

Are Pre-Service Foreign Language Teachers Ready for CLIL in Catalonia? A Needs Analysis from Stakeholders' Perspective

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ABSTRACT: Content and Language Integrated Learning (CLIL) is an educational approach that has been fostered as a way to increase students' foreign language competence. However, its implementation has not always come along with the sufficient teacher training. This study aims to examine CLIL teachers' competences and identify what training needs pre-service language teachers have towards these competences. The participants of this study are pre-service primary and secondary foreign language teachers (n=44), CLIL teacher trainers, inspectors and CLIL coordinators (n=18). Peacock's (2009) questionnaire is used to analyse pre-service teachers' training needs towards language, self-reflection, methodological and classroom management competences. A semi-structured interview is used to elicit stakeholders' perceptions towards CLIL teachers' competences and training needs. The quantitative data shows that stakeholders believe that language, methodological and classroom management competences are equally necessary for a CLIL teacher. Apart from the initial domains analysed, participants consider that content knowledge and teamwork, interschool collaboration and material development competences are also relevant. In addition, training needs relative to these competences are found. However, considerable deep training needs for methodology and foreign language competence are identified. The findings have implications for CLIL teacher education.

Keywords: CLIL; teacher education; CLIL teachers' competences; training needs; needs analysis.

¿Están preparados los docentes de lengua extranjera en formación inicial para AICLE en Cataluña? Un análisis de necesidades desde la perspectiva de los agentes implicados

RESUMEN: El Aprendizaje Integrado de Contenidos y Lengua Extranjera (AICLE) es un enfoque educativo que pretende desarrollar la competencia lingüística en una lengua extranjera del alumnado. No obstante, su implementación no siempre ha ido acompañada de la suficiente formación docente. Este estudio examina las competencias de los docentes AICLE e identifica las necesidades de formación que los docentes de lengua extranjera en formación inicial tienen respecto a estas competencias. Los participantes son docentes de lenguas extranjeras de primaria y secundaria en formación inicial (n=44), formadores AICLE, inspectores y coordinadores AICLE (n=18). Las necesidades de formación de los estudiantes respecto a la competencia comunicativa, de autorreflexión, metodológica y de gestión del aula se han estudiado con el cuestionario de Peacock (2009). Se ha utilizado una entrevista semiestructurada para comprender las necesidades de formación identificadas. Los participantes consideran que la competencia comunicativa, la metodológica y la de gestión del aula son igualmente necesarias para un docente AICLE. Asimismo, los participantes consideran

que el conocimiento del contenido y las competencias de trabajo en equipo, colaboración interescolar y de desarrollo de materiales son también relevantes. Se identifican necesidades de formación para todas las competencias siendo las más destacadas la competencia metodológica y la comunicativa.

Palabras clave: AICLE; formación del profesorado; competencias de los docentes AICLE; necesidades de formación; análisis de necesidades.

1. INTRODUCTION

Content and Language Integrated Learning (CLIL) is “an educational approach where curricular content is taught through the medium of a foreign language, typically to students participating in some form of mainstream education” (Dalton-Puffer, 2011, p.183). Integrating content and language has become popular since the European Commission (1995) encouraged the development of a plurilingual Europe through the teaching of two foreign languages apart from students’ L1. However, CLIL has become an umbrella term what makes it difficult to define what exactly CLIL is and, therefore, measure its benefits, improvements and needs (Dalton-Puffer, 2011; Pérez-Cañado, 2012).

The study presented in this paper was conducted in Catalonia, a bilingual Spanish region where two official languages (Spanish and Catalan) coexist. CLIL and Immersion are generally used in a different way. While immersion is used to refer to the teaching of content in Catalan, CLIL is used to mention the teaching of content through a foreign language, typically English. Even though Catalonia has a long tradition in immersion, CLIL was promoted at the beginning of the millennium through different projects funded by the Catalan Educational Department. However, CLIL implementation has not come along with the necessary CLIL teacher qualification during initial teacher education. As a result, teachers do not develop sufficiently the required competences what has a negative impact on both CLIL school-based implementation and students’ learning. Nevertheless, because of the rapid spread of CLIL implementation, it is probable that a teacher has to integrate content and a foreign language. Therefore, teachers should receive specific training for CLIL (Pérez-Cañado, 2012).

The present study focuses on pre-service foreign language teachers’ training needs and competences for CLIL teaching and learning. Exploring pre-service CLIL training needs is important to better design CLIL training courses (Durán, Beltrán & Martínez, 2016). Pre-service language teachers training needs are explored since language teachers are normally the ones in charge of developing CLIL in the Catalan context at primary level. Likewise, language teachers tend to have a major role at secondary level since they either coordinate the programme or team-teach alongside the content teacher.

