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The effect of CLIL training on Turkish EFL pre-service teachers' self-efficacy beliefs and attitudes towards CLIL[1]

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Abstract

This study aims to investigate the effect of content and language integrated learning (CLIL) training on Turkish EFL pre-service teachers' self-efficacy beliefs and their attitudes towards CLIL. For this purpose, a group of 28 Turkish pre-service language teachers was trained on CLIL, its theoretical background, aims, principles, strategies for planning and teaching lessons. The data collection tools included a teacher self-efficacy scale, a questionnaire of attitudes and experiences in CLIL, and semi-structured interviews. The participants completed pre-tests and post-tests of teacher self-efficacy scale in order to measure the effect of training on their self-efficacy beliefs. Moreover, the participants' attitudes towards CLIL were explored through the attitudes questionnaire and semi-structured face-to-face interviews. The findings revealed that the introductory CLIL teacher training had a statistically significant effect on self-efficacy beliefs of Turkish EFL pre-service teachers. The participants' attitudes towards CLIL turned out to be positive as well.

Keywords: CLIL; teacher self-efficacy beliefs; teacher training: English language teaching

1. Introduction

The development of bilingual education in the European context has started since the early 1990s (Helot & Cavalli, 2017). A bulk of studies has already emphasized the importance of bilingualism and multilingualism regarding learners' academic achievements, personal and professional development, and life success (García, 2011; Sierens & Van Avermaet, 2014; Helot & Cavalli, 2017; Merino & Lasagabaster, 2018).

Research also seems to provide strong evidence for cognitive benefits of bilingualism in increasing attention and improving memory, metalinguistic awareness, and other thinking skills (Adesope, Lavin, Thompson & Ungerleider, 2010; Sierens & Van Avermaet, 2014) as well as social advantages, such as character development resulting in being better world citizen as well as raising economic capacity (García, 2011). As a relatively new method of bilingual education, content and language integrated learning (CLIL) has specifically received a growing interest with its significant effect on learner development. A great number of researchers confirm that CLIL plays a significant role in EFL context as it has been shown to improve the process of learning a foreign/second language as well as content acquisition (Pokrivčáková et al.,2013; Bozdoğan, 2015; Soler, Gonzalez-Davies & Inesta, 2017). CLIL also helps develop such cognitive skills as metacognitive awareness, linguistic confidence, communicative skills, cultural awareness, risk-taking (Coyle, 2005; Lorenzo, Casal & Moore, 2010) in addition to better oral description, greater ability of expressing ideas, better understanding of meaning, higher pragmatic competence, and increased writing abilities (Merino & Lasagabaster, 2018).

In Turkey, CLIL has been integrated into the language and subject teaching in numerous K12 schools for many years. At university level, it appears as English-medium instruction (EMI) where university students are educated in their subject area in English. The emergence of CLIL in Turkish educational system originally started in 1970s when Anatolian high schools (a type of lycée where CLIL programs were implemented) were established (Bozdoğan & Karlıdağ, 2013). In recent years, CLIL approach has been widely accepted and practiced in several primary and secondary schools across Turkey especially in the private schools where English language education is one of the salient subjects and highly demanded by parents. This actually puts a lot of pressure on English language teachers as they are expected to have certain background and experience with CLIL. Our assumption is that a CLIL training program for pre-service teachers may affect, to some extent, their beliefs about their own teaching potential or abilities regarding implementation and practice of a CLIL-based approach. Thus, this study investigates pre-service EFL teachers' self-efficacy beliefs

before and after the implementation of a CLIL teacher-training course. This study fills a gap by contributing to research in this line as there is a lack of investigation in CLIL-based pre-service teacher training. This study is also important as it sheds light upon whether Turkish EFL prospective teachers consider the possibility of integrating CLIL methodologies into their future teaching. Offering an introductory CLIL teacher training course is a remarkable attempt to provide such needs of future language teachers within dual-focused multilingual perspective and preparing them for a globalized world.

In accordance with the purpose of the study, the following research questions were addressed in this study:

1. Does CLIL teacher training have an effect on Turkish EFL pre-service teachers' self-efficacy beliefs?
2. What are the attitudes of Turkish EFL pre-service teachers towards CLIL?

