RESEARCH ARTICLES

"I repeat the question porque no me entero": The use of L1 in the didactics of EFL teaching class by pre-service Primary Education teachers

"I repeat the question porque no me entero": El uso de la L1 en clase de didáctica del inglés como lengua extranjera por parte de maestros en formación de Educación Primaria

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Summary

This work analyses the use of Spanish (mother tongue) by pre-service teachers (N=55) during a class activity that consists of explaining and solving Primary Education (6-12) mathematical problems in English (foreign language). The objectives are established in the form of three research questions about the amount of frequency of Spanish; its functional categories according to the original classification of De la Campa and Nassaji (2009); and the lack of competence in English of the participants. This is a mixed-method research since it includes both quantitative and qualitative data, collected through a questionnaire; the recordings of the pre-service teachers' discourse; and a virtual interview. The novelty of the study lies in a new functional category: lack of foreign language competence, which precedes others such as personal comment, activity instruction, arbitrary code-mixing, and translation, for instance. Likewise, 78.18% used Spanish at least once during the activity, although this is limited to 2.13/person. This works sheds light not only on the low amount of Spanish but especially on its functional categories, revealing a lack of language competence and pedagogical skills among the pre-service teachers. The paper ends with some recommendations for language teachers.

Keywords: Pre-Service teachers; Primary Education; Mother Tongue; Foreign Language; Lack of Language Competence.

Resumen

Este trabajo analiza los usos del español (lengua materna) por parte de maestros en formación (N=55) durante una actividad que consiste en la explicación y resolución de problemas matemáticos de Educación Primaria (6-12 años) en inglés (lengua extranjera). Los objetivos se establecen en forma de tres preguntas de investigación sobre la cantidad y la frecuencia de uso del español; su codificación en categorías funcionales según la clasificación original de De la Campa y Nassaji (2009); y la falta de competencia en inglés de los participantes. Se trata de una investigación de corte mixto, al incorporar datos cuantitativos y cualitativos, recopilados a través de un cuestionario; las grabaciones de los discursos de los maestros en formación; y una entrevista virtual. La novedad del trabajo reside en una nueva categoría funcional: lack of foreing language competence, la cual antecede a otras como personal comment, activity instruction, arbitrary code-mixing y translation, por ejemplo. Además, un 78,18% utilizó el español una vez, al menos, durante el transcurso de la actividad, aunque las intervenciones se limitan a 2,13/persona. Este estudio evidencia no solo una baja cantidad de uso del español, sino especialmente las categorías funcionales en que se clasifica, manifestando, para algunos maestros en formación, una falta de competencia idiomática y de habilidades pedagógicas. El artículo termina con unas recomendaciones para profesores de idiomas.

Palabras clave: Maestros en formación; Educación Primaria; Lengua materna; Lengua extranjera; Falta de competencia idiomática.

Introduction

One of the most controversial points of discussion in the teaching of foreign languages (FL) points to the use of the mother tongue (FL) of the students (Chen, 2010; Macaro, Tian and Chu, 2018): first, there is a trend in favor of the FL (Cook, 2001; Macaro, 2005; Bruen and Kelly, 2017) for reasons of cognitive and sociolinguistic (De la Campa and Nassaji, 2009) or meta-analysis of FL (Sharma, 2006): "although the mother tongue is not a suitable basis for a methodology, it has, at all levels, a variety of roles to play which are at present consistently undervalued" (Atkinson, 1987: 47). Second, L1 represents an obstacle to interlanguage development (Selinker, 1972), according to the principles of acquisitivist approaches (Krashen, 1982; Krashen and Terrell,

1983). Therefore, its application seems inadvisable (Macaro, 2009; Littlewood, 2014), especially when teachers are influenced by their own experience as learners (Wach and Monroy, 2019).

Nevertheless, language teaching has been evolving towards bilingual teaching practices, which implies significant differences (Ferreira, 2011): LE is used as a vehicle to deliver content related to Non-Linguistic Areas (NLA). Among other approaches, Content and Language Integrated Learning (CLIL) (Coyle, Hood & Marsh, 2010) receives the highest recognition in bilingual education, especially in Europe (Nikula, 2016). In CLIL, the teacher chooses an integration of CLIL and content, the latter being the starting point for teacher planning (Meyer, 2010). For this reason, CLIL practices are more easily recognisable in secondary education contexts (Zayas and Estrada, 2020).

In contrast, English Medium Instruction (EMI), defined as 'the use of English language to teach academic subjects (other than English itself) in countries of jurisdictions where the first language [...] of the majority of the population is not English' (Dearden, 2014: 4), ranks first among content-based learning practices in higher education (Rose and McKinley, 2018; Murata, 2019). There are several reasons for this, including the internationalization of institutions (Jenkins, 2014), as well as the training of students to be able to practice in international contexts (Zayas and Estrada, 2020). The main difference between CLIL and EMI is that the former does not necessarily involve LE-content integration (Wilkinson, 2018).

In line with this, this paper aims to address some of the research gaps in this area (Wach and Monroy, 2019). To this end, the uses of Spanish as an L1 are analysed by a group of teachers in training (N=55) in a Spanish public university during an activity of an EMI nature. This experiment is part of the activities contemplated in the subject Didactics of the Foreign Language in Primary Education (English) during 2019-20, included in the 2nd year of the Degree in Primary Education. Here, students act as teachers of their own classmates for the presentation and explanation in English of mathematical problems of addition, subtraction, multiplication and division. Based on the theoretical contextual framework presented, three research questions are posed:

1. How much and how often is Spanish used for the presentation, explanation and solution of mathematical problems in English by teachers in Primary Education training?
2. What functional categories can be established for the use of Spanish, taking as a reference the original classification proposed by De la Campa and Nassaji (2009) for German as L1?
3. To what extent does the lack of competence in English as a foreign language (ELE) of teachers in training affect their ability to present and explain the problems of Primary Education mathematics?