2. LITERATURE REVIEW

2.1. CLIL Teachers’ Competences

There have been some attempts to describe CLIL teachers’ profile through the identification of CLIL teachers’ competences (Bertaux, Coonan, Frigols-Martín & Mehisto, 2010; Lorenzo, Trujillo & Vez, 2011; Marsh, Mehisto, Wolff & Frigols-Martín, 2010). Competence

is here understood as “a person’s ability to solve real problems in different contexts integrating knowledge, procedures and attitudes which are mobilised to achieve an effective and successful action” (Marsh et al., 2010, p.12).

The competences required for successful CLIL teaching are extensive (Hillyard, 2011), as *The European Framework for CLIL Teacher Education* (Marsh et al., 2010), *The Competences for Teachers of Bilingual Schools* (Lorenzo, Trujillo, & Vez, 2011) and *The CLIL teacher’s competence Grid* (Bertaux et al., 2010) note. However, there is a general agreement on the three interwoven needed areas: language, content and methodology (Hillyard, 2011; Pistorio, 2009). Nevertheless, as competence is defined in this work, content knowledge cannot be regarded as a competence, but as a necessary requirement to be competent.

For the purpose of this study, the relevance of four competences for CLIL teachers is analysed. These competences are communicative, self-reflection, methodological and classroom management. These skills are studied because they have been identified as key domains CLIL practitioners must possess for an effective CLIL instruction (Hillyard, 2011; Lorenzo et al., 2011; Pavón-Vázquez & Ellison, 2013; Peacock, 2009; Pérez-Cañado, 2016; Pistorio, 2009). Indeed, these four domains, as understood and defined in this study, include most of the competences and subcompetences identified by the frameworks mentioned above. Moreover, these domains have been used as the baseline to develop CLIL training courses for both pre-service and in-service teachers (Escobar, 2010).

In terms of *communicative competence*, teachers need to be able to use Basic Interpersonal Communication Skills (BICS) and Cognitive Academic Language Proficiency (CALP) so as to develop students’ informal and academic language. Teachers need to also master the language of classroom management for teaching a content subject through the target language, as well as use the specific language of a field of knowledge and adapt the language to students’ level (Bertaux et al., 2010; Escobar, 2016; Hillyard, 2011; Meyer et al., 2015; Pistorio, 2009).

Teachers must also be thoroughly trained in *methodological competence*. That is, teachers should be trained in integrating content and language, the specific methodology of the content and language subjects, planning activities using different materials and teaching approaches and assessing content and language integratively (Bertaux et al., 2010; Hillyard, 2011; Lorenzo, Trujillo, & Vez, 2011; Marsh et al., 2010; Meyer et al., 2015; Pistorio, 2009).

Regarding *classroom management*, CLIL teachers need to make CLIL learning efficient by managing the group and the interaction, giving instructions, enhancing communication, analysing classroom dynamics, creating opportunities for incidental learning and intrinsic motivation, as well as considering the different learning levels and rhythms (Bertaux, et al., 2010; Lorenzo et al., 2011; Marsh et al., 2010; Pistorio, 2009).

Finally, in terms of *self-reflection competence*, CLIL teachers need to explore and think about their own understanding of CLIL teaching and learning, their own practice and their further professional development (Marsh et al., 2010; Escobar, 2010).

In short, there is a general consensus that CLIL teachers need to be effective in the language of teaching, teaching and learning methodologies and the classroom management, as well as teachers should reflect on their own practice (Bertaux et al., 2010; Lorenzo et al., 2011; Marsh et al., 2010; Pérez-Cañado, 2016).

2.2. CLIL Teachers' Training Needs

One of the main challenges for CLIL sustainability is the lack of qualified teachers (Eurydice, 2017). Hence, "training teachers should be a priority" (Hillyard, 2011, p.9). Additionally, adopting a CLIL approach does not lead directly to effective learning since some time is needed to get used to CLIL (Lo & Macaro, 2015). Moreover, recent evidence suggests that there may be a gap between how CLIL is defined and how it is implemented in the classroom (Van Kampen, Meirink, Admiraal & Berry, 2017).

Training needs can be the result of either discrepancy between what someone is requested and s/he is able to do (prescriptive training need) or due to a difficulty identified in their workplace and daily practice (noticed training need) (Rossett, 2002). Previous studies have aimed to identify CLIL teachers' training needs. However, these studies have tended to focus on in-service teachers (Eurydice 2017; Hillyard, 2011; Pérez-Cañado, 2016). Therefore, pre-service teachers' training needs for CLIL teaching have not been explored in depth.

