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¿Los juntamos? A study of L1 use in interactional strategies in CLIL vs. NON-CLIL primary school learners

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Abstract: Research on the use of the first language (L1) in interactional strategies by young Content and Language Integrated Learning (CLIL) is still in its infancy. Here we compare CLIL and NON-CLIL primary school children in terms of L1 use in interactional strategies. The oral production of 44 age- and proficiency-matched dyads (21 CLIL, 22 NON-CLIL) is analyzed in terms of use of the L1 in appeals, clarification requests and metacomments. The results indicate that NON-CLIL learners produce more instances of L1 use in interactional strategies and that greater differences emerge as grade increases. This is consistent with previous research in CLIL contexts as well as investigations that have compared CLIL and NON-CLIL contexts. A qualitative inspection of the results has also revealed that there are differences between groups in their preference for either the L1 or the target language (TL) in the case of appeals and clarification requests. However, metacomments are always produced in the L1 in both groups, which appears to support previous classroom observation data.

Keywords: L1 use, CLIL, appeals for assistance, clarification requests, metacomments

1 Introduction

The role of the first language (L1) in second language learning (L2) has been studied both as a source of crosslinguistic influence (Gass and Selinker 1992) and, from a sociocultural perspective as an important tool which fulfils a series of social, cognitive and linguistic functions which scaffold L2 production both in collaborative and non-collaborative tasks (Alegria De La Colina and García Mayo 2009; Antón and Camilla 1998; Brooks and Donato 1994; Pladevall and Vraciu 2017; Storch and Wigglesworth 2003; Swain and Lapkin 2000). This last line of research has reported the benefits of using the L1 for supporting and enhancing

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L2 development, particularly, in the case of low-proficient learners (Alegría De La Colina and García Mayo 2009; Swain and Lapkin 2000). These positive results have substantiated the use of translanguaging as an educational practice in immersion and other bilingual classrooms against the strict separation of instructional languages (see García 2009; Swain and Lapkin 2013).

The present investigation is framed within the backdrop of sociocultural studies as it analyzes the use of the L1 in interactional strategies in Content and Language Integrated Learning (CLIL) and NON-CLIL learners. Cenoz (2003: 3) defines interactional strategies as “intentional switches into languages other than the target language (TL). The multilingual speaker makes the decision to use a language other than the TL when s/he is asking for help from her/his interlocutor or making comments about her/his own production”. An example of interactional strategy from Basque is illustrated in (1):

- (1) CHILD: *eh nola da oreina?*
 Eh how is deer
 ‘How do you say deer?’
 (Cenoz 2003: 5)

Several studies have investigated the use of the L1 in interactional strategies in English as a foreign language (EFL) learners (Cenoz 2003; Gost and Celaya 2005; Muñoz 2007; Poullisse and Bongaerts 1994; Viladot and Celaya 2007). These studies have mainly tackled the effect of factors such as proficiency, onset age and task-type on the use the L1. Less proficient learners have been found to make a greater use of the L1 due to their limited command of the TL, while a younger onset age is associated with a lower use of the L1. Amount of L1 use has also been reported to vary across different tasks. More recent studies have examined CLIL learners in this respect when narrating a story in a L2 (Lázaro Ibarrola and García Mayo 2012; Serra 2007) and have compared them to NON-CLIL learners (see García Mayo and Lázaro Ibarrola 2015, Martínez-Adrián and Gutiérrez-Mangado 2015a). These investigations have shown a lower use of the L1 in the case of CLIL learners, a finding which could be explained by their greater proficiency and the focus on meaning promoted in these instructional contexts (Agustín Llach 2009; Martínez-Adrián and Gutiérrez-Mangado 2015a). In other words, the exposure to more intense and meaningful input provided in CLIL lessons leads to a greater command of the TL and in turn to a decrease in the use of the L1. However, more studies are needed comparing the oral production of CLIL and NON-CLIL learners not only in terms of amount of use of the L1 but also in terms of different functions and patterns of L1 use (see Jarvis 2015 for an overview of questions that need to be addressed in CLIL contexts). In

addition, the use of interactional strategies by primary school CLIL and NON-CLIL learners has been scarcely looked into (García Mayo and Lázaro Ibarrola 2015; Pladevall and Vraciu 2017). This paper will try to address these gaps by comparing CLIL and NON-CLIL primary school children learning English as a foreign language in terms of amount and use of the L1 in interactional strategies (appeals for assistance, clarification requests and metacomments), a type of comparison that has not been done before.

The paper is organized as follows. Section 2 deals with empirical findings on L1 use in interactional strategies and transfer lapses in NON-CLIL and CLIL contexts. Research questions are addressed in Section 3, while the methodology is described next in Section 4. Then, the results are presented and discussed in Section 5. The paper ends with the main conclusions of the study.

2 L1 use in NON-CLIL and CLIL contexts

2.1 L1 use in NON-CLIL contexts

Several studies have investigated the use of the L1 during oral interaction in EFL learners (i. e. Cenoz 2003; Gost and Celaya 2005; Muñoz 2007; Poullisse and Bongaerts 1994; Viladot and Celaya 2007).

Some EFL studies have focused on both the use of interactional strategies and transfer lapses (Cenoz 2003; Muñoz 2007). Cenoz (2003) examined the influence of two previously known languages (Basque and Spanish) on the acquisition of English as a third language (L3) by primary school children at two testing times. She analyzed the supplier languages used in the case of interactional strategies and transfer lapses in an oral narration task. Basque was used as supplier language in interactional strategies. The use of Basque in this case was influenced by its use as the school language, the interlocutor's knowledge of this language or the relative informal context in which the conversation took place. In contrast, Spanish was favoured in the case of transfer lapses (as in Cenoz 2001). Factors such as linguistic typology, general socio-linguistic context (Spanish as the majority language) or individual differences were of greater importance in this case.