Methodology

Design and participants

The study paradigm of this work adjusts a mixed method by incorporating quantitative and qualitative data collected in three ways: first, direct observation of the entire process with the aim of assessing the use of Spanish among teachers in training during the course of an activity in English, to which is added the completion of a pre-test and a post-test before and after the activity, respectively. Second, listening to the recordings of the speeches of the teachers in training themselves and categorising the uses of Spanish according to the classification of De la Campa and Nassaji (2009). Third, a virtual interview with those who used at least one word in Spanish.

The experiment was carried out in the Faculty of Educational Sciences of the University of Cádiz, located in the Autonomous Community of Andalusia, Spain. This is a public university, with an average size of approximately 20,000 students, where the catalogue of study offers

includes 65 degrees and 54 masters. The Grade of Primary Education is the one that includes in the 2nd year the subject Didactics of the Foreign Language in Primary Education (English) which is where the activity described here was included.

This subject is compulsory for all the students in the Grade, with an individual and face-to-face workload of 6 ECTS (European Credit Transfer System), that is, 150 hours. Due to the high number of students enrolled (around 220), students are divided into three groups: A, B and C. At the same time, groups A and B are subdivided into three practical work subgroups: 1, 2 and 3. Group C is the only one that belongs to the multilingual modality, that is, part of the ANL subjects of the Degree can be taught in LE: English, French and German. However, this research was carried out with the students of group B. Finally, the justification of the activity points directly to one of the specific competences of the subject: "CE28. Expressing oneself, orally and in writing, in a foreign language".

The population analysed corresponds to the census sample of students (N=55) who took part in the activity, with the exception of one student who did not teach. It is important to note that, given the generalist nature of the subject, not all trainee teachers are being trained to teach English. This circumstance is exclusive to the subjects of the mention (foreign language/ CLIL) offered in 3rd year. However, the relationship between the number of students and levels of language competence in CLIL according to the Common European Framework of Reference for Languages (CEFR) (De Europa, 2001) is included below (Table 1). As a clarification, all students of the University of Cadiz must obtain a minimum level B1 to obtain their respective degrees. From the results of the pretest, we can find out the training in Spanish language of the informants (N=54), according to the levels of accreditation of the MCERL, also taking into account that their average age is 20 years and the average number of years as learners of Spanish language is almost 12. In this sense, the subject Didactics of Foreign Language in Primary Education (English) includes the following requirement: "students are assumed to have the linguistic and communicative skills and competences (level B2 in Spanish and A2 in English) that they have had to acquire in the previous studies of this subject":

Table 1.
Accreditation levels of teachers in training according to the MCERL.

Niveles MCERL	N	%
Sin acreditación	18	33,96%
A1	0	0,00%
A2	5	9,43%
B1	23	43,39%
B2	5	9,43%
C1	3	5,66%
C2	0	0,00%

Instruments

The research instruments are three: first, one of the researchers observed in situ the entire course of the activity, that is, the presentation and resolution by means of English orality alone of the problems obtained from Primary Education textbooks for the subject of mathematics in relation to four operations: addition, subtraction, multiplication and division, in that order of presentation. The problems were translated into English, with the approval of a university professor who specializes in teaching English as a foreign language. Each group consisted of 3/4 people, and four rounds of work were carried out with a time of 7 minutes/round during three sessions (subgroups 1, 2 and 3) of 1:30 hours. The whole process implied the use of English, from the reading of the problem in written language to the last moment of the explanation and resolution process, both for those who worked as teachers and students per se:

Table 2
Process of preparation and implementation of the activity

	Phase 1	Phase 2	Phase 3	Phase 4
Teachers	Delivery	Read	Presentation	Explanation
Students	-	-	Listen	Resolution

The audios of the speeches were recorded by each of the teachers and, once the activity was over, they were sent by e-mail to one of the researchers. The analysis of the recordings serves to answer research questions 1 and 2 about the amount and frequency of use of Spanish and its functional categories. These functional categories correspond to those proposed by De la Campa and Nassaji (2009) called "Coding Scheme of L1 Utterances". These items will be described in the results section, as well as including one of their own creation.

The third research tool is a virtual interview with teachers in training created by means of the Google Forms application and, in turn, sent through the Virtual Campus of the subject. The virtual interview was sent to all those who used the L1 (78.18%) during the activity. The interview consists of 5 questions on the uses of Spanish: the first four questions make direct reference to the four most recognized functional categories, while the last question focuses on the new functional category:

1. The first category is called Personal comment. This refers to the spontaneous attitude of the teacher while explaining. In the analysis we found answers such as "I don't know how to explain it", "I don't understand the question" or even "fuck!" or "shit!", among others. What are the reasons that lead an English teacher to use Spanish for this type of words or expressions?
2. The second category is Activity instruction. We have heard expressions like: "no, last week he sold this, right? and now you have to know how many he sold this one", for example. How beneficial do you think it is to use these expressions in Spanish to explain activities in English?
3. The third category corresponds to Arbitrary code-mixing. Expressions such as "it is addition, I think it is" or "no, from the other side", for example, are part of this classification. Why do you think this happens? Does the teacher do it consciously or unconsciously?
4. The fourth category is Translation. Examples of the "fewer"? "menos or "un momento, uy, one moments" were heard on the recordings. What do you think of an English teacher translating into Spanish?
5. The fifth category was called Lack of foreign language competence, including examples such as "how is 'every'" or "I don't know how to pronounce that". To what extent do you think the teacher's lack of competence in foreign language can affect the course of an English class and, with it, learning? What measures do you propose to solve this?

Analysis of the data

All the uses of the L1 were transcribed for two reasons: on the one hand, to find out the amount and frequency of use and, on the other, to categorize them based on the classification of De la Campa and Nassaji (2009). The amount and frequency of use is analyzed in a three-way way: first, the number of students who used the L1 is counted; second, the number of interventions in the L1 is noted; and, third, it is determined whether the uses of the L1 involve a single word or a sentence. The reason for avoiding time measurement is due to the low proportion of Spanish usage, which prevents more accurate recording.

The classification of the uses of the L1 into functional categories was done word by word or phrase by phrase. The researchers proceeded to the codification of the data, distributing the three groups of participants (1, 2 and 3) in an alternate way for the 55 cases, and being able to analyze each group twice, avoiding with them biases in the final classification. For the more complex cases, a third listening of the recording was carried out, deciding on the alternative most similar to those proposed by De la Campa and Nassji (2009). Finally, the responses from the virtual interviews were categorized for each question in order to provide an accurate perspective of the beliefs and perceptions of the teachers. However, each category is illustrated with examples that justify, in the voice of the informants, the uses of the L1.

