more proficient learners rely less on L1-based strategies (e.g. Lázaro Ibarrola & García Mayo, 2012; Pladevall-Ballester & Vraciu, 2017), which differs from other investigations that recorded a similar use of L1-based CSs across the different proficiency level groups (such us Arratibel-Irazusta and Martínez-Adrián, 2018, 2019) or a higher use of L1 in more proficient learners (Martínez-Adrián, 2020b). This contrast, again, could be due to the lack of a sufficient proficiency difference between the groups. Additionally, while some findings reveal that the lesser use of L1-based strategies is compensated by the use of TL-based CSs (Bialystok, 1983), some other have not found that the reduction of L1-based strategies brought an increase in TL-based strategies (Lázaro Ibarrola & García Mayo, 2012; Martínez-Adrián, 2020a). Furthermore, some studies suggest that avoidance and L1-based strategies are more frequently used by low proficiency learners Fernández Dobao, 2001; Rosas Maldonado, 2016), which contrasts with some other investigations that reported beginner students' preference for TL-based strategies (Arratibel-Irazusta & Martínez-Adrián, 2019).

As for specific L1-based strategies, the results for borrowings also appear to be rather mixed since some studies account for a higher use of these strategies by more proficient learners (Arratibel-Irazusta & Martínez-Adrián, 2018), whereas others report a decrease in the use of borrowings as students' proficiency increases (Pladevall-Ballester & Vraciu, 2017).

This section has shown that findings regarding the effect of proficiency on CSs are rather mixed in terms of quantity and types. The following section is devoted to

research conducted by means of self-reported questionnaires which has looked into the impact of proficiency on strategy use.

4.1.2. Self-reported questionnaire-based research

Less research has been conducted through self-reported questionnaires as regards proficiency and CS use. In the following lines, research in primary-education (Gallardo-del-Puerto et al., 2019) and secondary-education (Ollo Jiménez & Martínez-Adrián, 2019) will be tackled.

Gallardo-del-Puerto, Basterrechea and Martínez-Adrián (2019) surveyed 139 CLIL students of Primary Education (5th and 6th grade) that were divided into three proficiency groups: lower-beginner, beginner, and upper-beginner. The purpose of this study was to examine whether more proficient learners reported a lesser use of CSs and whether students revealed using a different type of CSs across different proficiency levels. Data were gathered through a five-point Likert scale questionnaire adapted from Purdie and Oliver (1999) that included questions about 11 different CSs (guessing, miming, morphological creativity, dictionary, predicting, paraphrase, borrowing, calque, foreignizings, avoidance and appeals for assistance). No differences were found as regards the total number of CSs between the groups, which supports other production-based findings (e.g. Arratibel-Irazusta & Martínez-Adrián, 2018). In terms of types, mime, avoidance and foreignizings yielded statistical differences. Mime and avoidance were more frequently used by the lower-beginner group, which match the findings observed in earlier studies (e.g. Fernández Dobao, 2001; Rosas Maldonado, 2016). Additionally, the most proficient group reported a lower use of foreignizings when compared to the other two groups, which aligns with the results obtained in Arratibel-Irazusta and Martínez-Adrián (2018). As for similarities in strategy choice, all the groups reported to rely on appeals for assistance and paraphrase the most, and morphological creativity the least, which supports the Nijmegen group's findings (Poulisse et al., 1990).

On the other hand, Ollo Jiménez and Martínez-Adrián (2020) examined whether less and more proficient learners differ in their L1-based CSs reported use. 78 Basque-Spanish bilingual CLIL and NON-CLIL students from 2nd and 4th year of Secondary Education participated in this survey. Participants were assigned to four groups

according to their grade and program-type. The same questionnaire adapted from Purdie and Oliver (1999) employed in Gallardo-del-Puerto et al. (2019) was used for the data collection. Nevertheless, the analysis of the current research focused on three strategies (borrowings, foreignizings and calques) out of the 11 included in the survey. Concerning quantity, more advanced students indicated a lesser use of L1-based CSs than less advanced learners. In terms of types, results show that less proficient learners reported a greater preference for borrowings than more proficient learners, which supports Pladevall-Ballester and Vraciu (2017). As for foreignizings, more proficient learners showed a lesser use of this category than their less proficient peers. In terms of calques, no significant differences were found between the groups. Lastly, intragroup analyses reveal that the two intermediate level groups reported favoring borrowings over other L1-based strategies. Furthermore, foreignizings and calques displayed similar reported use across the different proficiency groups.