2. Theoretical Framework of CLIL

The 4Cs framework of CLIL

The major theoretical perspective that constitutes the basis of a CLIL program has been developed by Coyle (2005), which is called 4Cs framework. As discussed by Ruiz de Zarobe and Jimenez Catalan (2009), this framework supports CLIL's ambitious aim to achieve multilingualism plus mother tongue. Four key principles of the model are as follows: content – successful acquisition of knowledge, skills, and comprehension of the subject; communication – the use of language as a means to develop communicative competence and content learning as well as language learning at the same time; cognition – challenging learners to build their own understanding during the learning process by developing higher order thinking skills for students with any academic level; and culture – fostering students' tolerance and understanding of pluriculturalism, and raising their intercultural awareness (Coyle, 2005).

Within CLIL instruction, teachers should integrate these 4Cs into the learning

process by linking them together. From this, it becomes clear that such a dual approach to language and content learning drawing on cognitive and cultural elements creates a new learning environment, which is supposed to differ from traditional language or subject lessons (Coyle, Hood & Marsh, 2010). Thus, the 4Cs model of CLIL principles represents a strong pedagogical and methodological basis for the sufficient CLIL teaching and learning.

CLIL teacher training

CLIL teacher training programs for pre- and in-service teachers are crucial to establish since they promote CLIL teachers' professional and language skills (Kewara & Prabjandee, 2018). The training provision attempts to integrate both theoretical and practical frameworks related to CLIL. However, CLIL represents considerable challenges not only to students but also to teachers as it is demanding for a teacher to be professionally competent in both language and subject teaching (Pinner, 2013). The main reason here lies in poor collaboration between institutions and trainers as well as lack of attention paid to the training of teachers before they graduate (Delicado Puerto & Pavon Vazquez, 2016).

The following aspects have to be considered while building up a teacher training program: developing more CLIL course books and other materials addressing learners' real lives, providing future teachers with appropriate academic and practical aids, and also promoting an awareness about CLIL and its potential benefits (Banegas, 2012). Thus, it is necessary to develop specific support for the integration and development of CLIL teachers (Pappa, Moate, Ruohotie-Lyhty & Eteläpelto, 2017). In order to successfully implement CLIL into the real learning environment, a number of pre-service and in-service teacher education programs are suggested to be developed (Banegas, 2012). As CLIL approach requires teaching in other language rather than L1, teaching trough this approach is quite challenging. Therefore, the lack of professional and qualified teachers might prevent the development of CLIL. Pre-service teacher education influences the formation of the future teachers' professional vision, their attitude and willingness to adapt as well as their pedagogical skill and abilities (Sylvén,

2013). In this regard, in order to become a professional teacher in CLIL-based practices, it is crucial to start preparing pre-service teachers at the university level by integrating specific CLIL teacher training programs (Biçaku, 2011). A sufficient number of studies and reports on CLIL teacher training demonstrate that it is necessary to build the training provision based on the theory of CLIL and its practical framework in order to achieve successful training practice for initial teacher education plus their further professional development (Banegas, 2012; Pokrivčáková et al., 2013; Ruiz de Zarobe & Jimenez Catalan, 2009).

Teacher self-efficacy beliefs

Teacher education goes hand in hand with the teachers' self-efficacy beliefs - teachers' willingness to realize their potential significantly influenced by their self-perceptions and beliefs (Karimvand, 2011). Thus, there must be a positive influence of the professional teacher preparation on their further self-efficacy beliefs. Researchers from different educational fields have found out a positive correlation between teachers' self-efficacy beliefs and their productivity, enhanced teaching strategies, and professional goals (Tschannen-Moran, Woolfolk-Hoy & Hoy, 1998; Henson, 2001; Karimvand, 2011). Tschannen-Moran and Hoy (2001) indicate that higher sense of efficacy is connected with teachers' willingness to apply new methods, approaches, and experiments. A number of studies also suggest that self-efficacy influences teacher effectiveness in various ways. Self-efficacy beliefs improve teacher ability to adapt successfully in stressful and challenging atmosphere, affect superior students' achievements and overall school effectiveness (Bray-Clark & Reid Bates, 2003; Tournaki & Podell, 2005). Thus, it is suggested that professional teacher development should be initially focused on the teacher self-efficacy beliefs as a key element in teacher effectiveness.