Foreign language proficiency has been identified as an area where CLIL teachers need more training (Pavón-Vázquez & Ellison, 2013; Pena-Díaz & Porto-Requejo, 2008). This insufficient competence is not only due to proficiency, but due to the lack of fluency for classroom management and language pedagogical awareness (Fernández, Pena-Díaz, García Gómez, & Halbach, 2005). This insufficient language proficiency could be result of the absence of a specific required level to be a CLIL teacher (Eurydice, 2017). Another possible explanation is the insufficient teachers' sensitivity towards the characteristic genres and registers of their subjects (Meyer et al., 2015).

For *methodology*, the training needs are also extensive. CLIL may change the way teachers have traditionally taught content and foreign languages (Pavón-Vázquez & Ellison, 2013; Pena-Díaz & Porto-Requejo, 2008). Moreover, CLIL implies using methodologies that allow integrating content and language (Hillyard, 2011; Pavón-Vázquez & Ellison, 2013), as well as sequence and scaffold input strategies (Van Kampen, Admiraal, & Berry, 2018). However, it appears that there is a discrepancy between what is considered good CLIL practice and the pedagogies CLIL teachers report (Van Kampen et al., 2017; 2018). Therefore, CLIL methodological training should enable teachers to know how to integrate content and language (De Graaff, 2016). Indeed, a deep knowledge on integration, alongside with aligned practice and assessment appear to have a positive effect on pre-service language teachers application of an integrated approach (Fenwick, Humphry, Quinn & Endicott, 2014).

Classroom management is necessary in order to use different strategies to deal with language and content integration, as well as include students with different levels (Pavón-Vázquez & Ellison, 2013). Several studies have also reported the scarcity of CLIL materials (Pérez-Cañado, 2016), something that in-service teachers have also widely complained about (Durán, Beltrán & Martínez, 2016). Moreover, in-service teachers are concerned about their insufficient mastery to adapt real native materials to be used in CLIL lessons (Pérez-Cañado, 2016). Finally, trainers emphasise the need to develop *reflective practices* in CLIL teachers so that these practices enable them to take ownership of their teaching practice (Pérez-Cañado, 2016).

Therefore, training programmes should be designed considering the competences that will adequately prepare CLIL teachers (Escobar, 2016), and the performance problems these teachers may experience. For this reason, this paper aims to examine CLIL teachers' com-

petences and identify what training needs pre-service language teachers have towards these competences. With this aim in mind, three research questions (RQ) are set out:

RQ1: To what extent do stakeholders believe language, self-reflection, methodological and classroom management competences are relevant for CLIL teachers?

RQ2: What training needs do stakeholders believe pre-service foreign language teachers have for CLIL teaching?

RQ3: Do the different groups consulted identify similar competences and training needs for CLIL teachers?

3. METHOD

3.1. Participants

A total of 62 participants divided in five groups participated in this study: pre-service primary (n=19) and secondary foreign language teachers (n=25), CLIL teacher trainers (n=10), inspectors (n=5) and CLIL coordinators (n=3).

In the Catalan Context, primary education encompasses 6 to 12 year old students. To be a primary teacher, a 4-year degree has to be completed. During the degree, pre-service primary teacher are trained as generalist, since the same teachers tend to teach different subjects to the same group of students. Secondary education encompasses 12-16 year old students. It is necessary to have a qualification in a specific field of knowledge and a Master's on teacher education to become a secondary teacher.

Pre-service primary language teachers (n=19) in this study were finishing their 4-years degree. During the last academic course, they specialised as foreign language primary teachers (60 ects). They had taken subjects on applied linguistics, namely second language acquisition and ELT methodology. In these courses, especially in the CLIL course (3 ects.), pre-service primary language teachers had received initial CLIL training. Pre-service secondary language teachers (n=25) were also finishing their Master's to become secondary foreign language teachers. Most of them (84%) had previously completed the 4-years degree on English studies, where pre-service secondary teachers had received specific training on applied linguistics, second language acquisition and ELT methodology.

Teacher educators (n=10) had an average of 14-years' experience as teacher trainers. All of them trained pre-service CLIL teachers. Education Inspectors (n=5) had an average of 12 years' experience as primary and secondary school inspectors. Their specialization field, except for one, was language. Each inspector was working with an average of five schools that had implemented a CLIL programme.

Finally, CLIL coordinators (n=3), who are a support offered by the Catalan Department of Education to guide the schools in CLIL implementation, had an average experience of 8 years working with schools that have implemented a CLIL programme.

3.2. Instruments and Procedure

This study followed a mix-methods design. The quantitative approach was used to collect numerical data through pre-service teachers' and experts' questionnaire. The qualitative

approach was used to explore pre-service foreign language teachers training needs towards CLIL teaching using semi-structured interviews and open-ended questions (Table 1).

Table 1. Total amount of filled questionnaires and interviews held.

