The impact of CLIL teacher education on the beliefs of in-service secondary CLIL teachers

Mª Paz Azparren Legarre
I-Communitas: Institute for Advanced Social Research, Public University of Navarre

ABSTRACT: This qualitative study investigates the impact of a CLIL teacher education programme on the beliefs that six in-service CLIL secondary school teachers of content subjects had about CLIL as an approach for teaching and about using a FL as the means of instruction. The importance of CLIL teacher education provision is now uncontested, however, little research exists on the impact that those courses may have on teachers' beliefs. Data was collected by means of questionnaires and semi-structured interviews before and after the programme was delivered to teachers. Results showed that the course had a significant impact on the teachers' beliefs. It enabled teachers to learn about, understand and become aware of what CLIL is and implies both as regards the approach itself and as regards language. Teachers gave voice to their beliefs and were able to reflect on their own previous CLIL teaching practices. After the programme, the teachers became empowered and confident professionals who were willing to apply CLIL principles in a conscious way. This evidence of impact has important implications for CLIL teacher education provision and for effective implementation in classrooms.
Key words: teacher beliefs, CLIL teacher education, teacher awareness, professional empowerment, professional development

El impacto de la formación de profesorado AICLE en las creencias de profesores AICLE de educación secundaria

RESUMEN: Este estudio cualitativo investiga el impacto de un programa formativo de profesorado AICLE sobre las creencias que seis profesores AICLE de educación secundaria en servicio tenían sobre AICLE como metodología de enseñanza y sobre la utilización de una lengua extranjera como vehículo de enseñanza. La importancia de la formación del profesorado AICLE es hoy incuestionable, sin embargo, existe poca investigación sobre el impacto que esta formación tiene sobre las creencias de los profesores. Los datos fueron recopilados a través de cuestionarios y entrevistas semi-estructuradas antes y después del programa. Los resultados mostraron que el curso tuvo un impacto significativo en las creencias del profesorado. El programa posibilitó que los profesores aprendieran y entendieran los principios de AICLE, y lo que esta metodología implica en la enseñanza y aprendizaje de una lengua extranjera. Los profesores pusieron voz a sus creencias y reflexionaron sobre sus prácticas docentes previas. El programa permitió el empoderamiento de los profesores y la mejora de su autoeficacia con una mayor disposición a aplicar los principios de AICLE. Esta evidencia de impacto tiene implicaciones importantes para la provisión de formación del profesorado AICLE y para una implementación efectiva en las aulas.

1. INTRODUCTION

Teacher beliefs have been defined in multitude of forms (Borg, 2003; Pajares, 1992; Richards, 1998). Common to all definitions is the assumption that teachers' beliefs influence their instructional decisions and classroom practices. Beliefs can also influence teachers' professional development (Johnson, 1994) and their adoption and acceptance of new methodologies (Donaghue, 2003). Several factors such as prior language learning experience (Freeman, 1993), teacher training (Hall, 2005), classroom practice (Woods, 1996), and context (Crookes & Arakaki, 1999) are influential in the instructional practices and decision making processes of foreign language teachers. In this paper, beliefs are considered as premises that teachers consider to be true, with a solid evaluative and affective component, that may stimulate action and which may be resistant to change (Borg, 2011).

Teacher education stands as a driving force that can motivate changes in beliefs and, thus, favour and contribute to professional development and to improved teaching practices (Borg, 2003). Trainees' beliefs are considered to evolve in heterogeneous ways as result of teacher training since their evolution depends on different factors such as the relationship teachers have with their own beliefs, with teaching and with learning, among other things (Almarza, 1996). Hall (2005) claimed that teachers adjust their preconceived beliefs about content, students and teaching methods to the professional knowledge that teacher education provides, which results in determination into what teaching methods to use in the classroom.

1.2. CLIL teachers' beliefs, CLIL teacher training and professional development

Content and Language Integrated Learning (CLIL) is an approach that integrates both the content of a subject matter and an FL when teaching (Coyle et al., 2010). For an approach to be considered real CLIL, it should integrate content, language, cognition and culture. CLIL stimulates learners' cognitive development and promotes competent and culturally broad minded citizens for the globalized world. CLIL is usually implemented by content subject specialist teachers, who need to incorporate the FL to their teaching practices in an integrated way. Being content specialists, these teachers' beliefs mainly orbit around content instruction, which leads in turn to content-based teaching practices. Language instruction is usually reduced to specific academic vocabulary instruction of the subject matter (Hüttner et al., 2013). Both the focus on content as well as ignoring the development of pluriliteracies (see Meyer et al., 2015) may prevent students' development of language accuracy (Cammaratta, 2009) and may impede deep learning to occur in the part of the learner (Meyer & Coyle, 2017). Despite using an FL for instructional reasons, these teachers may have not undergone the cognitive transition from content to CLIL teachers.