Results

The results are divided into three blocks: firstly, the results of the pre-test and post-test which included Likert type responses for values between 1 (strongly disagree) and 4 (strongly agree), in relation to questions about the students' own competence in abortion on the one hand and that of their colleagues on the other; secondly, the analysis of the recordings of the trainee teachers' speeches; and thirdly, the data extracted from the responses of the virtual survey.

Pretest

This tool helped us to compare some data on the oral comprehension, written comprehension, oral expression and written expression of teachers in training. We divided the results into two areas: on the one hand, thoughts and beliefs about their own language competence; and, on the other hand, knowledge for communication and interaction in English. In the first of the domains (Figure 1), we find that the aspects related to oral expression (2.59) and written expression (2.81) are below the average (2.84). However, with respect to beliefs about listening comprehension (2.89) and reading comprehension (3.07), we observe a higher trend. These data show that respondents (N=54) have a more positive perception of their comprehension skills than their production skills, both oral and written:
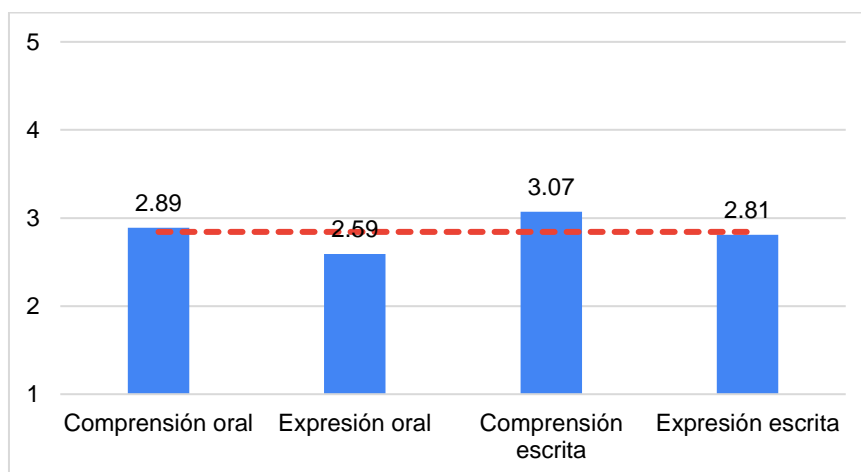

Figure 1. Pretest: beliefs about language skills

In the case of knowledge for communication and interaction in English, oral expression with 2.59 is still below average (2.78), along with generic expressions (2.72) and the use of up-to-date vocabulary (2.63). As with beliefs about language skills, one of the highest scoring items is reading comprehension (3.07), along with writing (2.81) and listening comprehension (2.89). We illustrate these results in Figure 2:
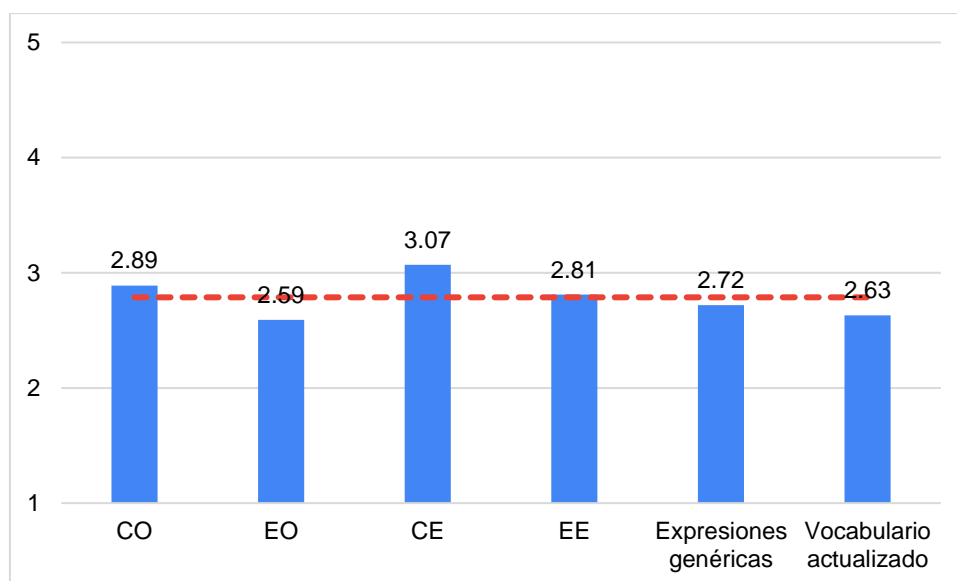
Figure 2. Pretest: knowledge for communication and interaction in English

Recordings of the speeches of teachers in training

With respect to the recordings, we chose the categorization of uses of L1 from De la Campa and Nassaji (2009) that we collect in table 6: (2) L1-L2 contrast; (9) Classroom equipment; (10) Administrative issues; (11) Repetition of student L1 utterance; and (14.2) L1 words form L1 culture. We will not focus on these functional categories in this block, although we are aware that they may be present in other contexts.

On the other hand, from the rest of the categories we will focus on those that have obtained the highest response rate: (7) Personal comment; (4) Activity instruction; (14.1) Arbitrary code-mixing; and (1) Translation. Before describing these results, it should be noted that, to the categorization of De la Campa and Nassaji (2009), we have added one more category, as we mentioned before: (15) Lack of foreign language competence. This category responds to the need for a group of answers that directly relate to the lack of language competence:

Table 3.
Results of the recordings, according to De la Campa and Nassaji (2009).