Likewise, Muñoz (2007) investigated lexical transfer (borrowings and foreignisms) and code-switching in the oral production of English by Catalan-Spanish bilingual learners who had learned French as the first foreign language at school. The results of the study revealed that Spanish and Catalan were the only supplier languages for transfer. Borrowings came mostly from Catalan and

Spanish. Catalan-dominant learners transferred from Catalan, Spanish-dominant from Spanish and family bilinguals from both languages. On the contrary, Catalan was the main source language in the case of code-switching. This was explained by contextual factors: The school setting and the interlocutor. Catalan was the school language and the language used by the researchers who were probably assimilated to teachers. Proficiency was also found to affect the type of crosslinguistic influence analyzed as it was more frequent among less competent learners (Möhle 1989; Ringbom 1987; Poulisse 1990).

Other NON-CLIL studies have also examined the impact of proficiency on transfer (Poulisse and Bongaerts 1994; Williams and Hammarberg 1997). Poulisse and Bongaerts (1994) in their study with Dutch learners of L2 English observed that the highest proficiency level group used fewer language switches than the lower proficiency level group. Similarly, the data reported by Williams and Hammarberg (1997) obtained from a longitudinal case study of an adult learner of L3 Swedish revealed a decline in the frequency of language switches as length of exposure to the L3 increased.

The incidence of other variables such as age or task type on the use of the L1 in interactional strategies and transfer lapses has also been investigated (Gost and Celaya 2005; Viladot and Celaya 2007). Gost and Celaya (2005) examined the impact of onset age on transfer in categories with and without pragmatic functions. Less transfer was found in early starters. In addition, early starters seemed to code-switch to a greater extent in categories without pragmatic function. In contrast, late starters made greater use of the L1 in categories with a pragmatic function. This was explained by late starters' greater consciousness of their interlanguage gaps and a higher use of problem-solving abilities.

Viladot and Celaya (2007) analyzed L1 use in the case of adult learners across three different tasks (an interview, an oral narration task and a role play). The narration task favoured a greater use of the L1.

2.2 L1 use in CLIL contexts

Apart from the studies carried out in EFL or NON-CLIL contexts, other studies dealing with L1 use in oral production have been conducted in a CLIL context. Some of those studies are longitudinal or pseudolongitudinal investigations of CLIL learners (Arratibel Irazusta 2015; Lázaro Ibarrola and García Mayo 2012; Serra 2007) and other studies have compared CLIL to NON-CLIL learners (Gallardo Del Puerto 2015; García Mayo and Lázaro Ibarrola 2015; Martínez-Adrián and Gutiérrez-Mangado 2015a). Arratibel Irazusta (2015) investigated

the development of L1 use (interactional strategies, transfer lapses, code-switching and discourse markers) in an oral narration task together with general proficiency and knowledge of receptive vocabulary in two different age CLIL groups. Results showed that older learners outperformed younger learners in both general proficiency and receptive vocabulary knowledge. However, both groups behaved in the same way in terms of L1 use except for the production of foreignisings. Additionally, discourse markers were the category that presented more L1 use in both groups. Finally, significant correlations were found between general proficiency, receptive vocabulary and L1 influence.

Lázaro Ibarrola and García Mayo (2012) examined the use of the L1 in discourse markers and repair sequences as well as the morphosyntactic development of a group of 15-year-old students immersed in a CLIL context in the Basque Country. They concluded that L1 use significantly decreased along the 2-year period investigated and that morphosyntax experienced a significant development. However, a lower use of the L1 did not lead to an increase in the use of the TL.

Similarly, Serra (2007) also analyzed the use of repair sequences by German-speaking primary-school children learning Italian or Romansch in a CLIL context. L1 use in repair sequences also decreased as learners gradually obtained a higher proficiency in the TL.

2.3 L1 use in CLIL vs. NON-CLIL contexts

As stated in the previous section, other studies have compared CLIL and NON-CLIL learners. García Mayo and Lázaro Ibarrola (2015) analyzed negotiation for meaning in primary-school learners in task-based interaction. The oral interaction of 40 age- and proficiency-matched dyads was analyzed in terms of conversational adjustments, repetitions and L1 use. As in previous studies comparing CLIL and NON-CLIL learners, CLIL learners displayed slightly higher linguistic abilities. CLIL learners were found to negotiate more and to resort to the L1 less frequently than EFL learners, as they were more fluent and were used to speak English with a meaningful purpose.

Similarly, Gallardo Del Puerto (2015) gathered data from primary school learners performing a peer interaction task. Two groups of CLIL learners in grades 4 and 6 were compared to two other groups of age-matched EFL learners as regards their production of codeswitching and transfer lapses in a dyadic story-telling task. Grade 4 CLIL learners produced fewer instances of codeswitching and transfer lapses than their EFL counterparts, these differences not being statistically significant. However, statistical significance was reached when the Grade 6 samples were compared. Codeswitching, borrowings

and foreignising were far more frequent in EFL than in CLIL, whereas CLIL learners produced more calques than EFL students. The study also concludes that the idea that foreignising is characteristic of higher proficiency (=CLIL) learners is not confirmed, which adds further inconsistency to previous CLIL research on this matter (Llach and Pilar 2014; Celaya 2008; Celaya and Ruiz De Zarobe 2010).

In a similar vein, Pladevall and Vraciu (2017) explored L1 patterns in the oral production of 5th and 6th grade primary school learners of EFL over a period of two academic years in comparison to learners with an equal amount of L2 exposure in a CLIL context. More specifically, the study examined the learners' use of the L1 in an individual narrative task in terms of content and function words, codeswitching, lexical transfer (i. e., borrowings, foreignisings) and interactional strategies. Interactional strategies were further subdivided into metacognitive strategies, metatalk strategies, task-related interactional strategies and private speech. The results of the study confirmed a lower amount of L1 use as L2 proficiency increased in both CLIL and NON-CLIL learners. Data also showed that primary school learners resorted to their L1 as a compensatory strategy during L2 production irrespective of the type of instruction in minimal input contexts. In terms of interactional strategies, in both groups metatalk and private speech were the dominant functions at the outset of the study, while at the very end of the project, the L1 maintained its regulatory function while its scaffolding role wore out.

Likewise, Gutiérrez Mangado (2015) studied the pseudolongitudinal development of two groups of primary-school CLIL and NON-CLIL learners in terms of L1 use in interactional strategies, transfer lapses and codeswitching. In the lapse of the two-year period examined, NON-CLIL learners used the L1 in these three categories. On the contrary, CLIL learners experimented a decrease in appeals for assistance and an increase in borrowings. More specifically, they were found to abandon more cooperative strategies (appeals for assistance) in favour of more uncooperative ones.