Pedagogically, they may lack knowledge about the approach, they may be unaware of

what the approach implies for them as professionals, for their learners and for society as a whole. They may not know what the ultimate goals of CLIL are, they may be unaware of the role that language plays in CLIL, and finally, they may not know how content and language integration can be done when teaching (Halbach, 2014; Pérez-Cañado, 2016a). All these constraints might affect CLIL instruction. The lack of knowledge about these elements might lead to teaching practices far from real CLIL, such as translation from the L1 (Contero et al., 2018) and content adaptation into easier contents. In addition to this, teaching in an FL can provoke negative emotions in teachers such as stress, fear and insecurity (Moate, 2011) since they are getting out of their comfort zone and struggling to reinvent their practice (Bonnet & Breidbach, 2017; Cammaratta, 2010; Pappa et al., 2017).

Aware of this situation, European authorities soon began to encourage CLIL teacher education provision to content teachers (Eurydice, 2006). CLIL teacher education provides teachers with pedagogic knowledge about the approach. Teachers both need to become aware of language (Macaro et al., 2019) and to learn how to integrate both content and language in their lessons efficiently. Research has shown that education which provides knowledge about planning, material creation and adaptation, and assessment contributes to teachers' professional development and may motivate evolution and change in the teachers' beliefs (Fernández Costales & Lahuerta Martínez, 2014; Pavón Vázquez et al., 2020; Pérez-Cañado, 2016b, 2018). Teachers may evolve from professionals who implement CLIL intuitively and autonomously (Hüttner et al., 2013) and whose sense of responsibility (Kurihara & Samimi, 2007) and efficacy (Nishino, 2012) stimulates them into making efforts, to reflective practitioners (Schön, 1987), whose CLIL instructional decisions and teaching practices are consciously based on solid grounds about this educational approach. This professional development may lead, thus, to improved and real CLIL teaching practices in the classroom.

Research about the impact that CLIL teacher education has on teachers' beliefs remains scarce (Azparren, 2020, Escobar Urmeneta, 2013; Yi Lo, 2019) and much of the existing research on this issue is not strictly related to CLIL but to other FL methodologies such as CBI (Cammaratta, 2009, 2010). This paper aims both to contribute to this field of research by investigating the impact of a CLIL teacher education programme on the beliefs of six in-service CLIL secondary school teachers, and to make visible the unseen dimensions of teachers' lives (Borg, 2019). It is based on the analysis of teachers' beliefs about CLIL as an approach for teaching as well as using English as the means of instruction before and after the programme.

2. Research questions

The research questions that motivated this research were the following:

- How does a CLIL teacher education programme impact on the beliefs of CLIL secondary school teachers of content subjects?
- Before the programme, what were the content teachers' beliefs about CLIL as an approach for teaching and about using an FL (English) as the means of instruction?

- How do these beliefs evolve during the programme?

3. MATERIALS AND METHOD

3.1. Context and participants

The context for the study was a CLIL teacher education programme delivered by the researcher to a group of secondary school content teachers. The programme had been designed by the researcher for the purpose of this research (see Appendix). It was based mainly on Coyle et al. (2010), and included original materials and resources. The aim of the programme was addressing the real needs of secondary school content teachers and to train and to educate them on theoretical and practical aspects of the CLIL approach. The programme consisted of five sessions of three hours each, and was delivered to teachers over a period of five weeks (one session per week). Each session combined theory as well as time for reflection and discussion about specific issues related to CLIL and to CLIL teaching practices.

Six CLIL content teachers attended the course voluntarily and agreed to take part in this study. The participants were four females and two males, who were specialist teachers of content subjects. Table 1 summarizes the more relevant characteristics of the participants (referred to hereafter as T1-T6). All six teachers consented for their anonymous data to be used for the purposes of this research.

Table 1: Participant profiles

PARTICIPANTS	GENDER	AGE	ACADEMIC BACKGROUND	ENGLISH LEVEL	SUBJECTS HE/SHE TAUGHT IN ENGLISH	TEACHING EXPERIENCE *(years)*	CLIL TEACHING EXPERIENCE *(years)*
Teacher 1 (T1)	Female	41-50	Engineering	C1	Maths	5	1
Teacher 2 (T2)	Male	31-40	Chemistry	C1	Chemistry	2	2
Teacher 3 (T3)	Female	31-40	PhD Chemistry	C1	Chemistry	2	2
Teacher 4 (T4)	Female	41-50	Biology Biochemistry	C1	EFL	20	4
Teacher 5 (T5)	Female	51-60	Masters MBA	Native	Geography & History	23	2
Teacher 6 (T6)	Male	41-50	Geology	C1	Biology	6	3