3. Literature Review

CLIL teacher education

Sylvén (2013) in her study on CLIL in Sweden examines the reasons why CLIL

research findings are diverse from country to country and introduces four main factors which are decisive in these findings. The first crucial factor according to Sylvén (2013) is CLIL policy framework which mainly means the documents providing guidance for schools and building educational system. The second factor demonstrated by Sylvén (2013) is the age of learners at which CLIL is being implemented. The next factor in the study is the amount of exposure to the target language outside of school since it has been resulted in correlation with language skills. The last factor influencing the results in CLIL implementation is teacher education at pre- and in-service level, as the researcher states CLIL teacher training influences future teachers and should not be underestimated. CLIL-based teacher education has been examined in a variety of international contexts. One of the rightful arguments made by Mattheoudakis (2017) stresses that such a training process should be designed or planned in collaboration with academia. Its integration into a teacher training program should relate to both pre-service and in-service teachers in that program. Banegas (2012) in one of his works, for instance, describes a CLIL course for Malaysian pre-service EFL teachers implemented in the context of Britain. The module of the program is divided into two terms, where the first term covers theory and practice of content-based English language teaching, and the second term promotes the development of teachers' practical skills in teaching CLIL lessons through literature texts.

In European context, Hunt (2011) describes and evaluates collaborative action research on 'e-based CLIL training' where a number of European countries participated. The training included both the face-to-face and the online sessions held for CLIL trainers, pre-service and in-service school subject teachers. The attitude questionnaire revealed the participants' positive perceptions about the face-to-face meetings, while the online sessions were not preferred (as cited in Banegas, 2012). Similarly, as for the mode of CLIL teacher training, De Santo and De Meo (2016) describe a blended CLIL teacher training course comprised face-to-face classes and online sessions. The research highlights the importance of this course with regard to the trainees' interactions and the role of e-trainers. The main outcome of this training course was in trainees' positive feedback and their interest in further study on CLIL approach.

In 2007, the University of Salamanca also launched a CLIL project where two universities from England and Spain cooperated to plan and implement a particular CLIL unit in six schools in Spain and in England. The project lasted 10 weeks, for a half of a day in a week, with the evaluation phase at the end of the unit. The schools from both countries prepared various teaching materials and online resources exchanging with each other, whether it is video, brochure, or website. The project has resulted in positive outcomes from teachers, students, and parents' perspectives (Gutierrez Almarza, Duran Martinez & Beltran Llavador, 2012). In the context of Czech Republic, Novotná and Procházková (2013) describes the implementation of CLIL training course designed for future maths teachers. The training program includes face-to-face classes covering various aspects of bilingual education, the use of language in content teaching along with online lessons on theory, methodology, and principles of CLIL. The results gathered from the anonymous online questionnaires show the trainees' positive attitudes towards CLIL approach (Pokrivčaková et al., 2013).

Regarding CLIL teacher education in higher education, Bruning & Purranann (2014) argue that CLIL teacher education is remarkably successful mainly because German teachers usually study the subject and language teaching together. These researchers highlight Braunschweig University, where CLIL is being integrated into the Master's program along with various subjects like history, chemistry, and mathematics. Guadamillas Gomez (2017) also reviews a CLIL training course provided for the fourth-year EFL pre-service teachers in a Spanish university. The CLIL training program integrates theoretical and practical content to encourage students to develop CLIL-based lesson plans accordingly. Briefly, results demonstrate participants' positive attitudes towards the practical part of training as they claim that micro-teaching lessons has helped them to improve their teaching skills. However, the theoretical part of the course has received mostly negative views as the students have found it difficult to understand CLIL's theoretical framework.

Finally, a recent study on CLIL teacher education in Thailand by Kewara and Prabjandee (2018) reveals overall positive attitudes of teachers towards effectiveness of CLIL regarding students' language development. However, as the majority of the

participants point out, CLIL approach requires more time, efforts, and energy to prepare appropriate materials and lessons plans and thus it is a responsibility of the schools' heads to create a specific CLIL training program for non-language teachers.