Other studies (Martínez-Adrián and Gutiérrez-Mangado 2015a) comparing CLIL and NON-CLIL learners have examined secondary school learners. In this study, participants were administered a general proficiency test and an oral narration task in front of a researcher. The oral narration task was examined in terms of L1 use both in interactional strategies and transfer lapses, as well as in terms of lexical richness, accuracy and complexity. A lower use of the L1 and a greater use of the TL during interaction was found in the case of CLIL learners. Differences between the groups were also found in general proficiency and lexical richness. In contrast, partial differences were found in accuracy and complexity.

Finally, other studies comparing CLIL to NON-CLIL contexts have explored language choice in the classroom. Gené Gil et al. (2012) analyzed the purposes

for which L2 English and the L1s (Catalan and Spanish) were used orally by students. Data were gathered through questionnaires administered to teachers and students, through oral interviews to instructors and through observation of class sessions. The examination of the data revealed a greater presence of L2 English in planned subject-based discourse and more presence of the L1 in unplanned discourse both in the CLIL and the NON-CLIL class. As for the use of the L1 by the teachers, both the CLIL and NON-CLIL teachers used it for providing complex explanations and instructions as well as for disciplinary and organizational reasons. Bearing in mind that the use of the L1 is common among CLIL learners in unplanned discourse, several authors are nowadays in favour of a reconceptualization of classroom codeswitching as well as the use of the L1 as a cognitive tool (Lin 2015; Swain and Lapkin 2013). Nonetheless, evidence that translanguaging develops language acquisition is thin on the ground (Tian and Macaro 2012; Zhao and Macaro 2014) and further research is needed to ascertain the benefits of using both the L1 and the L2 in CLIL contexts (see Lin 2015).

Specifically, more studies are needed which address not only the amount but also the different functions and patterns of L1 use in oral speech. Furthermore, the use of interactional strategies by primary school CLIL and NON-CLIL learners has been scarcely looked into, and the few studies that have examined primary school learners in CLIL and NON-CLIL settings to the present date (e. g. García Mayo and Lázaro Ibarrola 2015; Pladevall and Vraciu 2017) have specifically acknowledged the need of a more detailed study of why and when the L1 is used.

3 Research questions

This paper will try to address the aforementioned gap by comparing CLIL and NON-CLIL primary school children learning English as a foreign language in terms of appeals for assistance, clarification requests and metacomments. Bearing in mind that more focus on communication is promoted in CLIL classrooms and that general proficiency is usually enhanced in these settings (i. e. Lasagabaster 2008; Martínez-Adrián and Gutiérrez-Mangado 2015b; Navés and Victori 2010; Ruiz De Zarobe 2008) in this paper we seek to explore whether (i) a lower rate of L1 use in interactional strategies (appeals for assistance, clarification requests and metacomments) is found in CLIL learners when compared to NON-CLIL learners, and (ii) whether there are also qualitative differences in the types of strategies used. More specifically, we address the following research questions:

RQ 1. Are there any differences between CLIL and NON-CLIL learners in the amount of L1 use in interactional strategies (appeals for assistance, clarification requests and metacomments)?

RQ 2. Are there any differences between CLIL and NON-CLIL learners in their preference for either the L1 or the TL in the interactional strategies analyzed?

4 Methodology

4.1 Participants

In order to answer these two research questions, we compared two groups of CLIL learners to two groups of NON-CLIL learners matching in age (9 and 11 years old) and grade (4th and 6th year of primary). The students belonged to two different state schools in Pamplona (Northern Spain) located in working-class neighbourhoods, and following similar educational programmes. The difference between the two schools was that one of them had implemented a CLIL programme while the other only offered EFL lessons. Apart from English, Spanish was the only language used for instructional purposes in the schools.

As can be observed in Table 1, the students in the CLIL school had been receiving half of their lessons in English since the first year of Nursery School (when they were 3 years old). By the time they performed the task, students in Grade 4 had been learning English for 7 years, and the ones in Grade 6 had been doing so for 9 years. The approximate number of English lessons per week was 12, of which 8 were CLIL lessons and 4 EFL lessons, which means a total amount of 396 hours per school year.

As for the type of CLIL programme implemented, around 50% of the lessons had English as a medium of instruction and these lessons included all school subjects in different years. In Grade 4 and 6, literacy, maths, natural sciences, arts and crafts, and physical education were taught in English. The content lessons were characterized by a clear focus on meaning and communication rather than on form. Regarding the use of the L1 and the TL, the students were used to always interacting in English with their teacher and, to a lesser extent, with their peers. As for their proficiency level, they were considered beginner learners, although the older group had reached a slightly better command of the language. According to internal (school) and external (government) assessments, 4th year CLIL learners were in an A1 level and 6th year CLIL learners in A1+ level.

The students in the EFL school started learning English at the age of 6 when they were in the first year of Primary Education (when they turned 6). At testing time, they had been learning English for 4 and 6 years in Grade 4 and 6, respectively. The students in this school had had 5 English lessons per week every year (around 165 hours per school year).

The lessons in the EFL school followed a typical communicative methodology with a focus on the four basic language skills. In terms of proficiency, both EFL groups had a slightly lower proficiency than CLIL groups (4th year: A1-; 6th year: A1).

Table 1: Participants.