	PRE-SERVICE PRIMARY TEACHERS	PRE-SERVICE SECONDARY TEACHERS	CLIL TEACHER TRAINERS	INSPECTORS	CLIL COORDINATORS
Pre-service Teachers' questionnaire	19	25	-	-	-
Experts' questionnaire	-	-	6	5	3
Semi-structured interviews	4	4	4	-	-

3.2.1. Questionnaires

Pre-service language teachers' questionnaire had two parts. The first one had three open-ended questions that aimed to explore pre-service teachers' perceptions regarding the programme in which they were enrolled and their perceived training needs for CLIL teaching. The first question was adapted from Peacock's (2009) study. The second question aimed to explore the perceived training needs for CLIL teaching. In question three, participants were asked to rate the relevance of language, self-reflection, methodological and classroom management competence for a CLIL teacher. The second part of the questionnaire consisted of Peacock's (2009) questionnaire. This questionnaire was used because of the soundness of its design. Furthermore, it had been validated and used in other contexts. This questionnaire had a total of 20 closed-ended questions in which participants had to rate, using a 6-point Likert scale (1-not important, 6-extremely important), the presence of a given item in their programme and their perceived training needs relative to this item. All the items in the questionnaire referred to language (1 item), self-reflection (4), methodological (6) and classroom management (4) competences.

For the purpose of the study, Peacock's (2009) questionnaire was slightly adapted. Initially, the questionnaire only analysed the presence of each item in the programme. However, pre-service teachers training needs could not be inferred directly from the training the programme had offered. For this reason, using the example of Pérez-Cañado (2016), a second column was added to explore the perceived training needs.

Experts' questionnaire had four open-ended questions. The first three questions were the same as in the pre-service teachers' questionnaire for data triangulation purposes. A fourth question aimed at prompting other training needs or difficulties relative to CLIL implementation.

Both questionnaires were previously piloted with pre-service language teachers (n=10) and trainers (n=5) that did not participate in the study but had the same characteristics as the participants in this study. Some changes and adaptations, most of which were language adjustments, were made according to the feedback provided.

3.2.2. *Semi-Structured Interviews*

The semi-structured interviews aimed to better comprehend the current situation of pre-service teachers' qualification for CLIL. Pre-services teachers' semi-structured interviews had three questions. The first question aimed to obtain information about the competences CLIL teachers should have. Questions 2 and 3 intended to know the interviewees' perceived training needs relative to the competences highlighted and the training received. The same questions as the ones in the experts' questionnaires were used for CLIL teacher trainers' semi-structured interviews.

3.3. Data analysis

3.3.1. *Statistical Analysis*

Quantitative data was entered in the software package SPSS version 22. The consistency of the questionnaire was assessed with Cronbach's alpha ($\alpha=.958$). Since the data was not normally distributed, non-parametric tests were used. The statistical tests used were Spearman r , to correlate stakeholders' perceptions, Mann-Whitney, to explore significant differences between pre-service primary and secondary teachers, Kruskal-Wallis, to explore a possible main effect of group, and Friedman Two-Way analysis to analyse main effects of competence and training needs.

3.3. Data transformation

Qualitative data were coded and categorised in order to compare the results among the groups of participants. The categorisation process was data driven and the software Atlas.ti 7 was used. The categories were created identifying meaning units using the constant comparison method (Glaser & Strauss, 1967). Once the categories and codes were created, 10% of the data and the codes were given to a second rater. The inter-rater reliability score was calculated using simple percentage agreement, which resulted in 93%. Some adjustments were done as a result of the suggestions made by the second rater. At the end, the codes were organised into broader meaning categories so as to make a logical narration of the findings. Each code was defined within the framework of the study and an example was provided. Finally, the absolute frequency of each code was calculated for each group of participants.

4. RESULTS

4.1. CLIL Teachers' Competences

This study aimed to analyse the extent to which stakeholders (pre-service primary and secondary language teachers, trainers, inspectors and CLIL coordinators) perceived communicative, self-reflection, methodological and classroom management competences relevant for

a CLIL teacher and, if so, whether these competences were perceived equally relevant by all groups. The overall medians for each competence were calculated (Table 2). Language, methodological and classroom management competences got the higher score (6), whereas self-reflection got an overall median of 5.

Table 2. The perceived relevance of each competence (median).

	TRAINERS	INSPECTORS	CLIL COOR- DINATORS	PRE-SERVICE SECONDARY	PRE-SERVICE PRIMARY	MEDIAN
Communicative Competence	6	6	6	6	6	6
Self-reflection Competence	5	4	5	6	6	5
Methodological Competence	6	6	6	6	6	6
Classroom Management Competence	5.5	6	5	6	6	6

A Friedman's Two-Way Analysis was run in order to analyse whether participants perceived these competences as equally important. A significant main effect of competence was found ($\chi^2(3) = 14.625$, $p = .002$, $W = .25$). However, the pairwise comparisons with the significant values (p) adjusted revealed that there were not significant difference between the competences analysed. The pairwise comparison closer to significance was the one between communicative and self-reflection ($p = .085$), meaning that self-reflection competence was believed to be less relevant than communicative competence.