Categories	Numeration	Answers	%
Personal comment	7	23	28,05
Activity instruction	4	14	17,07
Arbitrary code-mixing	14.1	12	14,63
Translation	1	8	9,76
Reaction to student question	12	7	8,54
Lack of L2 competence	15	6	7,32
Comprehension check	8	5	6,1
Evaluation	3	2	2,44
Elicitation of student contribution	6	2	2,44
Humor	13	2	2,44
Activity objective	5	1	1,22
L1-L2 contrast	2	0	0
Classroom equipment	9	0	0
Administrative issues	10	0	0
Repetition of student L2 utterance	11	0	0
L1 words form L1 culture	14.2	0	0

These functional categories are illustrated below with a number of examples rescued from the recordings:

- In the first category, Personal comment (7), we observe 28.05% of the total results with respect to the analysis of the recordings. In this sense, we find some examples of informants that we can frame in a more spontaneous, colloquial and sometimes vulgar use of language: "Fuck!"; "Fuck all!"; "Bad, bad, bad..."; "The fuck"; etc. On the other hand, among the examples included in the recordings, we highlight some that indicate spontaneity: "I don't know how to explain it"; "Have you heard me?"; "Can you imagine?"; "No, there comes a time when..."; "I don't understand the question"; "I haven't heard anything, but good" (this example is included according to the pronunciation of the variety of Andalusian languages that the speakers speak); "Oh, I'm laughing nervously"; etc.
- The second category of analysis, Activity instruction (4), has 17.07% of the answers. In this category, teachers in training obviously use the L1 to explain the instructions of mathematical problems to others. In this one, we find examples such as: "You add it up plus two"; "No, last week he sold this, right? and now you have to know how many he sold this one"; "It's not... plus, plus"; "You have to subtract five thousand from this, right?"; "To know how much you can fit in each bag of each fruit and then you add it up"; etc.
- Another category with a high percentage is Arbitrary code-mixing (14.1) (14.63%). Here, the most significant examples are: "[He needs to sell] five thousand"; "It is addition, I think it is"; "I repeat the question because I don't know..."; "Of the level one"; "The level of Arcos (City B). Then..." We see that these examples focus on questions such as numbers, textual connectors, or idiomatic expressions, above all.
- With respect to the category Translation (1), this one counts with 9,7 %. In this category, we see clear examples of informants using some words by correcting themselves: "How many?"; "Yes, [yes]"; "Because, because, there are two levels"; "[You can] yes [yes]"; "Yes, [yes]"; "Fewer? Less"; "One moment, uy, one moment"; etc.

- The last of the categories, Lack of foreign language competence (15) - added by researchers to meet the need for a new category - gets 7.32% of the results. Here we can see examples of the lexicon: "What does 'each' look like?"; "What does 'even' look like? Also, we can find answers regarding the meaning: "But what is the meaning?"; ""[what is the meaning?] below, I think". And, finally, we observe examples with reference to pronunciation: "I don't know how to pronounce that"; "¿/ˈæpəl/ or /ˈeɪpəl/?, I don't know how to say it"; etc.

Postest

After analysing the results of the pre-test and the recordings, we carried out a post-test on the teachers-in-training to verify two areas of interest: firstly, the opinions and beliefs about the language competence and knowledge for correct communication and interaction in English of their classmates; and secondly, the opinions and beliefs about the problems arising from lack of language competence, also of their classmates. With regard to the first, it is verified that, above the average of analysis (3.04), the skills most valued by the students over their own colleagues are oral comprehension (3.16), generic expressions (3.15) and updated vocabulary (3.05). The lowest rated skill is oral expression (2.82):
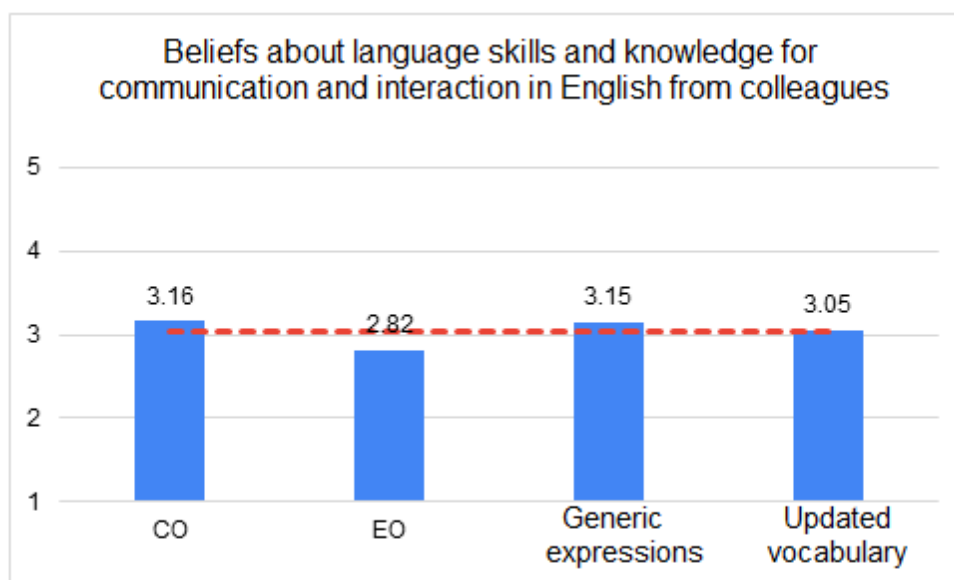
Figure 3: Post-test: beliefs about language competence and knowledge for peer communication and interaction in English