	CLIL4 (n = 20)	CLIL6 (n = 22)	EFL4 (n = 20)	EFL6 (n = 24)
Grade	4	6	4	4
Age	10	12	10	12
Onset age	3	3	6	6
Exposure (years)	7	9	4	6
Hours per week	12	12	5	5
CLIL hours per week	8	8	0	0
EFL hours per week	4	4	5	5
Hours per year	396	396	165	165
Proficiency level	A1	A1+	A1-	A1

4.2 Research instruments

Students paired up to narrate a story in English with visual support provided by a series of vignettes. The set of vignettes were different for 4th and 6th graders so as to ensure an equal level of difficulty for both ages. These vignettes belonged to two different stories that were carefully selected taking into account these learners' cognitive development, their age-related interests and the type of vocabulary needed to perform them. Thus, the stories differed in the number of pictures, the variety of episodes and characters. Five pictures corresponding to the story 'The Lost Teddy' were distributed to 4th graders. These pictures depict a mother and her child getting off a bus. Suddenly, the child notices he has lost his teddy bear. He becomes really sad because he cannot find his beloved teddy bear. His friends visit him at bedtime and bring him another one but he is still unhappy. In the end, his mother takes him to the Lost Property office, where he finally finds his teddy bear. In the case of 6th graders, 9 pictures from the story 'Spots' were handed out. These pictures illustrate a father who discovers that his youngest daughter is covered in chicken pox. When he is preparing breakfast, his two older sons show up in the kitchen also covered in chicken pox. He goes upstairs and he finds out

that his wife is also in bed with chicken pox. The doctor comes to visit them at home. After the doctor's visit, he looks after his family and is in charge of all the household chores. Once they recover from chicken pox, they go downstairs to the living-room and find the father full of spots.

With respect to the procedure followed, first of all, participants had to describe the pictures, which had been randomly presented. Then they had to put the pictures in order and finally they had to tell the story. Even if this type of task could be too difficult for children in early childhood, it was found to be feasible and beneficial for those in middle school (García Mayo and Lázaro Ibarrola 2015; Lázaro Ibarrola and Azpilicueta Martínez 2015). We cannot forget that children at this age (10–12) are able to provide communicative support to each other (Pinter 2006). Notwithstanding, in order to make sure that the task was suitable for students, several meetings were held with the school teachers. The oral production of 43 age- and proficiency-matched dyads (21 CLIL, 22 NON-CLIL) was analyzed in terms of use of the L1 in appeals, clarification requests and metacomments (see Muñoz (2007) for a similar categorization of interactional strategies). All their oral narrations were transcribed and codified in CHILDES format.

As for the codification of data, we looked for episodes in which the whole or part of the interactional strategy was produced in Spanish, and cases in which the TL English was used in the whole strategy. In the case of appeals for assistance, they were classified according to the strategy used to generate them: (i) the learner only uses the L1 (either with a formula or by directly inserting the item), as in (2), (ii) the learner uses a formula in English to ask for an item uttered in Spanish, as in (3), (iii) the learner uses a formula in Spanish to ask for an item uttered in English, as in (4), and (iv) the learner uses the TL English in the whole strategy, as in (5).

- (2) *CH1: *I have-I think I have the first. The mum and the boy go to... ¿cómo se dice*
 I have-I think I have the first. The mum and the boy go to... how do you say tienda?
 shop?
 'I have-I think I have the first. The mum and the boy go to... how do you say shop?'
(CLIL learner)
- (3) *CH2: *The lost teddy, how do you say va?*
 the lost teddy how do you say go
 'The lost teddy, how do you say go?'
(NON-CLIL learner)

- (4) *CH1: *is a boy ..., cómo se dice take spots varicella?*
 is a boy ..., how do you say take spots varicella
 There is a boy...., how do you say in English to catch chickenpox?
(NON-CLIL learner)
- (5) *CH2: *ok. I have a picture and in this picture is a dad with ... how do you say...with spots (meaning chickenpox)?*
(NON-CLIL learner)

We also identified cases in which learners used either the TL English (6) or the L1 to elicit clarification as shown, as in (7):

- (6) *INV: *What happens at the end?*
 *CH2: *what?*
(NON-CLIL learner)
- (7) *INV: *can you tell me what happens in the story?*
 *CH1: *¿cómo? ¿cómo?.*
 How how
 ‘How? How?’
(NON-CLIL learner)

We also looked for cases in which participants used the TL English or L1 for comments on the communicative situation (metacomments),¹ as can be seen in (8) and (9)²:

¹ Unlike appeals for assistance, the combination of English and Spanish was not considered for clarification requests and metacomments, as there were no language-mixed instances in the data in these two categories. Note that clarification requests were mainly cases of one-two words, which made the combination between two languages improbable. Metacomments are off-task and intentional switches, and therefore, the combination of English and Spanish was also unlikely (see Alegría De La Colina and García Mayo (2009) for other studies conducted with L1 Spanish learners in which the combination of languages in metacomments was not observed). In contrast, the different language-mixed subcategories for appeals for assistance in the present study can also be observed in recent studies with EFL learners (Lázaro Ibarrola 2016; Arratibel-Irazusta and Martínez-Adrián In press).

² Note, however, that we have not included here an example for metacomments in English, as there were no instances in the data analyzed in any of the groups.

- (8) *CH2: *¿Los juntamos?*
 shall we put them together
 ‘Shall we put them together?’

(CLIL learner)

- (9) *CH1: *vale entonces*
 Ok then
 ‘Ok then.’

(NON-CLIL learner)

4.3 Statistical analyses

Both descriptive and inferential statistical analyses were carried out. As far as the former, mean scores and standard deviations were calculated in each of the L1 influence variables in the four groups. A normality test (Kolmogórov-Smirnov (K-S)) was carried out to see whether samples were normally distributed. In order to investigate whether the differences found between the CLIL and NON-CLIL groups were statistically significant, we performed T-test analyses for normal distribution samples. Mann-Whitney tests were used when samples were not normally distributed.

Statistical significance will be indicated at $p < 0.01^{**}$ and $p < 0.05^*$ levels. Marginally significant differences will be marked at $p < 0.09\#$ level.

5 Results and discussion

In this section we present and discuss the results according to the research questions of the study. First, we focus on the results which are related to the first research question (*Are there any differences between CLIL and NON-CLIL learners in the amount of L1 use in interactional strategies (appeals for assistance, clarification requests and metacomments)?*). In order to give an answer to this research question, we have first of all compared CLIL to NON-CLIL groups in terms of total L1 use in interactional strategies (Tables 2 and 3):

Table 2: 4th year total L1 use in interactional strategies.

	Mean	SD	T-test	p-value
4th CLIL	2.40	2.50	2.177	0.043*
4th NON-CLIL	9.80	10.45		

As can be observed in Table 2, the 4th year CLIL group significantly outstripped the NON-CLIL group in this respect. The 4th year CLIL group had a lower use of the L1 when appeals for assistance, clarification requests and metacommments were taken together.