3.2. Data collection and analysis

Data was collected at two different moments during the study by means of questionnaires and semi-structured interviews. The teachers first completed a pre-course questionnaire, which had 9 questions about their professional background as well as 25 questions about their beliefs about CLIL as an approach for teaching and about using English as the means of instruction. Open-ended questions were used for teachers to comment and expand their answers. Three weeks after the programme had concluded, six semi-structured individual face-to-face interviews with the researcher were conducted at the school, each lasting on average 50 min. Interviews included 30 questions and were recorded. As with the pre-course questionnaires, the questions were about CLIL, about using English for teaching content subjects, and about the CLIL programme the teachers had just attended.

Data was analysed qualitatively (Patton, 2002). First of all, questionnaires were transcribed and computed, then, interviews were transcribed verbatim. Data was read and coded into two main themes, beliefs about CLIL as an approach for teaching content subjects in an FL, and beliefs about using an FL as the means of instruction, and into trends related to each theme.

4. Results

4.1. Beliefs about CLIL as an approach for teaching content subjects in a FL

Results about CLIL as an approach for teaching content subjects in a FL could be grouped into three trends as regards teachers' beliefs:

- teaching practices;
- professional satisfaction;
- and benefits of teaching and learning through CLIL.

As regards teaching practices, results showed that none of the teachers knew what CLIL was about before the programme was delivered, that is, none of the teachers had taught through real CLIL in the past. For example, T3 commented "Well... I really don't know the methodology. I haven't really implemented it yet".

Teachers simply translated everything and applied the same teaching ways in the CLIL classroom as they did in their classes in the L1. The only difference was the language they used for teaching and for communicating with learners. T1 explained "I use the same teaching practices when I teach my subject in English and in Spanish", and T6 "I thought that CLIL was just that, teaching Biology or Geology in English, and that the only difference was the language of instruction".

In addition to this, teachers did not know that language was so relevant and that it should be taken into consideration. They had been paying some attention to language from time to time during the teaching process in the past, but it had just been for practical reasons, that is, because learners did not understand content due to lack of specific vocabulary, for example. T1 mentioned "I didn't know that language was relevant to CLIL. I heard something about this once but I didn't know how language was involved".

This aspect evolved positively due to the CLIL teacher education programme in that teachers showed deep understanding and awareness about CLIL and about how to implement it on a regular basis. For example, T3 explained "Before the course, I simply translated everything, and then, I added a vocabulary section to the CLIL groups. Now it is going to be different because it is not going to be just specific words about the subject but something different... a different way of doing things and different exercises so students can express... yes, so students can express things a bit more", and T1 "I have always taken for granted that students understand what I say but now I see that if I help them with language, they will learn content in a better way".

Moreover, teachers were able to acquire and develop a CLIL teaching professional criteria and to self-evaluate and become critical about their own CLIL teaching practices in the past before attending the course. They referred to these teaching practices as "wrong" or "inappropriate", and wanted to change them consciously in the future. T3 observed "Now I see that I have been doing things wrong. From now on, I will be able to prepare my classes better and to take language into consideration".

Regarding the second trend, professional satisfaction, teachers believed that CLIL was professionally rewarding for them before the programme. For example, T2 mentioned "I feel that I'm doing something useful and helpful", and T6 "I think that this is an evolution in my work as a teacher. I think that this is adding some prestige to what I do. Other colleagues who do not teach their subjects in English somehow feel some kind of admiration for us".

On the negative side, teachers believed that CLIL implied a big effort in that they had to prepare absolutely everything in order to teach their subjects in English, and that they had to invest a lot of time in CLIL. These beliefs provoked negative feelings in teachers such as frustration, stress and anxiety. For example, T3 explained "I like it but I lack confidence because of English. I feel insecure and I need to prepare things very well before getting into class. This is very stressful and tiring", and T6 "It is frustrating sometimes. CLIL takes you so much time and energy"

All in all, teachers had great expectations in that learning about CLIL could help them improve in their classes. T6 commented "I want to improve and become better at teaching in English so I'm really looking forward to learning what all this is about".

After the programme had concluded, teachers considered that it had helped them develop their sense of self-efficacy when teaching the subject. They somehow relaxed in that they knew how to do things. For example, T3 explained "I think that this methodology provides a big control of the subject, both referring to content and to language", T6 "Learning about CLIL has been very helpful for my personal development in the classroom because I was very insecure... but now I will be able to help students more with the subject by means of material adaptation, planning…", and T2 "Now I know how to do things in my CLIL classes. I feel more confident now, yes".