Qualitative data (the interviews and the open-ended questionnaires) revealed stakeholders referred to other competences apart from the ones initially analysed. Since these new domains were repeatedly reported, they were included in the analysis. Four new domains were added and coded as content knowledge, teamwork, material development and interschool collaboration competences (figure 1).

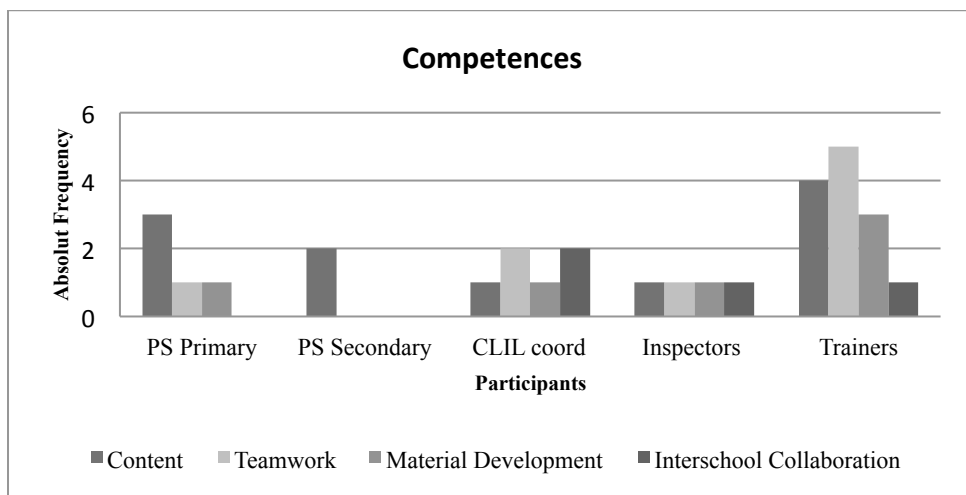


Figure 1. CLIL teachers' competences according to participants.

Although content knowledge is not considered a competence within the framework of this study, *content knowledge* was repeatedly reported as a competence by the participants of this study. Stakeholders believed that a good CLIL teacher should possess an extensive knowledge of the content subject and its peculiarities:

"The ideal CLIL teacher has perfect English and has to be specialist on the content Subject. Moreover, s/he has a third aspect, the methodology, because being proficient in the foreign language and the content is not enough." (S¹_01),

"More cross-curricular knowledge; teachers should know about other subjects apart from their speciality." (I_03).

However, stakeholders did not believe content knowledge, language and methodology were sufficient for CLIL success and sustainability. They believed that developing *coordination and teamwork competences* was necessary to implement a project where content and language could be successfully integrated.

Finally, stakeholders, especially the experts, believed that *material development competence* was also necessary for a CLIL teacher. Knowing how to access, adapt and create teaching resources for CLIL learning is essential due to the scarcity of available CLIL materials.

"To know how to create classroom materials. People are used to using the book or the materials other people have created, but they never have time to create their own." (T_03).

¹ The capital letters stand for: S: pre-service primary teacher; MA: Pre-service secondary teacher; T: Teacher Trainer; I: Inspector; CC: CLIL Coordinator.

4.2. Pre-Service Foreign Language Teachers' Training Needs

Pre-service teachers were asked to assess, using Peacock's (2009) questionnaire, the CLIL training received and their training needs. Different items of this instrument referred to the same competence. The consistency of the items measuring the same competence was assessed using Friedman's Two-Way Analysis test. Since no main effect of item was found, a single value for each competence (language, self-reflection, classroom management and methodological competence) was calculated (Table 3).

Table 3. Medians of the perceived training needs regarding each analysed competence.

	COMMUNICATIVE COMPETENCE	SELF-REFLECTION COMPETENCE	METHODOLOGICAL COMPETENCE	CLASSROOM MANAGEMENT COMPETENCE
Pre-service Secondary teachers	5.5	5	5.4	5.5
Pre-service primary teachers	6	5.33	5.6	5.5

Another Friedman's Two-Way Analysis was run in order to explore whether pre-service teachers perceived the depth of the training needs was different for each competence. The results suggested that there was no main effect of training need for pre-service secondary teachers ($\chi^2(3)=5.478, p=.479, W=.09$), but there was a significant main effect of training need for pre-service primary teachers ($\chi^2(3)=9.980, p=.019, W=.23$). The pairwise comparisons revealed that there was a significant difference between the training needs for communicative and self-reflection competences ($p=.05$). Pre-service primary teachers seemed to perceive that their training needs for communicative competence were higher than for self-reflection.