Table 3: 6th year total L1 use in interactional strategies.

	Mean	SD	Z	p-value
6th CLIL	0.18	0.41	-3.764	0.000**
6th NON-CLIL	6.67	5.18		

Similarly, we can observe that the 6th year CLIL group made a lower use of the L1. The statistical analysis revealed highly significant differences in this respect.

Subsequently, we broke down overall L1 use into appeals for assistance, clarification requests and metacommments. In the case of appeals, we can see mainly cases in which the learners exclusively used Spanish as illustrated in (10) and cases in which they used a formula in English followed by an L1 Spanish term as can be observed in (11):

(10) *¿Cómo se dice pensar?* (NON-CLIL)
 how do you say think
 ‘How do you say think?’

(11) How do you say *elegir?* (NON-CLIL)
 how do you say choose
 ‘How do you say choose?’

When we compared 4th year learners (Table 4), we could observe that the NON-CLIL group made a higher use of the L1 in these two subcategories. However, statistically significant differences emerged between the groups

Table 4: 4th year L1 use in appeals for assistance.

Language(s)	4th CLIL		4th NON-CLIL		T-test/Mann-Whitney test	p-value
	Mean	SD	Mean	SD		
Only using L1 Spanish (<i>¿Cómo se dice tienda?</i>)	0.80	1.87	1.20	1.69	T = -0.502	0.622
Using a formula in English + L1 Spanish term (<i>How do you say va?</i>)	0.10	0.32	2.70	4.92	Z = -2.053	0.040*

only in the case in which the learner used a formula in English followed by an L1 Spanish term.

In 6th year (Table 5), CLIL learners did not resort to the L1 in appeals for assistance, but simply because they did not produce appeals for assistance, possibly due to their greater proficiency. In contrast, NON-CLIL learners used Spanish either alone or in combination with English. As regards the combination with English, both instances of use of a formula in English followed by a term in L1 Spanish and marginal cases of use of a formula in Spanish followed by a term in L2 English were produced. The difference turned out to be significant in the case of Spanish alone and a statistical tendency was found in those cases in which a formula in English followed by a term in L1 Spanish was used. No statistically significant differences were found in the case of the use of a formula in Spanish followed by a L2 English term.

Table 5: 6th year L1 use in appeals for assistance.

Language(s)	6th CLIL		6th NON-CLIL		T-test/Mann-Whitney test	p-value
	Mean	SD	Mean	SD		
Only using L1 Spanish (<i>¿Cómo se dice tienda?</i>) ³	0	0	0.58	0.79	Z = -2.350	0.019*
Using a formula in English + L1Spanish term (<i>How do you say va?</i>)	0	0	0.58	1.44	Z = -1.735	0.083#
Using a formula in Spanish and L2 English term (<i>¿Cómo se dice take spots varicella?</i>)	0	0	0.08	0.29	Z = -0.957	0.338

As for the use of the L1 in clarification requests, again the 4th year CLIL group made a lower use of the L1. However, this difference did not reach statistical significance, as illustrated in Table 6.

Table 6: 4th year L1 use in clarification requests.

Language(s)	4th CLIL		4th NON-CLIL		T-test/Mann-Whitney test	p-value
	Mean	SD	Mean	SD		
Only using L1 Spanish (<i>¿cómo? ¿cómo?</i>)	0.40	0.84	1.50	2.42	Z = -1.546	0.122

³ For the sake of clarity, the same examples used for the description of the codification of the data have been included next to the strategy used.

Similarly, in the case of 6th year learners (Table 7), CLIL learners again used the L1 to a lower extent than NON-CLIL learners. The difference turned out to be statistically significant in 6th year learners.

Table 7: 6th year L1 use in clarification requests.

Language(s)	6th CLIL		6th NON-CLIL		T-test/Mann-Whitney test	p-value
	Mean	SD	Mean	SD		
Only using L1 Spanish (¿cómo? ¿cómo?)	0.09	0.30	1.00	1.04	Z = -2.509	0.012*

Regarding metacomments, 4th year CLIL learners made a lower use of the L1. As shown in Table 8, the difference turned out to be highly significant from a statistical point of view.

Table 8: 4th year L1 use in metacomments.

Language(s)	4th CLIL		4th NON-CLIL		T-test/Mann-Whitney test	p-value
	Mean	SD	Mean	SD		
Only using L1 Spanish (¿Los juntamos?)	0.40	0.84	4.00	4.71	Z = -2.676	0.007**

The same trend was observed in the case of 6th year students. As illustrated in Table 9, a marginal use of the L1 in the CLIL group was found. The differences between groups were highly significant in this respect.

Table 9: 6th year L1 use in metacomments.

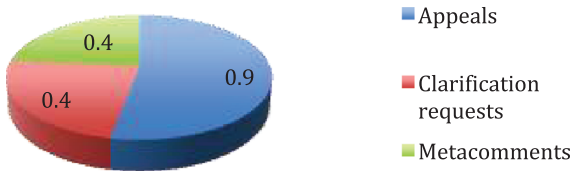
Language(s)	6th CLIL		6th NON-CLIL		T-test/Mann-Whitney test	p-value
	Mean	SD	Mean	SD		
Only using L1 Spanish (¿Los juntamos?)	0.09	0.30	4.17	3.79	Z = -3.855	0.000**

As an answer to the first research question and from a quantitative point of view, the results seem to indicate that NON-CLIL learners produce more instances of L1 use in interactional strategies. NON-CLIL learners seem to

notice a higher number of gaps in their interlanguage and therefore seem to use more problem-solving abilities and the L1 as a compensatory strategy for the missing knowledge. This is consistent with previous research in CLIL contexts (Lázaro Ibarrola and García Mayo 2012; Serra 2007) as well as investigations that have compared CLIL and NON-CLIL contexts (García Mayo and Lázaro Ibarrola 2015; Martínez-Adrián and Gutiérrez-Mangado 2015a), which have found a lower use of the L1 in CLIL learners. The lower incidence of the L1 in CLIL learners could be explained by the focus on fluency and communication of meaning through the L2, which is usually promoted in CLIL classrooms (Martínez-Adrián and Gutiérrez-Mangado 2015b). The lower use of the L1 could also be prompted by the higher proficiency usually attained by CLIL learners. Several investigations have concluded that CLIL exposure seems to be beneficial for general proficiency in the L2 (Lasagabaster 2008; Martínez-Adrián and Gutiérrez-Mangado 2015b; Navés and Victori 2010; Ruiz De Zarobe 2008). In this respect, research has found that cross-linguistic influence is more frequent among less proficient learners (Agustín Llach 2009; Möhle 1989; Navés et al. 2005; Poulisse 1990; Poulisse and Bongaerts 1994; Ringbom 1987; Williams and Hammarberg 1997). In addition, the examination of the results has also revealed greater differences as grade increases which could be explained by the effect of the accumulated hours of CLIL instruction received by Grade 6.