Even if teachers still considered that CLIL implied a big effort and time investment, T4 commented "CLIL can be really exhausting", they were enthusiastic about CLIL and they were open and willing to implement the approach as they had learnt it in the programme. T2 mentioned "I didn't know what CLIL was but now I feel that I know about the methodology and about how to put it in practice. Yes, I know how to do things in my classes now, yes".

As concerns the third trend, benefits of teaching and learning through CLIL, teachers considered that CLIL was positive to both teachers themselves and to learners at both

moments during the study, before and after the CLIL teacher education programme. It was positive for teachers because they found usefulness to their English knowledge, because they thought that CLIL provided good job opportunities, and because they considered CLIL a positive evolution in their careers. For example, T6 explained "I have been studying English for several years and now I can put it in practice", and T4 "CLIL is challenging and a good job opportunity. I love it. I find it so enriching because it helps you evolve professionally and you learn a lot as a teacher".

According to the teachers, CLIL was positive for learners because they considered that having a good knowledge of English would be very beneficial for them in their lives as adults for study and work, and because teachers saw English as the lingua franca in many areas of knowledge, so using it for learning specific content subjects was also contributing to learners. T2 commented "My subject matter [Chemistry] is worked and studied in English in real life, scientific papers are in English... so you know, I think that learning it in English now is going to be so beneficial for students in the future. I think that this is a positive evolution for students, yes", and T6 "This is good for students because their linguistic abilities will improve as a result of learning specific contents in English now. And this will be very helpful for them in the future for having good study and work opportunities".

4.2. Beliefs about using a FL as the means of instruction

Results showed that the FL can exercise ample influence on CLIL secondary school teachers of content subjects. Five trends emerged related to the effects that the FL can have on distinct facets of their beliefs:

- content instruction;
- content and language;
- learners' communication;
- the teacher-learner relationship;
- and teachers' anxiety and stress

As regards the first trend, content instruction, results showed that teaching their content subjects had become difficult for most teachers because: (a) explaining new concepts in English was a challenge to them; (b) it was impossible to cover all the contents; and (c) the subject was adapted to make contents easier and simpler. For example, T3 mentioned "Finding ways to explain the same content in several different ways is difficult to me".

In addition to this, teachers also considered that teaching through an FL affected classroom dynamics. More specifically, the rhythm of work became slow, learners got distracted easily and they were not always willing to listen to teachers, who needed to deliver different types of activities in order to keep their attention. T6 explained "I sometimes, or even many times, find that my students can't answer questions or work as I need them to. The reason is that they don't know important vocabulary about the content".

After the CLIL teacher education programme, teaching content through English was considered less difficult. For teachers, knowing and, above all, understanding CLIL and how language could be integrated in their teaching practices really made a difference in that language stopped being a limitation in many areas of content instruction. T3 mentioned "Yes, now I know how to integrate language and how it can be taught to students. This

is amazing because I have suddenly found the solution to many problems I had in class".

Regarding content and language, results showed that teachers adapted curricular content to more basic knowledge of the content. The reason for doing so was that content was explained, learnt and worked in English. In a similar vein, language adaptation also took place because teachers found the language that was used in subject books difficult for learners to be able to understand and learn both content and language. For example, T6 explained "I simplify the contents and I adapt the subject to the group and the English level of students", and T3 "I try to use easy vocabulary and easy expressions so language is not an obstacle to understanding content".

After the CLIL teacher education programme, teachers still considered that adapting content and language would still be a necessity mainly because of learners' level of English, but they had learnt how to integrate language on a regular basis for learners to be able to understand and work with content. T2 mentioned "I think I will need to continue simplifying contents, but now the main reason for doing so won't always be language".

As for learners' communication, results showed that, according to the teachers, learners: (a) both were not able to express what they wanted to say and could not express themselves as they would have liked; (b) did not produce but reproduce English, that is, learners first underwent a memorization process and then reproduced what they had memorized previously. Neither spontaneous English nor free production occurred on the part of the learners. For example, T2 commented "Students sometimes have problems for saying what they want to say", and T6 "Students learn everything by heart so they are not really using English, they simply repeat everything as they studied it at home".

After the course, teachers thought this situation would improve simply because they would be able to teach language better, however, teachers still thought that learners would somehow continue memorising things.

With reference to teacher-learner relationships, results showed that for teachers their relationship with learners was different in the CLIL classroom due to using English. It also became evident in the results that teachers provided less educational messages to learners, activities became poorer, and they needed to control discipline more in the CLIL classroom. For example, T2 revealed "Both myself and my students cannot say things as we would like to", and T3 "The FL is a limitation for the tasks and activities that I would like to promote in the classroom. The limit is for me and for the students because, if it is an oral activity, we are all unable to express things as we would like".