Secondly, we observed that informants value interactions with other colleagues positively. However, when we look closely at these data in Figure 6, we can see a polarization between the score of 3.22 that refers to the item "my colleagues have been able to follow the dynamics without too many problems", and the 2.11 assigned to the problems of participation in these dynamics due to lack of language skills. Concluding with the post-test, 1.95 represents the score given by the teachers in training to the fact of having used Spanish:
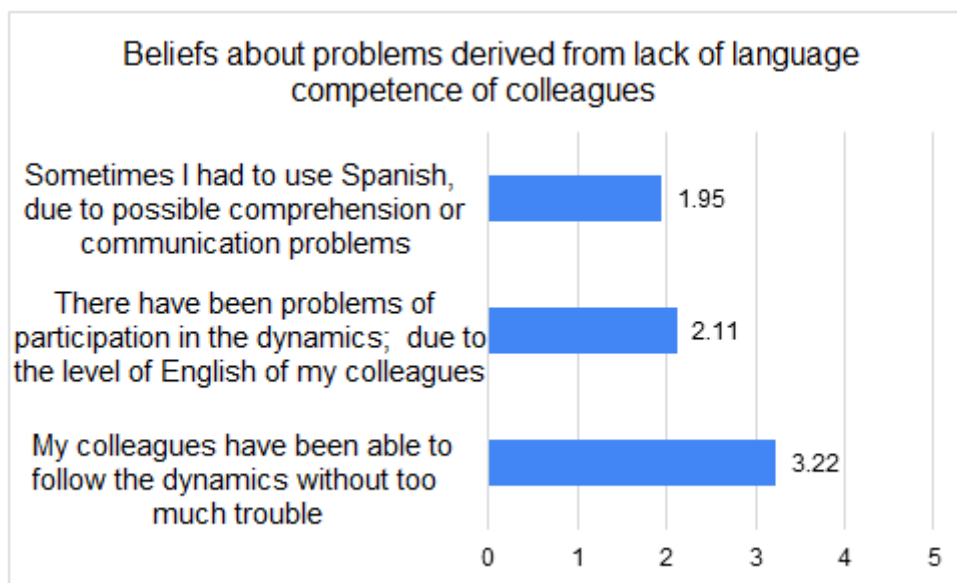
Figure 4. Post-test: beliefs about problems arising from lack of English proficiency of colleagues.

Virtual Interview

The last of the instruments is the virtual interview in which 81.13% of the teachers in training who, as we highlighted earlier, had used the L1 took part. To collect the results data, we present Table 8 where we associate each of the interview questions with different categories according to the answers of the teachers-in-training:

Table 4.
List of questions from the virtual interview and the categories of answers.

Questions	Categories
Question 1	Nervousness
	Poor command of LE (vocabulary)
Question 1	Harmful use of L1 for the development of LE
	Translation as a last resort for teachers
Question 3	In/conscious use of L1
Question 4	Translation is not recommended
Pregunta 5	Improvement in oral skills (pronunciation)
	Best language training for teachers

Discussion

After the analysis of the results, according to the study instruments chosen (pre-test and post-test, recordings and virtual interview), we can determine that the use of the L1 by teachers in training in this activity is not as frequent as expected: although 78.18% of the participants use Spanish, only 2.13 interventions/person were recorded. To illustrate our discussions, we have categorized the uses of the L1 in two ways that we describe below: on the one hand, the functions of the use of L1, following the functional categories of personal comment, activity instruction, arbitrary code-mixing and translation (De la Campa and Nassaji, 2009); and, on the other hand, we emphasise the functional category that we have created (lack of foreign language competence), as an innovative element of this research.

Functions of the uses of Spanish as L1

The two categories where the highest volume of examples regarding the use of L1 has been recorded are personal comment (28.05%), activity instruction (17.07%), arbitrary code-mixing (14.63%) and translation (9.76%):

- With respect to personal comment, we cannot be surprised that this is the condition with the highest percentage, since the examples give us reason to affirm that this is interrelated with spontaneity. In the virtual interview with the teachers, one of the most usual categories in their answers was nervousness or anxiety (student 2 and 6, personal communication, February 14, 2020). This is reflected in examples such as the case of a student, whose use of the L1 is: "oh, I'm laughing nervously". As we said, this may be the result of "the nervousness of repeating the same thing over and over again and seeing that you are not understood" (student 2, personal communication, February 14, 2020). Related to this, other reasons for the use of L1 are "stress" and "burden" (student 6, personal communication, February 14, 2020) or even "lack of patience" (student 3, personal communication, February 14, 2020). We find here some very significant examples, such as the use of vulgarisms, such as "joder!" or "la ostia!" (and colloquial expressions and dialectal features, in this case, of Andalusian speeches).
- The second functional category related to the use of the L1 is activity instruction. In it, we anticipated in the results that teachers would use this function of the L1 to explain directly to their classmates what they had to do in the activity. This use of the category specifically implies deficiencies in reading comprehension in LE. In the virtual interview, we extracted as main categories of the answers "harmful use of the L1 for the development of LE" and "translation as a last resource for teachers". From these, we can see that teachers are aware that the use of the L1 in the LE classes could be quite harmful in the teaching-learning process, offering other mechanisms: "in my opinion, it could be explained in another way and not repeat things so many times" (student 2, personal communication, February 14, 2020).
- The third functional category is arbitrary code-mixing, where Spanish is used in an apparently unconscious way and not as a lack of competence in LE, at least in the context of analysis. The examples collected illustrate this circumstance: "He needs to sell five thousand"; "I repeat the question because I don't know..."; "No, the other side"; etc. The paradox of this functional category is found in the answers of the teachers in training in the virtual interview, since 50% are in favour of the fact that the use of the L1 for this context is unconscious or accidental ("some of us are missing words"; student 6, personal communication, February 14, 2020), while the other half believes that the teacher is acting consciously ("it is easier for him/her to use Spanish"; student 7, personal communication, February 15, 2020), something justified in the specialized literature for bilingual English-Spanish speakers with low-medium competence (Lipski, 2014).
- The functional category of translation refers precisely to the translation into Spanish of words or expressions for a full understanding of the message in English. In this sense, translation has traditionally been rooted in language teaching in order to achieve a mastery of grammatical rules and standards, as well as vocabulary. Through translation into the L1 student body, teachers ensure a transfer of knowledge without interference from the use of the target language, something that seems to be shared by some of the respondents: "in some cases it may be beneficial, but only in the case that something is not understood at all because it is complex and new to the student body, for comparison purposes, perhaps" (Student 4, personal communication, February 14, 2020). However, this statement does not seem to fit among the bulk of teachers-in-training, since, despite being a functional category of use of the L1 that stands out, widespread thinking is betting on eradicating translation from language classrooms or, in this case, EMI classes where LE is used as a vehicle for communication: "I think it is not good because if you translate the most complex words, children are not going to pay attention to what you say in English, only to the translation" (student 5, personal communication, February 14, 2020).