Teachers' self-efficacy beliefs and attitudes of CLIL implementation

Concerning the attitudes of teachers' towards CLIL, Dalton-Puffer, Huettner, Schindelegger & Smit (2009) interviewed 28 teachers from Austrian HTL colleges about their beliefs. In terms of language learning, subject teachers state that CLIL promotes constant language learning. They also consider CLIL as additional to the classroom instruction but not substitute. However, content teachers do not demonstrate a concrete aim to improve students' language competence despite teaching specific subject terminology. The participants also mention that CLIL is successful at making students feel better when speaking in English. Overall results of the study indicate the teachers' strong feelings of responsibility. Pokrivčáková et al. (2013) have also surveyed 35 Slovak elementary school teachers about their personal views on CLIL and its implementation in their lessons. The study reveals teachers' uncertain or mixed views ranging from very positive to negative. Yet, the participants indicate that they feel unprepared and lack of competence in teaching CLIL, and define CLIL professionally challenging. Besides all the benefits of CLIL illustrated by teachers, certain challenges are also outlined as high demands for teachers and learners, lack of relevant materials and resources, and problems with balancing content and language teaching.

With a total of 80 Belgian secondary school CLIL-teachers, De Mesmaeker and Lochtman (2014) investigate the notion of professional identity by using an online survey of teacher self-efficacy scale. The results demonstrate low scores of self-efficacy beliefs regarding the general aspects of teaching. The researchers highlight the participants' low confidence in motivating students and helping them value their learning. Another study on teachers' attitudes, perceptions, and experiences of CLIL from various schools and universities in 15 Colombian cities through a web-based survey reveals that the majority of teachers do not have sufficient knowledge of CLIL

(McDougald, 2015). However, they also express positive attitudes towards their CLIL experience regarding its effectiveness in developing language skills. The teachers highlight that they need more knowledge about the methodology and how to adapt it to the students' needs.

More recently, a study by Soler, Gonzalez-Davies & Inesta (2017) indicates Catalonian school stakeholders' overall positive attitudes towards CLIL instruction. The results demonstrate that the initial stage of implementation and teacher preparation is an important factor for effective CLIL-based learning. Schools and professionals should cooperate and create a sort of CLIL culture. Finally, one more study conducted by Yessenova (2017) in Kazakhstan with regard to science and maths pre-service teachers indicates that participants have low level of self-efficacy beliefs regarding their abilities to teach through English. The results show that the main factor there is the lack of professional CLIL pre-service teacher training.

4. Methodology

Setting and participants

This study was carried out in a foundational university in the northwest of Turkey over spring semester in 2018. The specific context of the study was the Department of English Language Teaching (ELT) where prospective language teachers are provided with solid content and pedagogical knowledge on English as a second/foreign language teaching. Considering the undergraduate program of ELT, an increasing emphasis on CLIL started to take place in the last two years simultaneously with recent CLIL-oriented English language teaching implementations and practices in several K12 schools in Turkey. The present study utilized non-random purposive sampling technique (Tongco, 2007; Creswell, 2014). Thus, 28 Turkish EFL pre-service teachers participated in this study. They were all Turkish native speakers whereas one student was a bilingual of Turkish and German. Their age ranged from 20 to 24 years old, and one of the participants was at an age of 32. The participants consisted of 4 males and 24 females and they were all proficient in English as it was a prerequisite for entering the program.

Data collection instruments and procedures

This study used a mixed methods explanatory type of research design so that we could gain a deeper understanding of the phenomenon under scrutiny (Creswell, 2014)**.** To explore self-efficacy beliefs of Turkish EFL pre-service teachers quantitatively, the original Teacher Self-Efficacy Scale (TSS) created by Tschannen-Moran and Hoy (2001) was implemented as the primary data collection tool in this study. The scale was administered twice during the data collection procedure as a pre-test and post-test to investigate the effect of CLIL training on Turkish EFL pre-service teachers' self-efficacy beliefs. The three subscales of teacher self-efficacy beliefs (instructional strategies, classroom management, and student engagement) contained 24 items in total. To explore Turkish EFL pre-service teachers' attitudes towards CLIL, the Attitudes and Experiences in CLIL questionnaire was retrieved from McDougald (2015). For the purpose of this study, the questionnaire was slightly modified and thus only 17 items out of 20 remained considering their relevance to attitudes of the participants towards CLIL. Similar to the TSS in this study, this attitude questionnaire on 5-point Likert scale were given to the participants as a pre-test and post-test.