Teachers considered that this trend would continue being similar in the future because it also had to do with both their own knowledge of English as well as their learners'.

As regards the last trend, teachers' anxiety and stress, results showed that using English was in general a source of stress and anxiety in many different situations inside and outside the CLIL classroom. T6 explained "It's like a rollercoaster feeling; I'm always going up and down when I am teaching in English. I would like to be optimistic but sometimes it is really hard and everything overwhelms me".

Three kinds of situations emerged regarding this trend: i) Teachers lacked knowledge about specific vocabulary of the subject and both needed to look for it and to study it beforehand in order to be able to explain the content to learners. T1 commented "I need to prepare absolutely everything before getting into class. I need the vocabulary, the expressions...";
ii) Sometimes, while the CLIL class was in progress, teachers suddenly found themselves

unable to say something or to explain something related to the content because they did not know the vocabulary. When this happened, teachers usually omitted that part of content, studied the vocabulary at home and thought about different ways to explain that content to learners, and explained it another day. T1 mentioned "It has sometimes happened to me that I wanted to explain something related to content and I haven't been able to do it because I didn't know the language that I needed to do so. So I gave the students some work to do. Instead of explaining it wrong because of language, I prefer preparing things at home and I will explain the idea the following day"; and iii) Teachers felt that they needed to adapt absolutely everything for learners to be able to understand and follow the class: subject contents were both simplified and became redundant (teachers felt that they had to repeat contents several times and over days), and the language also became very easy. T4 explained "It is an effort selecting resources that are appropriate for each level. I prefer my own materials; they adapt better".

Finally, as concerns the use of Spanish in the classroom, teachers used it to avoid wasting time when something had been explained several times but learners still did not understand it, for discipline reasons, and to provide important information to learners about something. For example, T4 explained "I use Spanish to avoid wasting time. When I realise that students aren't understanding something, explaining it in English is ridiculous", and T5 "I have always used Spanish in the classroom when it's needed and basically not to waste time and so things are clear to the student. I also use Spanish if it is abstract or maybe I allow some words to be translated directly. And if I can't explain it very quickly, then I use Spanish. I'm not going to spend twenty minutes with a performance".

After the CLIL teacher education programme, negative feelings such as nervousness and anxiety decreased, whereas frustration disappeared.

5. Discussion

5.1. The impact of the CLIL teacher education programme on the teachers' beliefs about CLIL as an approach for teaching content subjects in a FL

Teachers' beliefs about CLIL experienced significant evolution as a result of attending the CLIL teacher education programme. The teachers participating in this study were all in-service CLIL secondary school teachers of content subjects who did not know anything about the approach they had been using for teaching their content subjects before the CLIL teacher education programme was delivered to them. Their initial attitudes about teaching their subjects through English were positive though. They agreed that CLIL was professionally enriching, a positive evolution in their subjects and both good and contributing for learners. However, these positive attitudes did not prevent them from feeling stressed, frustrated and anxious about CLIL and about using English as a means of instruction both inside and outside the classroom (Moate, 2011), or enabled them to successfully implement the approach (Kennedy & Kennedy, 1996). In the absence of any knowledge about CLIL, the teachers had been struggling both to reinvent their practice (Bonnet & Breidbach, 2017; Cammaratta, 2010; Pappa et al., 2017) and to keep a balance between content and language

(Cammaratta, 2009). They had also been developing their own ideas about CLIL teaching, and had been taking autonomous instructional decisions (Hüttner et al., 2013) based both on intuition and on their own beliefs.

The CLIL programme provided them with knowledge and understanding about the approach (Fernández Costales & Lahuerta Martínez, 2014; Pavón Vázquez et al., 2020; Pérez-Cañado, 2016b, 2018). It enabled them to acquire and develop CLIL teaching professional criteria (which they had lacked). This, in turn, enabled them both to have and to base their teaching decisions and judgements on solid and authentic knowledge about CLIL. They became aware of wrong teaching practices such as translation (Contero et al., 2018) and were open to embrace a real instructional change, which was founded on conscious and right teaching decisions. Intuition left space, thus, to conscious decision making processes. In addition to this, the CLIL teacher education programme empowered teachers as CLIL professionals. Being experienced teachers, they had been feeling as novice teachers again in their classes of CLIL subjects. This had been provoking friction in the teachers as well as frustration but both their professional efficacy (Nishino, 2012) and their sense of responsibility (Kurihara & Saminy, 2007) had been motivating them to make efforts. They experienced a professional rebirth after the programme. The teachers' insecurities disappeared and they were able to relax. As they did in their L1 classes, they felt in complete control of the teaching process. Moreover, the teachers' initial positive attitude into teaching their content subjects in English evolved into real enthusiasm about CLIL and about implementing it as they had learnt in the course.