As for the distribution of L1 use across categories (see Figures 1 and 2), this distribution in the NON-CLIL groups is held constant in year 4 and year 6. In both years, the use of the L1 is more common in the category metacomments. Appeals for assistance are the second most frequent category of L1 use, and clarification requests the least frequent. However, the distribution in the CLIL groups is different and not constant. In year 4, appeals are the first category with more L1 use, followed by clarification requests and metacomments, both of which appear in identical proportions. In year 6, appeals no longer exist, but clarification requests and metacomments are still distributed equally. The fact that metacomments is the most common manifestation of L1 use in both years in the NON-CLIL groups suggests that NON-CLIL learners are not so used to interact in the TL. In contrast, CLIL learners are more used to speaking in the TL and to interacting because of the active methodology they follow in the classroom (Coyle 2007), which could explain the lower use of the L1 in the category 'metacomments'. In addition, we cannot forget that the integration of content and language in content-based instruction is normally achieved by means of content tasks in the foreign language that are cognitively engaging for the learners (García Mayo 2015), such as the one carried out by the participants in the present study. So, it may be the case that CLIL learners are better equipped to such tasks.

L1 use in 4th year CLIL learners



L1 use in 6th year CLIL learners

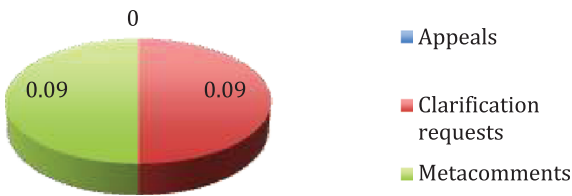
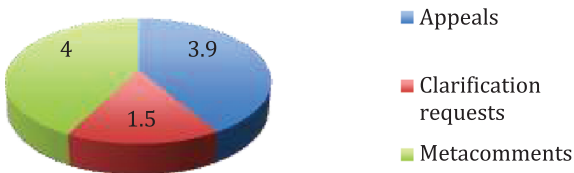


Figure 1: Distribution of L1 use across categories in the CLIL groups.

L1 use in 4th year NON-CLIL learners



L1 use in 6th year NON-CLIL learners

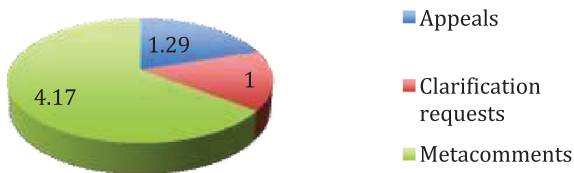


Figure 2: Distribution of L1 use across categories in the NON-CLIL groups.

As for the second research question (*Are there any differences between CLIL and NON-CLIL learners in their preference for either the L1 or the TL in the interactional strategies analyzed?*), a detailed illustration of the use of the L1 in comparison with the TL in appeals, clarification requests and metacomments will be provided in Figures 3, 4, 5, 6, 7 and 8.⁴

A qualitative inspection of the results has revealed that as regards appeals for assistance, the use of the TL English in the whole strategy (i. e. the use of paraphrases or circumlocutions) was non-existent in any of the groups (Figure 3). This might indicate that both types of learners are not considering their peers as equivalent to their teachers, with whom they normally employ the TL. This result also accounts for the greater flexibility of the use of the L1 in CLIL contexts. Even if in a CLIL context the TL is used as a communication tool for subject-related content, CLIL learners still resort to the L1 to co-construct meaning with their peers and to scaffold L2 production. We can also observe that there are differences in learners' use of the L1 and the TL in this type of interactional strategy, as CLIL 4th grade learners preferred to use Spanish (Appeal Spanish) and their NON-CLIL counterparts the use of a formula in English followed by a L1 Spanish term (Appeal English-Spanish). Nevertheless, these appeals in which NON-CLIL learners made use of the combination English-Spanish could be considered mere formulaic uses of this string of words (i. e. How do you say...?).

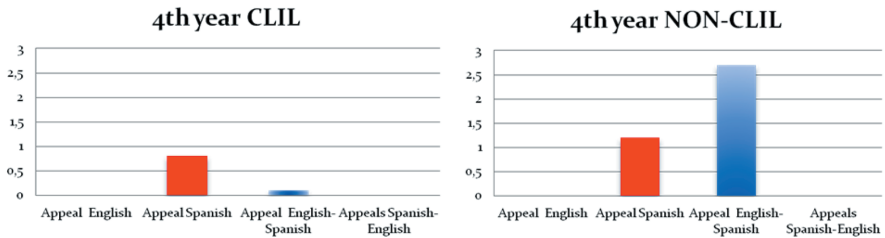


Figure 3: 4th year appeals for assistance.

As shown in Figure 4, in 6th grade, CLIL learners did not make use of appeals, possibly due to their greater proficiency and better command of vocabulary or TL resources to compensate their lack of knowledge, while NON-CLIL learners

⁴ Given the small data set provided, the conclusions drawn from the study remain tentative. Future research should be conducted with a bigger sample.

used both Spanish (Appeal Spanish) and the use of a formula in English followed by a L1 Spanish term (Appeal English-Spanish) by the same number in this type of interactional strategy. Additionally, NON-CLIL learners produced some appeals for assistance entirely in English (Appeal English), but they were lower and marginal in number when we compared them to appeals in which the L1 was used alone (Appeals Spanish) or in combination with English (Appeal English-Spanish).