Lack of foreign language competence

The major novelty of this work involves the appointment of a new functional category with respect to the original classification of De la Campa and Nassaji (2009): lack of foreign language competence. In the context of analysis, this is not a trivial issue, since it is positioned in the sixth option (7.31%) in terms of frequency; specifically, five teachers in training (11.62%) used the L1 as an in-service resource, demonstrating a lack of knowledge of legal abortion.

The latter contrasts with two aspects: on the one hand, the average number of years of English study among participants is almost 12, ranging from 5 to 17 years of age. Only one student stated that she had been learning English for "months". It is possible then that the number of years of study is not directly linked to the degree of mastery of LE. Therefore, the focus should be on issues such as teacher training (Czura, 2016) and, consequently, teaching methodology (Amengual-Pizarro, 2013). According to what has been explained here, the teaching methodology experienced by the informants implied, in the best of scenarios, an instrumental use of LE based on the reproduction of apparently communicative linguistic uses, the purpose of which was to achieve native competence (Corbett, 2003).

On the other hand, informants believed that their LE skills, both in reading comprehension (3.07) and oral expression (2.59), were sufficient, something that contrasts with other studies in almost identical contexts (Fernández-Viciana and Fernández-Costales, 2016). Although it should be noted that the majority of participants have no teaching experience (Popko, 2005) in general (65.45%) and in language teaching in particular (87.27%), it is striking that certain cases show such a clear lack of language competence in reading comprehension and in the verbalization of mathematical problems for primary school students (6-12 years old). This lack of language competence is illustrated by examples such as the following: "How is "every" [in English]"; or "ˈæpəl/ or ˈeɪpəl/? I don't know how to say it!", among others.

Returning to the results of the post-test, the participants are also unable to recognize among their colleagues communication and interaction problems caused by lack of competence in LE: their thoughts on oral competence (3.16) and oral expression (2.86) justify this statement. They believe, at the same time, that they have an adequate knowledge of generic expressions (3.15), as well as that their vocabulary is up-to-date (3.05) in order to be able to communicate and interact in English. They assure that their classmates have been able to follow correctly the complete dynamics of the activity about mathematical problems (3,22). They have also not detected significant problems as a result of lack of knowledge in Spanish as a foreign language (2.11), in addition to not having had to resort to the L1 due to breaks in comprehension or communication (1.95).

Regarding the latter, there is an obvious contradiction, which is also evident in other studies (Copland and Neokleous, 2011): while participants believe they have consciously avoided the use of the L1 - which corresponds to the generally accepted opinion among teachers (Hall and Cook, 2013) -, the recordings show that 43 of them (78.18%) used Spanish at least once during their speech. However, it is also fair to note that the number of interventions in L1 is reduced to 2.13/person. This indicates that the amount of L1 use is apparently reduced compared to other research (Levine, 2014; Kerr; 2019). As a solution, students propose two alternatives, bearing in mind that the totalities of the respondents argue that the lack of language competence strongly affects LE learning: first, a general improvement in teacher training; and, second, as a more specific training, the development of oral competence, especially pronunciation.

Among the arguments put forward in relation to the first alternative (teacher training), they propose "obliging teachers to train adequately in L2" (student 2, personal communication, February 14, 2020), something already known for other contexts (Genç, 2016; Yin, 2019); or that "the most feasible solution I see is for the teacher to join an English language academy" (student

3, personal communication, February 14, 2020). For the second alternative (oral proficiency, pronunciation), informants propose solutions such as "listen and talk more; more songs or conversations in English" (Student 4, personal communication, February 12, 2020). They therefore call for specialized training in the teaching of oral language and, above all, pronunciation (Buss, 2017). Finally, one student refers to pedagogical and not only linguistic issues: "the teacher must not only have knowledge of the language, but also know how to teach and adapt to the needs of the students" (student 5, personal communication, February 14, 2020), something already anticipated in this area of research (Chong, Cho, Wong, 2005; Ramanayake and Williams; 2017).

In conclusion, this paper examines the uses of Spanish as an L1 by university students who taught their own classmates during an activity involving mathematical problem solving in English. Although the participants were themselves students of the subject Didactics of the Foreign Language in Primary Education (English), the activity was framed in an EMI context. In general, the amount of use of the L1, from the number of interventions per participant, seems to result. These uses of the L1 are classified according to the divisions of De la Campa and Nassaji (2009), of which examples were recorded for eleven categories out of fourteen possible options, four of which stand out: personal comment (28.05%); activity instruction (17.07%); and arbitrary code-mixing (14.63%) and translation (9.76%).

However, among all the categories of use of the L1, the one we have called "Lack of foreign language competence" (7.31%) stands out, as it does not appear in the original classification (De la Campa and Nassaji, 2009). This category includes examples of L1 use derived from lack of knowledge about abortion. The reason for this could be found in language training that focuses on formal learning of grammatical rules and norms, written language and the memorization of decontextualized vocabulary. This contrasts with the impression that teachers in training have of their own language competence, since although it does not stand out greatly, they consider that they have sufficient mastery of Spanish for all four language skills. They also believe that their colleagues' mastery of Spanish language is satisfactory, both for general language use and for specific issues, depending on whether the language is oral or written. Finally, they do not believe that communication and interaction problems occurred during the activity as a result of this lack of mastery in Spanish, or that they had to resort to Spanish. Therefore, we can conclude that there is a certain gap between the beliefs and thoughts of the teachers in training themselves and the reality of the context of analysis. Therefore, the result of the comparison between the main theoretical concepts and the discussion of the results of the context of analysis serves to answer the three research questions:

Table 5

Relationship of the research questions with the answers from the comparison between the theoretical contextual framework and the results of the research

Questions	Answers
Questions 1	The amount of use of Spanish as L1 is apparently low, taking into account that, although 78.18% of teachers in training used Spanish at least once, the number of interventions is reduced to 2.13 per person.
Questions 2	The uses of Spanish as an L1 are concentrated in 11 of the 14 functional categories (De la Campa and Nassaji, 2009), with four of them standing out: on the one hand, those related to emotion or expressiveness, i.e. personal comment (28.05%) and arbitrary code-mixing (14.63%), related to the unconscious use of the L1; and, on the other hand, activity instruction (14.63%) and translation (9.76%), which involve the conscious use of the L1 as a measure to ensure the understanding of the messages by the receiver.
Questions 3	Lack of competence in Spanish as a foreign language by teachers in training necessarily leads to the use of Spanish as an L1, resulting in a new functional category: Lack of foreign language competence. It should be noted that although few examples have been recorded, the degree of difficulty of the activity raises doubts about the language training of teachers in training during secondary education but, above all, their beliefs in terms of their own language competence, perhaps somewhat higher than that demonstrated. Therefore, the lack of language competence may decisively affect the correct teaching work in the language classroom or even CLIL in Primary Education, giving way to an uncontrolled use of the L1. In this respect, the participants themselves, through the virtual interviews, are aware of the seriousness of the situation, although they are unaware of their true stage of interlanguage knowledge according to the results of this study.