An across group analysis between pre-service primary and secondary language teachers was carried out in order to explore differences in their perceived training needs. To this end, several Mann-Whitney U tests were run. The results showed no significant differences for communicative (Mdn. 6 vs. Mdn. 5.5 respectively; $U=199.500, z=-.271, p=.786$), self-reflection (Mdn. 5.33 vs. Mdn.5 respectively; $U=173, z=-1.162, p=.245$), methodological (Mdn. 5.6 vs. Mdn. 5.4 respectively; $U=201.5, z=-.436, p=.663$) nor classroom management (Mdn. 5.5 vs. Mdn. 5.5 respectively; $U=196.5, z=-.576, p=.564$).

A Mann-Whitney test was run to know how pre-service teachers perceived their CLIL qualification. The results suggested that pre-service secondary teachers considered they were significantly less qualified for CLIL teaching than pre-service primary teachers (Mdn. 1 vs. Mdn. 3.5 respectively; $U=384.5, z=3.907, p<.001$). Apparently, the introductory course to CLIL teaching had a positive effect on pre-service primary teachers' perceptions.

The training needs of pre-service foreign language teachers were further explored through the analysis of the qualitative data. Training needs regarding eight different competences were reported. These competences were the four initially analysed (communicative, self-reflection, methodological and classroom management competences), as well as the four

domains reported by stakeholders (teamwork, content knowledge, interschool and materials creation competences).

As for *communicative competence*, stakeholders mainly perceived two different needs. First, their lack of foreign language proficiency (29 references²) because stakeholders believed pre-service teachers did not have sufficient language command to teach a curricular content through a foreign language. The second need identified was the lack of language awareness and pedagogical knowledge (4 references) to scaffold and adapt the foreign language to students' level:

"They [pre-service teachers] lack fluency in order to deliver lessons successfully. It is hard for them to adjust explanations to different levels, to explain concepts simply and efficiently, to paraphrase, to offer good examples, etc." (T_10).

Methodological competence was the domain reported the most when mentioning training needs. One of the needs relative to this domain was the insufficient comprehension of what integration meant and what implications it had for the teaching practice (27 references).

"The most important training need is to comprehend that you are not doing English [...] you are teaching a subject" (T_01).

Related to this first need, stakeholders perceived more training should be provided regarding CLIL methodology, learner-centred methodologies (project-based learning, problem-based...) and collaborative learning (51 references):

"Methodologies where the importance is on the task not on teachers' talk: projects, collaborative tasks..." (I_02).

"Specific instruction on CLIL methodology." (MA_01).

Although previous literature had identified *classroom management* and *self-reflection competences* as important domains for a CLIL teacher, stakeholders barely mentioned training needs relative to these two competences. However, stakeholders did report training needs for *interschool collaboration competence* (10 references). It was believed that teachers should, first, become aware of the need of sharing good CLIL practices and experiences and, second, teachers should know how to disseminate this information in an informal and formal way to the educational community.

"Capacity to disseminate what you are doing in the classroom with other schools." (T_01).

"To visit and get to know schools that follow CLIL methodology; to have experienced CLIL teachers as Master's teachers so that we can have an opinion on it from a practical perspective." (MA_07).

Participants also reported training needs for *teamwork competence*. Stakeholders mainly perceived two training needs relative to this domain: not having enough collaborative experience (9 references), as well as the absence of structures and institutional support to enable this coordination and cooperation to occur (6 references). As for *content knowledge*, the main need was having knowledge in a specific field of knowledge (13 references), but also a lack of general cultural knowledge (5 references). This need was the result of the specialisation of teachers that, at the end, built up barriers for the integration of different subjects.

² Number of times this need was reported.

“Secondary teachers’ specialization makes teaching a content subject in English difficult. However, there are some exceptions of content teachers that are proficient in a foreign language.” (I_03).

Finally, two different training needs were highlighted for *material development competence*: first, not knowing what should be considered in order to decide whether already existing materials were adequate for the educational purposes established in terms of content and language. Second, the same problem appeared for material creation.

“They [Students] also need to improve their competence in relation to the selection, adaptation and creation of activities, materials and resources.”(T_10).

Overall, stakeholders and pre-service language teachers mainly reported training needs for two of the competences initially analysed: communicative and methodological. Nevertheless, participants also identified training needs for interschool collaboration, teamwork, content knowledge and material development.

4.3. Across-group Comparison of the Competences and Training Needs Highlighted

The third aim of this study was to explore whether experts and pre-service teachers had different perceptions regarding CLIL teachers’ competences and training needs. For this reason, first, the perceived relevance of the competences will be compared. Second, the training needs identified by the stakeholders will be contrasted.