In view of all that has been mentioned so far, findings for the effect of proficiency and reported CS use seem to be mixed in terms of quantity. Although Gallardo-del-Puerto et. al. (2019) observed no variation in the overall amount of reported CS use across proficiency levels, Ollo Jiménez and Martínez-Adrián (2020) did. However, this may be due to different proficiency gaps in the different samples or the different CSs considered. With regard to types, results seem to agree that students reported lower use of foreignizings as proficiency increased (Gallardo-del-Puerto et al., 2019; Ollo Jiménez & Martínez-Adrián, 2020). Additionally, self-reported questionnaire-based research (Gallardo-del-Puerto et al., 2019) seem to support production-based studies (Fernández Dobao, 2001; Rosas Maldonado, 2016) that suggest that low proficiency learners rely on avoidance more than more advanced students.

All in all, findings in relation to the influence of proficiency are contradictory, both in production-based and in self-reported questionnaire-based research. Moreover, when effects are attested, two features could vary: CS quantity and types. Furthermore, the latter may be analyzed in terms of the nature of the strategies employed or the favoring of some particular strategies over others. However, proficiency is not the only factor that affects students' strategy use. The following section offers an overview of research that has looked into the effect of task-type.

In contrast to proficiency, task-type has received less attention in the literature. The investigations concerning the relationship between task features and CSs, to my knowledge, have all been conducted through a production-based analysis (Fernández Dobao. 2001; Ghout-Khenoune, 2012; Kaivanpanah, Yamouty, & Karami, 2012; Poulisse et al., 1990). Additionally, the vast majority of participants are young-adults.

One of the early studies to pay attention to task-type was the Nijmegen project (Poulisse et al., 1990). Three groups of 15 L1 Dutch learners of L2 English participated in this study. They were asked to perform three different activities: a picture description task (considered a controlled activity[5]), an oral interview (i.e. a natural task[6]) and a story retell task (in between a controlled and a natural task). Poulisse et al.'s (1990) taxonomy was used for the analysis (see section 3). Results revealed that task effect was highly influential on students' CS choice. Picture description was found to trigger the use of analytic strategies, whereas in the two other tasks they employed a high amount of transfer and holistic strategies. Poulisse et al. (1990) suggest that factors such as task demands, task complexity, the cooperative principle and the economy principle, or time constraints influenced students' performance.

In more recent research, Fernández Dobao (2001) also investigated the relation between CSs and task features, among other factors. To this end, 15 participants of Secondary Education and Tertiary Education took part. Data were gathered through three different oral tasks: picture story narration, photograph description, and free conversation. As for CSs, they were divided into avoidance strategies and achievement strategies. The latter were further subdivided into paraphrase strategies (TL-based) and transfer strategies (L1-based). Results yielded significant differences across tasks regarding the choice of CSs. Findings revealed that students employed achievement strategies more often in free conversation and picture description than in story narration. As for the breakdown of achievement strategies, participants relied on their L1 quite more in conversation, compared to the other two tasks. These differences were explained in terms of the interlocutor's role in the different tasks (Fernández Dobao, 2001).

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5   "Tasks in which disturbing factors are controlled as much as possible" (Poulisse et al., 1990, p. 81)
6   "Natural tasks should, ideally, be indistinguishable from natural speech situations" (Poulisse et al., 1990, p. 81)

Similarly, Kaivanpanah, Yamouty and Karami (2012) examined the effect of task-type (as well as proficiency and gender) on the use of CSs. 227 learners of English in Terahran, whose ages ranged from 12 to 37, took part in the whole study, 27 of whom participated in the activities related to task features. They were asked to perform three activities: picture description, reading a joke, and telling a story. Four strategies were analyzed: appeals for help, circumlocution, time stalling devices, and message abandonment. The aim was to see whether task-type influenced the use of CSs. Results revealed that telling a joke triggered the use of appeals for help, probably due to learners' eagerness to understand the joke (Kaivanpanah et al., 2012). Moreover, picture description was found to favor the use of circumlocution, which supports the Nijmegen project's findings.

Lastly, in Ghout-Khenoune (2012) 16 Arabic-French bilingual university students were asked to perform two different activities: free discussion and picture description. 10 different CSs were considered from Tarone's and Færch and Kasper's (1983) taxonomies for the analysis. Results showed that more CSs were employed in free discussion than in picture description. Ghout-Khenoune (2012) argues that this could be due to the nature of the task as well as the learning pattern used in each task. Free discussion is less contextualized and cognitively more demanding than picture description. As for the learning pattern, a free discussion was carried out in groups and they had to interact and negotiate meaning while picture description was carried out in pairs and very little interaction and negotiation occurred. As for the strategy choice, in contrast to earlier findings (such as Poulisse et al., 1990), participants relied on almost the same strategies in both tasks, which were mainly TL-based.