5.2. The impact of the CLIL teacher education programme on the teachers' beliefs about using a FL as the means of instruction

The teachers' beliefs about using the FL as a means of instruction could be classified into two broad groups: (a) beliefs about the teachers' knowledge and command of English, and (b) beliefs about how language should be integrated in the teaching process. The latter group of beliefs experienced the greater evolution as a result of the CLIL teacher education programme, however, the former did not experience a significant variation.

As regards the first group, these beliefs were related to insufficient language for oral expression and communication in the classroom (Macaro et al., 2019), and being unable to explain things in different ways, or to express themselves as they would like to during oral activities, together with lack of knowledge of specific content language were constant comments before the study. Both the lack of knowledge about the language and using English as the language for communication implied, among other things, stress, anxiety, insecurity and frustration. Moreover, teachers felt that their professional integrity was being challenged (Bonnet & Breidbach, 2017; Moate, 2011; Pappa et al., 2017).

The CLIL teacher education programme did not exert any significant impact in these beliefs. Teachers still considered after the course that these areas would continue to be challenging to them and that they would need to continue working for improving their FL knowledge in order to be able to work appropriately in the classroom in the areas aforementioned. This seems obvious, though, since the education programme was about the CLIL approach itself and not about language.

As for the second group, beliefs about how language should be integrated in the teaching process, results showed that teachers were unaware of language and the role that it plays in CLIL (Halbach, 2014; Macaro et al., 2019; Pérez-Cañado, 2016a). Moreover, before the course, using a foreign language for teaching content subjects was a demanding task for teachers and a source of uncomfortable situations within the CLIL classroom. The scope of situations in which this happened was extensive and most of them involved the teachers, learners, the content matter and the classroom itself. The CLIL classroom was a micro world where many different things were happening at the same time and to all the participants involved. This was common to all teachers. Using English as the language of instruction brought again emotional insecurity and stress to teachers (Moate, 2011), as well as professional frustration because, as content teachers, they felt again that they needed to reinvent their practice and to adapt content to an easier and poorer version for the sake of learning simply because language was a limitation. Some teachers considered English a lingua franca (Hüttner et al., 2013; Macaro et al., 2019) and found that teaching their subjects in the FL was enriching and contributing both to them as professionals and to their learners, but this did not prevent them from feeling frustrated.

The CLIL teacher education programme exerted a positive impact on these kind of beliefs. First of all, teachers became aware of language and the role that it plays in CLIL (Yi Lo, 2019). This allowed them to reflect on their previous teaching practices and to re-think different ways of doing things in the classroom in order to integrate language in their lessons. As a result of the self-assessment and reflection processes that teachers underwent, different areas such as content adaptation, slower working rhythm in the classroom, learners' communication and low promotion of oral activities were highlighted by the teachers to evolve in the future into an improved version. Teachers became aware that the main reason for these areas to be deteriorated when teaching was their own unawareness of language. They considered that if language was instructed accordingly, these areas would improve since all the actors involved in them, teachers and learners, would be producing English consciously and in a realistic way. Secondly, teachers learnt about different strategies to integrate language in their lessons. This led them to feel in total control of the teaching process, including planning, scaffolding and resources. They knew how things should be done and they could decide and act accordingly. Finally, the negative emotions that teachers had been feeling such as anxiety, stress, frustration and insecurity almost disappeared. The CLIL teacher education programme provided teachers with essential knowledge about language integration and instruction, and this knowledge empowered and relaxed teachers. Despite lacking knowledge about the language itself, knowing how language could be integrated in their teaching practices on a regular basis really supported them as professionals and helped them in the challenge of incorporating English for instructional and communicative reasons in their lessons.

This evolution in the teachers' beliefs may benefit both learners and teachers. Since CLIL is an approach that integrates content and language across the board, its benefits may be maximised through the teachers' decisions and actions for deep learning of both content and language to occur in the part of the learner (Meyer &Coyle, 2017). Teachers in turn may enjoy their CLIL subjects simply because they have become aware of the dimension of CLIL in learning. If done well, CLIL can advance education (Coyle, 2018).

6. CONCLUSION

This research has provided further knowledge about two areas important for CLIL teachers: the impact that CLIL teacher education may have on CLIL teachers' beliefs and the beliefs that in-service CLIL secondary school teachers of content subjects display both about CLIL as an approach for teaching and about using a FL as a means of instruction, and how they may evolve as result of CLIL teacher education. Since research about CLIL teachers' beliefs remains scarce, this study provides a deeper understanding of the elements and circumstances that may influence teachers' decisions and teaching practices in the classroom and how they can be shaped through CLIL teacher education. However, the results reported in this study should not be taken as common to all CLIL teacher education programmes. Different elements may influence the impact that any CLIL teacher education endeavour may exert on teachers' beliefs such as the programme itself (contents and length among others), the trainer/educator, the way it is delivered, and the teachers themselves.