In terms of competence relevance, a Kruskal-Wallis test showed a non-significant main effect of group (experts vs. pre-service primary vs. pre-service secondary language teachers) for communicative ($H(4)= 1.545, p=.819, W=.08$), self-reflection ($H(4)=8.383, p=.079, W=.12$), methodological ($H(4)=1.131, p=.889, W=.07$) and classroom management competences ($H(4)=1.351, p=.853, W=.07$). Therefore, both experts and pre-service language teachers perceived these competences are equally relevant for a CLIL teacher. However, differences between groups appeared in the qualitative data, as figure 1 shows. While pre-service teachers mainly reported content knowledge as a characteristic of a good CLIL teacher, the experts also referred to teamwork, material development and interschool collaboration.

Regarding the training needs, variations were found between groups. For instance, pre-service and experts agreed on identifying *communicative and methodological competences* as the two domains where more training needs were reported. However, while both groups agreed that language command was the main need for communicative competence, opinions varied for methodology. Teacher trainers and pre-service teachers referred to the insufficient comprehension of CLIL approach as an important training need. Nevertheless, the experts were the only ones who highlighted the incomplete mastery of learner-centred methodologies.

As for *interschool collaboration*, teacher trainers, inspectors and CLIL coordinators considered that CLIL teachers needed to become aware of the importance of sharing experiences with other schools implementing CLIL (4 references). However, pre-service teachers believed real good CLIL practices should be provided during initial teacher education (10 references). Interestingly, trainers and CLIL coordinators perceived the education administration as a limitation for interschool collaboration. As for *teamwork competence*, experts considered teachers tended to work independently and they did not think collaboration was crucial in CLIL programmes (4 references), whereas trainers and pre-service primary teachers (6 references) believed school organisation was a barrier for cooperation among teachers.

In the case of *content knowledge*, experts considered the lack of content knowledge as a limitation for CLIL success. Finally, different opinions could be found for *material development*. This was the domain that worried teacher trainers and coordinators the most. While pre-service primary teachers were concerned with the availability of teaching materials (10 references), trainers and coordinators were concerned with the creation and adaptation of teaching materials (6 references).

Overall, the across group comparison reinforces that language and methodology are the two domains where considerable training needs are reported. However, the different perceptions between stakeholders in the other domains have different implications. First, both voices have to be heard when designing a CLIL training course. Second, it could be believed that training programmes are addressing these needs, whereas trainees do not. Therefore, planned and systematic evaluation of CLIL teacher training programmes is paramount.

5. DISCUSSION

This study aimed to examine CLIL teachers' competences and training needs from the perspective of CLIL teacher trainers, inspectors, CLIL coordinators and pre-service primary and secondary foreign language teachers.

The relevance of communicative, self-reflection, methodological and classroom management competences was studied from a theoretical and methodological point of view using Peacock's (2009) questionnaire. In addition, an inductive analysis of an open-ended questionnaire and an interview allowed for identifying other domains (content knowledge, teamwork, interschool collaboration and material development) stakeholders believed to be relevant for CLIL teachers.

In line with previous studies (Bertaux et al., 2010; Lorenzo, et al., 2011; Marsh et al., 2010), stakeholders believe communicative, methodological and classroom management competences to be equally important for a CLIL teacher. However, opposite to previous research (Escobar, 2010), participants perceive self-reflection competence to be slightly less relevant than the other three. This difference could be the result of the different nature of these competences. While communicative, methodological and classroom management are believed to be essential tools for teaching, self-reflection, although repeatedly reported as an important competence for teaching improvement (Schön, 1987), is an introspective process that may not be directly observable in the teaching practice. In fact, most studies (Bertaux et al., 2010; Marsh et al., 2010; Pistorio, 2009) have described language, methodology and classroom management skills as three basic domains for CLIL teachers, whereas self-reflection has only been considered important for some specific training programmes (Escobar, 2010). Indeed, what is surprising is that experts identify this competence as slightly less relevant for a CLIL teacher. Probably, this finding is linked to their vision of the purpose of teacher education: to create technicians (instrumental education) or reflexive practitioners.

Content knowledge, teamwork, interschool collaboration and material development competences have been included in the study because the data driven analysis revealed they were repeatedly elicited. Although these competences are not new, previous CLIL frameworks (Bertaux et al., 2010; Lorenzo et al., 2011; Marsh et al., 2010) do not include all of them. However, the experts are mostly the ones who identify these competences as essential for

CLIL instruction. A possible explanation is that experts have a better defined professional profile of a CLIL teacher.