The review of these studies seems to indicate that the relationship between CS and task-type is, to some extent, linked. Some findings point out that different tasks influence the amount of strategy use, probably due to the different task and cognitive demands (Ghout-Khenoune, 2012). As for strategy types, findings appear to be mixed. While some studies did not find any significant variations as regards CS choice across tasks (Ghout-Khenoune, 2012), others observed that the strategy choice was heavily influenced by the features of the task (Fernández Dobao, 2001; Kaivanpanah et al., 2012; Poulisse et al., 1990), which supports some other findings from studies that have explored other TLs different from English (e.g. Rosas Maldonado, 2018). Several

features have been suggested to influence strategy choice, including time constraints (Poulisse et al., 1990), the interlocutor's role (Fernández Dobao, 2001), the cooperative principle and the economy principle (Poulisse et al., 1990).

In short, task-type appears to have an impact on learners' CS. Lastly, the following section will be devoted to influence of gender on CS use.

4.3. Gender

Similar to task-type (Section 2.2), scarce research has been conducted in this respect. However, as with the factor 'proficiency' (Section 2.1), two lines of investigation can be distinguished: production-based and self-reported questionnaire-based research. Therefore, the in this section production-based research (Kocoglu, 1997; Lai, 2010) will be presented in the first place and, subsequently, investigations based on self-reported questionnaires (Basterrechea, Martínez-Adrián, & Gallardo-del-Puerto, 2017; Kaivanpanah, et al., 2012).

4.3.1. Production-based research

As previously mentioned, scarce research has been conducted as regards CSs and gender relationship. To my knowledge, only three production-based studies have been conducted in relation to gender and CSs; however, only two have been included (Kocoglu, 1997; Lai, 2010) due to access constraints.

On the one hand, Kocoglu (1997) aimed to observe female and male learners' strategic behavior when interacting with female and male native speakers. In order to examine this, 10 Turkish EFL learners were paired with native speakers and asked to hold a conversation. Significant differences were found regarding the gender of the interlocutor. All the participants employed more strategies when talking with a female interlocutor than when talking with a male interlocutor, "because the former were more cooperative and more encouraging in conversations than the latter" (Kocoglu, 1997, p. 6).

On the other hand, Lai (2010) explored the effect of gender in the case of senior English majors from a Chinese college. 36 participants (18 males and 18 females) were asked to perform a concept-identification task, that is, learners were asked to describe

four concepts (two concrete and two abstract) in front of a native speaker. The goal was for the native speakers to guess the word. For the examination, the CSs included in Faerch and Kasper (1983), Paribakht (1985, as cited in Lai, 2010) and Yule and Tarone (1997, as cited in Lai, 2010) were considered. Three parameters were analyzed regarding CSs: frequency, types, and effectiveness. The analysis of the data did not yield any significant differences in frequency or type. These results differ from Hou Songsang (1998, as cited in Lai, 2010) findings, which indicated female students' higher use of appeals for assistance than male learners in interactional tasks. Lai (2010) suggests that this could be due to the fact that both female and male participants in this study learned English in the same environment. Nonetheless, females were found to use CSs more effectively than their male counterparts. This could be explained by women's better performance in language-related activities (Wen Qiufang & Johnson, 1997).

After reviewing the aforementioned studies, the key aspects of the influence of gender on CSs can be listed as follows: quantity of strategies used, types, and efficiency. Concerning quantity, findings focus on the interlocutor's gender and on the gender of the learner. On the one hand, the interlocutor's gender seems to predict the use of CSs (Kocoglu, 1997), as a female interlocutor appears to prompt communication, and, consequently, the CS use. Nonetheless, this should be taken with caution taking into account the existing limited research. On the other hand, learners' gender appears not to affect strategic behavior since both female and male students seem to use the same amount of strategies (Lai, 2010). Nevertheless, the possible bias in this statistical analysis needs to be taken into account since Lai (2010) seems not to consider the variable 'interlocutor's gender'. Regarding the type of strategies used, in contrast to earlier findings (Hou Songsang, 1998, as cited in Lai, 2010), no evidence of different use of CSs was detected. Laslty, Lai (2010) found female students' CSs use to be more effective than the use of male learners. However, more research would be suggested in order to make more accurate conclusions.