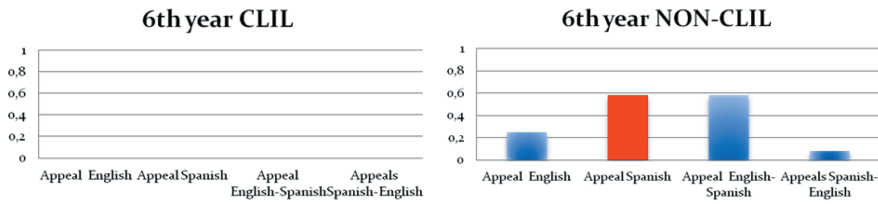


Figure 4: 6th year appeals for assistance.

As for clarification requests, both the TL English and the L1 were used in the case of these interactional strategies in both types of learners in grade 4 (Figure 5). This contrasts with the results reported for appeals for assistance in this grade. We speculate that this has to do with the nature of these two interactional strategies. Clarification requests seem to be more related to content and more internal to the task, which could lead to the use of the TL in addition to the L1. Some differences between groups emerged though. 4th CLIL learners produced more requests in English than in Spanish. In contrast, 4th NON-CLIL learners preferred the use of Spanish rather than English in this type of interactional strategy. In this category, which is more specifically related to content, the 4th CLIL learners seem to prefer the use of the TL, which is in turn the communication tool for subject-related content in the CLIL class.

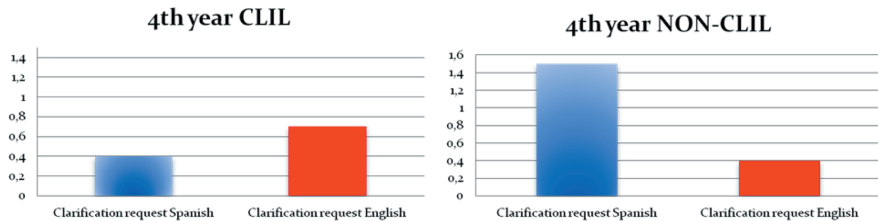


Figure 5: 4th year clarification requests.

In contrast, 6th grade learners (Figure 6), both CLIL and NON-CLIL used Spanish in clarification requests. Neither CLIL nor NON-CLIL learners made use of the TL English. This could be accounted by the fact that at this age, on economy grounds, and possibly due to a greater cognitive maturity (Lin 2015), learners prefer to use their L1 which may lead them to solve their content gaps or doubts in a more rapid way.

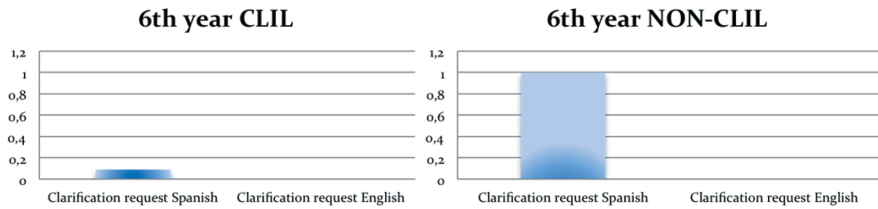


Figure 6: 6th year clarification requests.

Finally, metacomments were always produced in Spanish in CLIL and NON-CLIL learners in both grades, as can be observed in Figures 7–8. Thus, in those episodes more external to the task in which students provide comments on the communicative situation, there is a clear preference for the L1.

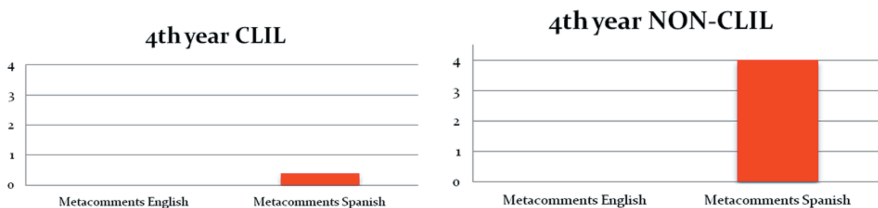


Figure 7: 4th year metacomments.

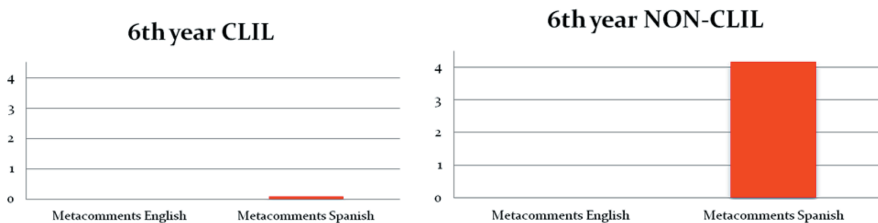


Figure 8: 6th year metacomments.

In sum, the qualitative analysis of the results revealed that while there were some differences between the CLIL and the NON-CLIL groups in their preference for either the L1 or the TL in the case of appeals and clarification requests when we compared them in the 4th year, metacomments were always produced in the L1 in both groups. In 6th year, even though we could not investigate the case of appeals, as CLIL learners did not produce this type of interactional episodes possibly due to TL proficiency effects, we could observe that the language used for clarification requests and metacomments was Spanish in all these episodes this year. This finding is consistent with previous studies carried out in NON-CLIL contexts (e. g., Alegría De La Colina and García Mayo 2009; Birello 2005; Chavez 2003) according to which the use of the L1 seems to be used in unplanned discourse (e. g., for real functions such as spontaneous comments, chatting with peers) as a means for the organization and management of the activity and also in line with some recent studies carried out with CLIL learners (Pladevall and Vraciu 2017) in which the L1 remains a cognitive tool and has a regulatory function even as L2 proficiency increases.