Stakeholders believe *content knowledge* to be necessary for a CLIL teacher since CLIL implies integrating a foreign language and a content subject (Hillyard, 2011; Escobar, 2010). Due to teacher specialisation, it may be difficult to have qualified teachers in both language and content (Eurydice, 2017). This may explain why stakeholders believe teamwork competence as a necessary skill for a CLIL teacher. That is, *intra and interschool collaboration* seems to be necessary for CLIL implementation, given that teachers may not have enough theoretical and methodological knowledge in one of the two subjects. As for *material development competence*, Pérez-Cañado (2016) has already pointed out the scarcity of CLIL materials. However, successful CLIL programmes are characterised, among other aspects, by the availability of teaching materials. This may explain why material development was considered an essential domain for CLIL teachers in this study.

All in all, the results suggest that the competences identified are not exclusive of CLIL teaching, but of good pedagogy (Nikula et al., 2016). Therefore, it could be the case that the challenges teachers and learners face in CLIL settings make more salient the need of good pedagogy. For this reason, more attention to initial teacher education is needed (Escobar, 2016).

The second aim of this study was to explore stakeholders' perceived training needs for CLIL teaching and learning. Training needs for language, self-reflection, methodology and classroom management were reported. However, the results obtained in the data-driven analysis of the open-ended questionnaire and the interview highlight mainly two considerable training needs: foreign language and methodology. The agreement on these two needs can be the result of the requirements established to become a CLIL teacher, mainly language and methodology (Eurydice, 2017; Hillyard, 2011; Pistorio, 2009).

When identifying training needs for *communicative competence*, stakeholders basically referred to language proficiency. As Eurydice (2017) pointed out, this lack of foreign language proficiency may be due to low language proficiency level required to be a CLIL teacher (B2-primary, C1-secondary). In the case of methodological competence, mainly two aspects were highlighted: first, the lack of comprehension of what CLIL means and, therefore, implies when it is applied in the classroom. Indeed, De Graaff (2016) warns that the flexibility of the term 'integration' can be the main threat for CLIL sustainability. A second perceived training need is the insufficient instruction in teaching and learning methodologies for CLIL purposes (Pavón-Vázquez & Ellison; 2013; Pena-Díaz & Porto-Requejo, 2008).

Besides these two main needs, participants report training needs for all the domains, both those initially analysed and those that were later added. These training needs seem to be the result of the identification of daily classroom challenges instead of prescriptive training. In terms of both intra and interschool collaboration, previous research has already highlighted the lack of collaborative culture, especially between teachers that belong to different disciplines (Durán, Beltrán & Martínez, 2016). In addition, previous studies have also found that CLIL materials are scarce or not thought for non-native speakers (Pavón-Vázquez & Ellison, 2013).

The third aim of this study was to compare the perceptions of the different groups consulted. As for competences, the across-group comparison did not show differences in perception. In fact, it seems that participants were reluctant to identify a competence as not important for a CLIL teacher. Regarding training needs, pre-service teachers tended to focus

on those domains closely related to CLIL teaching practice (language, content, methodology), whereas experts also identified needs considering the CLIL teacher as a member of a school community. These differences could be explained by the perspective of each group on CLIL implementation, but also on the participants' experience (Durán, Beltrán & Martínez, 2016). That is, pre-service teachers had short experience in CLIL settings, therefore they basically identified the training needs related to the prescribed profile of a CLIL teacher. On the contrary, experts, who had more experience dealing with CLIL settings, noticed salient training needs which were the result of daily teaching practice.

All in all, this study presents some limitations and, therefore, the results have to be interpreted with caution. First of all, the number of participants is limited to two different pre-service training programmes in Catalonia and, hence, the training needs for pre-service teachers enrolled in other courses or in other countries may vary. Moreover, this study has analysed the perceived training needs from foreign language teachers' perspective. Nevertheless, the results may not be representative of content teachers' needs since their experience and knowledge comes from the content subject. It is worth further exploring the training needs of content and foreign language teachers towards CLIL teaching and learning so as to know what specific training needs each group has towards the competences analysed, as well as to find communalities.

6. CONCLUSION

The results of this study have some pedagogical implications. First, it should be defined CLIL teachers' profile so that teacher education, both initial and ongoing development, contribute to the development of CLIL teachers' competences. Second, the findings suggest that different stakeholders identify different training needs, some of which are prescriptive, others noticed and others prospective (Rossett, 2002). Thus, the design, implementation and evaluation of initial teacher education for CLIL has to consider the voice of the different stakeholders. Third, initial teacher education should offer sufficient opportunities for prospective teachers to develop those competences that will be required in CLIL settings and not just focus on communicative and methodological competences. Finally, teacher education programmes have to be systematically evaluated to ensure that the purpose of these programmes is reached.

In short, this present study has shed some light in the area of current pre-service CLIL teachers training needs. From the outcomes it can be concluded that not enough CLIL education is provided to pre-service teachers. Furthermore, the results indicate possible directions pre-service CLIL teacher training should take. If there is a true intention of developing successful multilingual education, qualifying teachers within this approach should be a priority.

7. REFERENCES

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