As previously mentioned, the effect of gender has not only been examined through production-based research but also through self-reported questionnaire-based studies. In the section that follows, a brief review of self-reported questionnaire-based findings will be offered.

4.3.2. Self-reported questionnaire-based research

Having reviewed production-based studies on the effect of gender on CSs, this section will now focus on the investigations conducted trough self-reported questionnaires. To my knowledge, three surveys have been conducted; however, due to access constraints, only two (Basterrechea et al., 2017, Kaivanpanah et al., 2012) will be included.

Firstly, Kaivanpanah et al. (2012) surveyed 227 (89 males and 138 females) learners of English in Tehran (Iran). Data were gathered through self-reported questionnaires in which 35 strategies were considered. The gender factor appeared to be significant just as regards to six CSs: circumlocution, asking for clarification, omission, comprehension check, use of fillers, and over-explicitness. All these strategies were social in nature which may be related to the fact that "females generally display greater social orientation than males" (Oxford and Nykos. 1988, 322, as cited in Kaivanpanah et al., 2012).

On another survey, Basterrechea, Martínez-Adrián and Gallardo-del-Puerto (2017) aimed to observe the impact of gender on CSs use in a CLIL context. For this purpose, 142 (58 female and 84 male) CLIL primary-school students (5th and 6th grade) took part in this study. Moreover, the survey used was the same employed in Gallardo-del-Puerto et al. (2019), which was adapted from Purdie and Oliver (1999). The effect of gender was analyzed in terms of the quantity and type of CSs. Results showed that, overall, females and males reported using a similar amount of CSs, which supports other production-based findings (Lai, 2010). In addition, participants, regardless of their gender, were found to report a preference for appeals for assistance, paraphrasing and dictionary the most, and morphological creativity the least. Despite these similarities, borrowings and avoidance were more frequently employed by females than men; while predicting and guessing were more used by males than females. This suggests that "males are risky and daring; and less concerned with conveying meaning" whereas females "show a strong preference for efficiency in using the TL" (Basterrechea et al., 2017, p. 63). This supports the findings from Lai (2010) that found female learners' use of strategies more efficient.

Together these studies provide some insights into the relationship between gender and the reported use of CSs. Two main aspects can be pointed out in this relationship:

quantity and types of strategies that were reported to be employed. In the matter of quantity, female and male students reported employing the same amount of CSs (Basterrechea et al., 2017), which agrees with the observation of production-based research (Lai, 2010). With reference to the types of CSs, females and males reported using differently some of the categories analyzed (Basterrechea et al., 2017; Kaivanpanah et al., 2012; Wang Limei, 2008, as cited in Lai, 201-0), which differs from some production-based researches (Lai, 2010) but supports others (Hou Songsang, 1998, as cited in Lai, 2010). Most of the differences between female and male strategic behavior have been suggested to be due to an underlying socio-cultural component, which matches with some observations made in earlier studies dealing with language learning strategies (e.g. Ehrman & Oxford, 1989).

5. Conclusion

Encountering language-related problems derived from insufficient TL knowledge while communicating in the TL is rather frequent among learners. In order to cope with these troubles, resources as the use of CSs tend to be employed. However, what exactly constitutes a CS and how to classify them is not universally established.

The term CS has come to be used to refer to strategies that are employed when L2 learners face linguistic problems derived from the lack of knowledge in the TL; however, when a more specific description is considered, discrepancies seem to arise. Two features have been considered to characterize a CS: problematicity and consciousness. Nevertheless, there seem to be different ways of conceptualizing these parameters. The lack of a single definition of CSs has resulted in several perspectives when classifying them, among which two are the most recurrent in CS literature: an interactional approach, which is linguistically based; and a psycholinguistic approach which is process-oriented. On the former line, Tarone's taxonomy (1983) has been the one receiving the greatest attention; while The Nijmegen project's taxonomy (Poulisse et al., 1990) has been the most referred to in the case of the psycholinguistic approach.