This study has some limitations which should be mentioned. First of all, it was not possible to investigate if this (positive) evolution in the teachers' beliefs had any influence on the way teachers implemented CLIL in the classroom. Investigating the transference of knowledge from the course to the classroom should be the further researched. Secondly, the researcher being the teacher educator could have influenced the participants' responses as they may have wanted to please her. Finally, the extent to which the results of a questionnaire can be compared to those gathered in an interview is not clear.

This research provides much information for reflection when it comes to addressing content teachers' circumstances as regards effective CLIL implementation. It has emerged in the study that CLIL teachers may suffer from stress, anxiety, insecurity and worries that originate both on the approach itself since in the absence of CLIL training they do not know how to implement it in classrooms, and on the teachers' frictions with the FL. Therefore, it is mandatory to provide them with the knowledge and the tools they need by means of CLIL teacher education in order to reduce those negative emotions and improve the CLIL teaching atmosphere. Content teachers need CLIL teacher education programmes that help them in their transition from content to CLIL teachers. The changes that CLIL teacher education may promote at cognitive level on teachers are abstract and not perceivable to the eye, however, CLIL effectiveness may be maximised as a result, and benefit learners, teachers and society. Learning about what teachers do and believe is essential since they are the ultimate decision makers in classrooms (Freeman & Johnson, 1998).

7. REFERENCES

Almarza, G. (1996). Student foreign language teaches' growth. In D. Freeman & J. C. Richards (eds.), *Teacher Learning in Language Teaching* (pp. 50-78). Cambridge University Press.

Azparren, M.P. (2020) Education teachers for Content and language Integrated Learning: An action research study of secondary school teachers' practices and cognitions during a CLIL teaching programme. Unpublished PhD dissertation. University of Navarre.

Bonnet, A., & Breidbach, S. (2017). CLIL teachers' professionalization. Between explicit knowledge and professional identity. In A. Llinares, & T. Morton (Eds.). *Applied Linguistic Perspectives on CLIL* (pp. 270-285). John Benjamins.

Borg, S. (2003). Teacher cognition in language teaching: a review of research on what language teachers think, know, believe, and do. *Language Teaching*, *36*(2), 81-109.

Borg, S. (2011). The impact of in-service teacher education on language teachers' beliefs. *System, 39*, 370-380.

Borg, S. (2019). Language teacher cognition: perspectives and debates. In X. Gao (ed.), *Second Handbook of English Language Teaching* (pp. 1-23). Springer International Handbooks of Education.

Cammaratta, L. (2009). Negotiating curricular transitions: foreign language teachers' learning experience with content-based instruction. *The Canadian Modern Language Review*, *65*(4), 559-585.

Cammaratta, L. (2010). Foreign language teachers' struggle to learn content-based instruction. *L2 Journal*, 2(1), 89-118.

Contero, C. Zayas, F. & Arco Tirado, J. L. (2018). Addressing CLIL lecturers' needs: reflections on specific methodological training. *Porta Linguarum: Monográfico III*, 121-135.

Coyle, D. (2018). The place of CLIL in (bilingual) education. *Theory Into Practice, 57*(3), 166-176.

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

Crookes, G. & Arakaki, L. (1999). Teaching idea sources and work conditions in an ESL program. *TESOL* Journal, *8*(1), 15-19.

Donaghue, H. (2003). An instrument to elicit teachers' beliefs and assumptions. *ELT Journal, 57*(4), 344-351.

Eurydice. (2006). *Content and language integrated learning (CLIL) at school in Europe.* Eurydice Unit, Eurydice.

Escobar Urmeneta, C. (2013). Learning to become a CLIL teacher: teaching, reflection and professional development. *International Journal of Bilingual Education and Bilingualism*, *16*(3), 334-353.

Fernández Costales, A. & Lahuerta Martínez, A. C. (2014). New approaches in English language teaching: Teacher training in the framework of content and language integrated learning. *Magister*, *26*(1), 18-24.

Freeman, D. (1993). Renaming experience/reconstructing practice: developing new understandings of teaching. *Teaching and Teacher Education*, *9*(5/6), 485-497.

Freeman, D., & Johnson, K. E. (1998). Reconceptualizing the knowledge base of language teacher education. *TESOL Quarterly*, 32, 297-417.

Halbach, A. (2014). Teaching (in) the foreign language in a CLIL context: Towards a new approach. In R. Breeze, C. Llamas Saíz, C. Martínez Pasamar, & C. Tabernero Sala (Eds.). *Integration of theory and practice in CLIL* (pp. 1-14). Rodopi.