Taking the conclusions as a reference, we put forward a series of recommendations for language teachers in general and for teachers-in-training in particular about the use of the L1:

- The strategic use of the L1 in the language classroom may be justified at certain times, as stated in the "Balanced Approach" (Nation, 2003). However, there is also a risk that if teachers know or share their students' L1, they may make excessive use of it (Miles, 2014). The latter may imply that the use of the L1 is not limited to moments of real need (for example: situations of severe stress), but that it becomes systematized in the face of any logical setback derived from the development in LE of the learners and, thus, implies its acceptance by all the agents involved in the teaching-learning process.
- This circumstance would mean that students would consciously avoid any unnecessary attempts to use the target language, avoiding the formulation of hypotheses about the specific functioning of the target language, among others. Therefore, we recommend the exclusive use of the LE - knowing the scientific movement in favour of the "optimal use" (Macaro, 2009: 38) of the L1 - where the teaching task consists of facilitating the understanding of the messages and providing the learners with the opportunities of production, avoiding a systematized corrective intervention on the errors (Estrada, in press).
- The two previous recommendations are feasible based on sufficiently solid theoretical and practical training of language teachers in the processes of language acquisition (Krashen, 1982, on the one hand, and human communication (Sperber and Wilson, 1986), on the other, which depend, in both cases, on the processes of cognition and not on their own beliefs and opinions (Johnson, 2009). Teachers must be able to understand the

mental mechanisms involved in the processing of linguistic and non-linguistic information that leads to the acquisition of the target language, while analyzing the stages of interlanguage that learners go through in order to adapt to their needs.

Referencias

Amengual-Pizarro, M. (2013). Primary education degrees in Spain: Do they fulfill the linguistic and pedagogic needs of future teachers? *Vigo International Journal of Applied Linguisitics*, *10,* 9-28. Recuperado de http://webs.uvigo.es/vialjournal/pdf/Vial-2013-Article1.pdf

Atkinson, D. (1987). The mother tongue in the classroom: a neglected resource? *ELT Journal, 44*(4), 241-247. doi: https://doi.org/10.1093/elt/41.4.241

Buss, L. (2017). The role of training in shaping pre-service teacher cognition related to L2 pronunciation. *Ilha do Desterro, 70*(3). doi: https://doi.org/10.5007/2175-8026.2017v70n3p201

Bruen, J., & Kelly, N. (2017). Using a shared L1 to reduce cognitive overload and anxiety levels in the L2 classroom. *The Language Learning Journal, 45*(3), 368-381. doi: https://doi.org/10.1080/09571736.2014.908405

Chong, S., Cho, D., & Wong, A.F.L. (2005). *A case study of the development in pedagogic thinking of a pre-service teacher. Pedagogical Knowledge and Skills of Preservice Primary School Teachers*. Recuperado de https://pdfs.semanticscholar.org/d9f6/e8aa95d31949e8c70ea03f03b213a7251eb9.pdf

Chen, Y-H. (2010). Lexical bundles in L1 and L2 academic writing. Language, Learning and Technology, 14(2), 30-49. doi: http://dx.doi.org/10125/44213

Cook, V. (2001). Using the first language in the classroom. The Canadian Modern Language Review, 57(3), 402-423. doi: http://dx.doi.org/10.3138/cmlr.57.3.402

Copland, F., & Neokleous, G. (2011). L1 to teach L2: complexities and contradictions. *ELT Journal, 65*(3), 270-280. doi: http://dx.doi.org/10.1093/elt/ccq047

Corbett, J. B. (2003). *An intercultural approach to English language teaching*. Clevedon: Multilingual Matters.

Coyle, D., Hood, P., & Marsh, D. (2010). *Content and language integrated learning*. Cambridge: Cambridge University Press.

Czura, A. (2016). Major field of study and student teachers' views on intercultural communicative competence. *Language and Intercultural Communication, 16*(1), 83-98. doi: http://dx.doi.org/10.1080/14708477.2015.1113753

De Europa, C. (2001). Marco Común Europeo de Referencia para las Lenguas: aprendizaje, enseñanza, evaluación. Madrid: Instituto Cervantes/Ministerio de Educación, Cultura y Deporte/Anaya, 2002.

De la Campa, J.C., & Nassaji, H. (2009). The amount, purpose, and reasons for using L1 in L2 classrooms. *Foreign Language Annals, 42*, 742-759. doi: http://dx.doi.org/10.1111/j.1944-9720.2009.01052.x

Dearden, J. (2014). English as a medium of instruction-A growing global phenomenon. British Council. Recuperado de https://www.britishcouncil.es/sites/default/files/british_council_english_as_a_medium_of_instruction.pdf

Estrada, J. L. (en prensa). Posibilidad de aplicación de técnicas de corrección no intervencionista para errores orales a la enseñanza de idiomas, Encuentro, 28.

Fernández-Viciana, A., & Fernández-Costales, A. (2017). El pensamiento de los futuros maestros de inglés en Educación Primaria: creencias sobre su autoeficacia docente. Bellaterra *Journal of Teaching & Learning Language & Literature, 10*(1), 42-60. doi: http://dx.doi.org/10.5565/rev/jtl3.684

Ferreira, J. G. (2011). Teaching life siences to English second language learners: What do teachers do? *South African Journal of Education, 31*(1), 102-113.

Genç, G., Kuluşaklı, E., & Aydın, S. (2016). Exploring EFL learners' perceived self-efficacy and beliefs on English language learning. Australian Journal of Teacher Education, 41(2), 4.