Similarly, this finding seems to align with studies that offer observation data from the CLIL classroom (Gené Gil et al. 2012; Pastrana Izquierdo 2010). Data reported by Gené Gil et al. (2012) revealed that the pupils hardly ever addressed their peers in the TL, except when they presented a class project or another type of compulsory activity orally. When addressing their teachers, they used English but only for content-related questions. Likewise, Pastrana Izquierdo (2010) observed that primary school children normally switched to the L1 when working on a task with their peers, but they used the TL only when speaking to the teacher regardless of the nature of the topic (organizational, personal or content-related). Although we have not gathered data through observation procedures, the instructors of the CLIL groups indicated that learners mainly used Spanish when interacting with their peers. Thus, the data from our interactive task seem to mirror what occurs within the CLIL class. This is also consistent with research conducted in content-based instruction contexts on language choice during classroom interaction (see Tedick and Wesely 2015 for a review of these contexts).

In addition, even if CLIL learners use the L1 to a lower extent than NON-CLIL learners, we expected greater use of English alone in the categories analyzed in the case of CLIL learners. The results presented seem to indicate that these learners are not in the monolingual mode of English (Grosjean 1998). They are consistent with other investigations carried out in CLIL contexts in which a lower use of the L1 on the part of CLIL learners did not lead to an increase of the TL in all the contexts analyzed (Arratibel Irazusta 2015; Lázaro Ibarrola and

García Mayo 2012; Pladevall and Vraciu 2017). We cannot forget that the CLIL classroom is a multilingual setting where learners usually share at least one common language. Therefore, it is natural for students to use all the linguistic resources at hand, including their knowledge of the L1, when facing highly demanding tasks (Pérez Vidal 2002).

At this point some information regarding teachers' linguistic behaviour and perceptions should be desirable. This could shed light on the learners' use of the L1 and the TL while performing an interaction task. The very few observation studies conducted in CLIL settings so far have reported that CLIL teachers use the L1 mainly to give instructions or for disciplinary measures, to avoid misunderstandings and to gain a fuller comprehension of content topics. The L1 is an important supportive means, especially in CLIL beginners (Gierlinger 2007). The study carried out by Gené Gil et al. (2012) has also revealed that the use of the L1 is not punished at all and is not a rival of the TL in the CLIL class, probably because teachers are conscious of the benefits of using the mother tongue and all the linguistic resources at hand. The L1 is chosen as a source of relief and support for both the teachers and the pupils.⁵ Thus, it is not surprising that some of the CLIL participants in the present study were using the L1 for providing comments on the communicative situation to their peers.

Similarly, studies reporting data gathered through interviews with teachers in the CLIL classroom seem to point in the same direction. Méndez and Pavón (2012) interview primary school and secondary school CLIL teachers about the coexistence of the L1 and the L2 in the CLIL class. They conclude that the coexistence of the L1 and the L2 will not only help students consolidate the two linguistic structures, but it also has the potential to ultimately foster a more effective assimilation of academic content. The L1 is successfully employed as an instrument of disambiguation to help them understand complex ideas and notions. These results are in line with the evidence provided of positive transference across languages in CLIL environments (Cummins 2000; Lorenzo et al. 2009). Nonetheless, a call for further research has been made on how L1 use may facilitate L2 acquisition and how both the L1 and L2 can work together to develop students' bilingualism and biliteracy (Tedick and Wesely 2015).

⁵ Please, note that the situation in North-American immersion programmes may be different as the pedagogies implemented in these programmes are aimed at excluding the L1 from the classroom. Immersion programmes have been heavily influenced by monolingual ideologies (see Lin (2015) for a review of these contexts and factors influencing their policies).

6 Conclusion

This paper has contributed to the scarcity of research comparing CLIL and NON-CLIL primary school learners in terms of amount and patterns of L1 use in interactional strategies. More specifically, appeals for assistance, clarification requests and metacomments have been examined.

Regarding the quantitative dimension of the study, a higher use of the L1 in interactional strategies in NON-CLIL primary school learners was found probably due to the communicative nature of the CLIL classroom and the TL higher proficiency usually attained in those programmes. Differences between these two types of learners seem to be greater thanks to the accumulated hours of CLIL instruction by grade 6. Additionally, CLIL and NON-CLIL learners differed in terms of the category that presented more L1 use. The use of the L1 was more frequent in the category ‘metacomments’ in the NON-CLIL group, which could be explained by the EFL learners’ inexperience in performing cognitively demanding tasks in the TL and their need to resort to the L1 to move the task forward.

As for the qualitative dimension of the study, even if there were differences between CLIL and NON-CLIL learners in their preference for either the L1 or the TL in appeals for assistance or clarification requests, there were similarities in learners’ preference for the L1 in metacomments in CLIL and NON-CLIL learners. The L1 was used to organize and monitor the activity in both types of learners. This finding is consistent with classroom observation data according to which CLIL learners as well as NON-CLIL learners tend to use their L1 for metacognitive purposes. Taking into account that the use of the L1 is common among CLIL learners in unplanned discourse, some authors nowadays demand a reconceptualization of classroom codeswitching as something which is natural for bilinguals to do (Lin 2015; Swain and Lapkin 2013). These authors also believe that the L1 is a cognitive tool that reports multiple advantages in the learning of the L2. Nonetheless, further research is needed to convince scholars if the L1 helps/hinders the learning of the L2. Both qualitative and quantitative studies analyzing the planning of systematic and functional use of the L1 and L2, as well as studies investigating the impact of factors (e. g., age and cognitive maturity, modality, proficiency) are demanded (Lin 2015; Turnbull and Dailey-O’Cain 2009).

In conclusion, even if a lower use of the L1 was found among CLIL learners, it did not imply a greater use of the TL English in the interactional episodes analyzed. Although the TL English is a communication tool for subject-matter in CLIL contexts, these primary school learners are not in the monolingual mode of English and make use of the L1 for regulatory functions.

For further research, it would be convenient to compare L1 use across different tasks, as task effects have been reported by the literature on communication strategies (see Poulisse 1990; Viladot and Celaya 2007). In addition, as the CLIL group had a higher exposure, a follow-up study should control for hours of exposure. Likewise, future investigations should include a bigger sample so as to reach more definite conclusions. A longitudinal study aimed at the development of L1 use in interactional strategies from 4th to 6th year would also be desirable. Similarly, observation of the CLIL and NON-CLIL participants in their regular classes would be advisable. Thus, mixed methods research is clearly advocated in this line of research.

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