Hall, L. A. (2005). Teachers and content area reading: attitudes, beliefs and change. *Teacher and Teacher Education*, *2*, 403-414.

Hüttner, J., Dalton-Puffer, C., & Smit, U. (2013). The power of beliefs: lay theories and their influence on the implementation of CLIL programmes. *International Journal of Bilingual Education and Bilingualism*, *16*(3), 267-284.

Johnson, K. E. (1994). The emerging beliefs and instructional practices of pre-service English as a second language teachers. *Teaching and Teacher Education*, *10*(4), 439-452.

Kennedy, C. & Kennedy, J. (1996). Teacher attitudes and change implementation. *System*, *24*, 351-360.

Kurihara, Y. & Samimy, K. K. (2007). The impact of a U.S. teacher training program on teaching beliefs and practices: A case study of Secondary school level Japanese teachers of English. *JALT Journal*, *29*(1), 99-122.

Macaro, E., Jiménez-Muñoz, A. & Lasagabaster, D. (2019). The importance of certification of English medium instruction teachers in higher education in Spain. *Porta Linguarum*, *32,* 103-118.

Meyer, O., Coyle, D., Halbach, A., Schuck, K. & Ting, T. (2015). A pluriliteracies approach to content and language integrated learning – mapping learner progressions in knowledge construction and meaning-making. *Language, Culture and Curriculum*, *28*(1), 41-57.

Meyer, O. & Coyle, D. (2017). Pluriliteracies teaching for learning: conceptualizing progression for deeper learning in literacies development. *European Journal of Applied Linguistics*, *5*(2), 199-122.

Moate, J. M. (2011). The impact of foreign language mediated teaching on teachers' sense of professional integrity in the CLIL classroom. *European Journal of Teacher Education, 34*(3), 333-346.

Nishino, T. (2012). Modeling teacher beliefs and practices in context: a multimethods approach. *The Modern Language Journal, 96*(3), 380-399.

Pappa, S., Moate, J., Ruohotie-Lythy, M. & Eteläpelto, A. (2017). CLIL teachers in Finland: The role of teachers' emotions in professional identity negotiation. *Apples-Journal of Applied Language Studies*, *11*(4), 79-99.

Pavón Vázquez, V., Lancaster, N. & Bretones Callejas, C. (2020). Key issues in developing teachers' competences for CLIL in Andalusia: training, mobility and coordination. *The Language Learning Journal*, *48*(1), 81-98.

Pérez-Cañado, M. L. (2016a). Are teachers ready for CLIL? Evidence from a European study. *European Journal of Teacher Education*, *39*(2), 202-221.

Pérez-Cañado, M. L. (2016b). Teacher training needs for bilingual education: in-service teacher perceptions. *International Journal of Bilingual Education and Bilingualism*, *19*(3), 266-295.

Pérez-Cañado, M. L. (2018). Innovation and challenges in CLIL teacher training. *Theory into Practice, 57*(3), 1-10.

Pajares, M. F. (1992). Teachers' beliefs and educational research: cleaning up a messy construct. *Review of Educational Research*, *62*(3), 307-332.

Patton, M. Q. (2002). *Qualitative research and evaluative methods* (3rd ed.). Sage.

Richards, J. C. (1998). Teacher beliefs and decision making. In J. C. Richards (ed.), *Beyond Training* (pp. 103-121). Cambridge University Press.

Schön, D. A. (1987). *Educating the reflective practitioner*. Basic Books.

Woods, D. (1996). *Teacher cognition in language teaching*. Cambridge University Press.

Yi Lo, Y. (2019). Development of the beliefs and language awareness of content subject teachers in CLIL: does professional development help? *International Journal of Bilingual Education and Bilingualism, 22*(7) 1-15.

8. Appendix: The CLIL teacher education programme: content syllabus.

Session 1:

An introduction to CLIL: the origins of CLIL and the motivations behind the approach.
Principles and potential benefits of the CLIL approach.
Learning conversations about CLIL (teacher beliefs).

Session 2:

Becoming aware of the importance of language in CLIL.
Language integration in CLIL.
Learning conversations about CLIL (teacher beliefs).

Session 3:

Pluriliteracies.
CLIL planning at macro and at micro levels.
Learning conversations about CLIL (teacher beliefs).

Session 4:

The use of materials and resources:
- Recognising good and bad CLIL materials
- Adapting already existing CLIL materials
- Creating new CLIL materials.
Learning conversations about CLIL (teacher beliefs).

Session 5:

Assessment in CLIL:
- Error correction
- Peer-correction
- How to elaborate appropriate exams for CLIL subjects.
Learning conversations about CLIL (teacher beliefs).