Hall, G., & Cook, G. (2013). *Own-language use in ELT: Exploring global practices and attitudes*. Londres: British Council.

Jenkins, J. (2014). *English as a lingua franca in the international university. The politics of academic English language policy*. Londres: Routledge.

Johnson, K. (2009). *Second language teacher education. A sociocultural perspective*. Nueva York: Routledge.

Kerr, P. (2019). The use of L1 in English language teaching. Part of the Cambridge Papers in ELT series. Recuperado de https://languageresearch.cambridge.org/images/CambridgePapersInELT_UseOfL1_2019_ONLINE.pdf

Krashen, S. D. (1982). Principles and practice in second language acquisition. Oxford: Pergamon Press.

Krashen, S. D., & Terrell, T. (1983). *The Natural Approach: Language acquisition in the Classroom*. Oxford: Pergamon Press.

Levine, G. S. (2014). Principles for code choice in the foreign language classroom: A focus on grammaring. *Language Teaching, 47*(3), 332–348. doi: http://dx.doi.org/10.1017/S0261444811000498

Lipski, J. (2014). Spanish-English code-switching among low-fluency bilinguals: Towards an expanded typology. *Sociolinguistic Studies, 8*(1). doi: http://dx.doi.org/10.1558/sols.v8i1.23

Littlewood, W. (2014). Communication-oriented language teaching: Where are we now? Where do we go from here? *Language Teaching, 47*(03), 349-362. doi: http://dx.doi.org/10.1017/S0261444812000134

Long, M. (2015). *Second language acquisition and task-based language teaching*. West Sussex: Wiley Blackwell.

Macaro, E. (2005). Codeswitching in the L2 classroom: A communication and learning strategy. En E. Llurda (ed.), *Non-native language teachers. Perceptions, challenges and contributions to the profession* (pp. 63-84). Nueva York: Springer.

Macaro, E. (2009). Teacher use of codeswitching in the second language classroom: Exploring 'optimal' use. En M. Turnbull y J. Dailey-O'Cain (eds.), *First Language Use in Second and Foreign Language Learning* (pp. 35-49). Clevedon: Multilingual Matters.

Macaro, E., Graham, S., & Woore, R. (2016). *Improving Foreign Language Teaching Towards a Research-Based Curriculum and Pedagogy*. Londres: Routledge.

Macaro, E., Tian, L., & Chu, L. (2018). First and second language use in English medium instruction contexts. *Language Teaching Research*. doi: http://dx.doi.org/10.1177/1362168818783231

Meyer, O. (2010). Towards quality-CLIL: Successful planning and teaching strategies. *Pulso, 33*, 11-29. doi: http://dx.doi.org/10.1787/9789264083943

Miles, R. (2014). Evaluating the use of L1 in the English Language Classroom. *Engisia, 6*(1), 43-51. doi: http://dx.doi.org/10.22373/ej.v6i1.2514

Murata, K. (2019). *English-medium instruction from an English as a lingua franca perspective: Exploring the higher education context*. Nueva York: Routledge.

Nation, P. (2003). The role of the first language in foreign language learning. *The Asian FL Journal, 5(*2), 19-27. doi: http://dx.doi.org/10.21600/ijoks.383385

Nikula, T. (2016). CLIL: A European approach to bilingual education. En N. V. Deusen-Scholl, y S. May (eds.), *Second and foreign language education* (pp. 1-14). Cham: Springer International Publishing.

Popko, J. (2005). How MA-TESOL students use knowledge about language in teaching ESL classes. *Applied Linguistics and Language Teacher Education, 4*, 387-403. doi: http://dx.doi.org/10.1007/1-4020-2954-3_22

Ramanayake, S., & Williams, C. (2017). I don't know why I'm learning this. *International Journal of Teaching and Learning in Higher Education, 29*(3), 447-457. Recuperado de http://www.isetl.org/ijtlhe/

Rose, H., & McKinley, J. (2018). Japan's English medium instruction initiatives and the globalization in higher education. *Higher Education, 75*(1), 111-129. doi: http://dx.doi.org/10.1007/s10734-017-0125-1

Selinker, L. (1972). Interlanguage. *International Review of Applied Linguistics in Language Teaching, 10*(3), 209-241.

Sharma, K. (2006). Mother tongue use in English classrooms. *Journal of NELTA, 2,* 80-87. doi: http://dx.doi.org/10.3126/nelta.v11i1.3132

Song, Y., & Andrews, S. (2009). *The L1 in L2 learning: teachers' beliefs and practices*. Munich: Lincom Europa.

Sperber, D., & Wilson, D. (1986). *Relevance: communication and cognition*. Oxford: Basil Blackwell.

Turnbull, M., & Dailey-O'Cain, J. (eds.) (2009). *First language use in second and foreign language learning*. Bristol: Multilingual Matters.

Wach, A., &Monroy, F. (2019). Beliefs about L1 use in teaching English: A comparative study of Polish and Spanish teacher-trainees. *Language Teaching Research, 1*(19). doi: http://dx.doi.org/10.1177/1362168819830422

Wilkinson, R. (2018). Content and language integration at universities. Collaborative reflections. *International Journal of Bilingual Education and Bilingualism, 21*(5), 607-615. doi: http://dx.doi.org/10.1080/13670050.2018.1491948

Yin, J. (2019). Connecting theory and practice in teacher education: English-as-a-foreign-language pre-service teachers' perceptions of practicum experience. *Innovation and Education, 20*(2), 136-151. doi: http://dx.doi.org/10.1080/13540602.2013.848568

Zayas, F., & Estrada, J. L. (2020). EMI at tertiary level un Spain. Perspectives from lectures at a medium-sized state university. En M. M. Sánchez-Pérez (ed.), *Teacher training for English-medium instruction in Higher Education* (pp. 232-256). Pensilvania: IGI Global.

Zhao, T., & Macaro, E. (2016). What works better for the learning of concrete and abstract words: Teachers' L1 use or L2-only explanations? *International Journal of Applied Linguistics, 26*(1), 75-98. doi: http://dx.doi.org/10.1111/ijal.12080