Out of several factors that may influence CS use, this paper has reviewed three of them: proficiency, task-type and gender. The review of the effect of proficiency on the

CS use has shown that two lines of research can be highlighted according to their methodology: production-based (e.g. Martínez-Adrián, 2020a; Rosas Maldonado, 2016) and self-reported questionnaire-based research (Gallardo-del-Puerto et al., 2019; Ollo Jiménez & Martínez-Adrián, 2020). Overall, the results seem to be rather mixed in terms of quantity and types. While some studies have attested a decrease in CS use as learners become more proficient (e.g. Fernández Dobao, 2001; Poulisse et al., 1990), others report a similar use across the different proficiency groups (e.g. Arratibel-Irazusta & Martínez-Adrián, 2019). Concerning CS types, despite the fact that some findings display more proficient learners' lower use of L1-based strategies (e.g. Lázaro Ibarrola & García Mayo, 2012; Pladevall-Ballester & Vraciu, 2017), others attested no difference between the different proficiency groups (e.g. Arratibel-Irazusta & Martínez-Adrián, 2018) or observed a more frequent use of L1 in more proficient learners (Martínez-Adrián, 2020b). Furthermore, some investigations have noticed a reduction of L1-based CSs to be compensated with TL-based ones (Bialystok, 1983), whereas others have not observed an increase of such strategies (Lázaro Ibarrola & García Mayo, 2012; Martínez-Adrián, 2020a). Additionally, some findings show low proficient learners' preference towards avoidance and L1-based strategies (Fernández Dobao, 2001; Rosas Maldonado, 2016), which differs from other results that reported these students to rely more on TL-based strategies (Arratibel-Irazusta & Martínez-Adrián, 2019).

As for findings related to the influence of task-type on CS use, both overall CS quantity (Ghout-Khenoune; 2012) or category choice (e.g. Fernández Dobao, 2001; Poulisse et al., 1990) have been observed to be affected. However, strategy choice do not always appear to vary across tasks (Ghout-Khenoune; 2012). Some suggested factors that might affect strategic behavior include task and cognitive demands (e.g. Ghout-Khenoune, 2012), time constraints (e.g. Poulisse et al., 1990), the interlocutor's role (e.g. Fernández Dobao, 2001), and the cooperative principle and the economy principle (Poulisse et al., 1990).

The last factor reviewed in this paper is gender. As in proficiency, gender has two main lines of research in relation to data gathering: production-based (Kocoglu, 1997; Lai, 2010) and self-reported questionnaire-based research (Basterrechea et al., 2017; Kaivanpanah et al., 2012). Three aspects can be noted regarding the relationship between gender and CSs: quantity, choice, and effectiveness. In terms of quantity, two

points of view can be noted: interlocutor's gender and learner's gender. Focusing on the former, findings reveal that female interlocutors seem to prompt communication and, therefore, greater CS use. Concerning the learner's gender, females and males appear to use the same number of CSs (Basterrechea et al., 2017; Lai, 2010). Regarding strategy types, results seem to be mixed. Some findings show a different category choice between female and male learners (e.g. Basterrechea et al., 2017; Hou Songsang, 1998, as cited in Lai, 2010; Kaivanpanah et al., 2012), while other studies did not find any differences in terms of types of strategies employed (Lai, 2010). Lastly, women were found to use CSs more efficiently in some investigations (e.g. Lai, 2010). Some of these differences have been suggested to be due to socio-cultural characteristics.

As it can be noticed in this review, scarce research has been conducted on the effect of task and gender on CS use when compared to the influence of proficiency. For this reason, future research is suggested in those areas. Self-reported questionnaire-based studies together with research with children are, to my knowledge, lacking in the area of task-type. Concerning 'gender', the effect of learners' gender while taking into account the interlocutor's is particularly needed in order to have a more precise picture. Moreover, despite the overall agreement between self-reported questionnaire based and production-based findings, it would be interesting to test the same sample through both methodologies in order to see how aware students really are of their CS use.

In terms of pedagogical implications, little research has been conducted on CS teachability (Dörney, 1995, as cited in Martínez-Adrián et al., 2019; Nakatani, 2005). Despite further research being needed, CS instruction seems to have an overall positive effect (Nakatani, 2005). It is safe to say that students are bound to encounter communication problems during their TL learning since communicating is rather unavoidable in order to improve their language skills and, due to the language deficit, learners will probably struggle sometimes when trying to convey a message. Often, students may feel self-conscious when having a conversation, for example, because of their low proficiency. For this reason, teaching them about CS use could boost their confidence and motivation, and reduce students' anxiety, which has been argued to improve students' performance (e.g. Kebłowska, 2012). In addition, raising learners' awareness of these strategies could help them communicate more efficiently. In other words, using TL-based strategies and being aware of which strategy might be more

suitable according to the context and its characteristics (e.g. time constraints) could have an impact on more efficient communication. Even though these strategies may not improve learners' language *per se*, CSs can prompt better use of the language they already know to cope with communication problems.

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