The 5-week data collection started with the TSS and The Attitude and Experiences in CLIL Questionnaire that were given at the beginning and end of the process. Once these were administered to the participants in the very first class of the first week, a 4-week in-class CLIL training was delivered by the second author, who was also the course instructor, through one-hour session every week over a period of 4 weeks in collaboration with the first author. Prior to the study, an introductory training program was developed by the researchers drawing on theoretical and practical aspects of CLIL and research on CLIL training programs for pre-service and in-service teachers (Banegas, 2012; Hunt, Neofitou, & Redford, 2009; Novotná & Procházková, 2013). The first session mainly provided basic theoretical knowledge, such as the history of CLIL, its definition, framework, principles, and strategies. The remaining 3 sessions were allocated to practical issues that would enable the pre-service teachers to develop CLIL lesson plans, to initiate reflective discussions on the implementation of CLIL, and to get feedback from each other. In the end, post-tests of TSS and Attitude questionnaire

were completed by the same group of participants and consequently compared and contrasted with the pre-tests data in order to see the impact of CLIL training.

Semi-structured interviews were also carried out as a follow-up to the TSS for triangulation and validation purposes. The interviews were conducted individually with six randomly selected participants who agreed to be interviewed voluntarily and lasted for about 30 to 40 minutes. The interview questions aimed to gather more in-depth data by exploring the participants' beliefs and ideas about CLIL as well as their own sense of efficacy in terms of instructional strategies, classroom management, and student engagement.

Data analysis

In order to analyse the quantitative data, SPSS as a statistical software was employed. First, the descriptive statistics were utilized to get the means and standard deviations of the scores from both pre-tests and post-tests of TSS and Attitude and Experiences in CLIL questionnaire. Following this, the means were compared and contrasted with the use of inferential statistics, a paired-samples t-test, to find out if there was a statistically significant difference between the means of the pre-tests and post-tests. In order to maintain credibility, the interview data was triangulated with the quantitative data for a more in-depth understanding of each research question. For the analysis of qualitative data, the semi-structured interviews were transcribed verbatim and then content analysis was employed. It involved three main steps such as open coding, creating categories, and interpretation of the findings (Creswell, 2014). The content analysis in this study was inductive as the categorisation of the data was made within the existed themes taken from the TSS questionnaire (Armat, Assarroudi, Rad, Sharifi, & Heydari, 2018).

5. Results

The effect of CLIL training on Turkish EFL pre-service teachers' self-efficacy beliefs

The aim of the quantitative data analysis was to find out if there was an effect of the CLIL training on Turkish EFL pre-service teachers' self-efficacy beliefs. The level of

significance in this research was defined as α = 0.05 (Huck, 2012). After the data from both tests were gathered, the researchers used SPSS to produce descriptive analysis and paired-samples *t*-test (inferential) types of statistical analysis in order to find the means and standard deviations of the scores gained by the participants in pre- and post-tests and further to identify if there was a statistically significant difference between the means of pre- and post-tests scores.

Before the descriptive and inferential analysis was produced, the means of pre-tests and post-tests self-efficacy scores were tested for normal distribution in order for the results to be reliable (Huck, 2012). According to the Shapiro-Wilk normality test, the p-value of pre-tests results is equal to 0.731 while the p-value of post-test results is equal to 0.515. Thus, as both of the *p* calculated values are more than *p* critical value (α = 0.05), it can be concluded that the data scores are normally distributed. Further, SPSS was used to produce a descriptive analysis of the data. For this research, the descriptive analysis was employed to find the means and standard deviations (SD) of the scores for each of 24 items obtained in pre-tests and post-tests of TSS. Consequently, the normally distributed data from the output of the descriptive analysis enabled the researcher to produce the dependent (paired-samples) t-test to compare the means of two dependent variables of the same sample size (pre-tests and post-tests on teacher self-efficacy beliefs before and after the CLIL training) and to detect a statistically significant difference between those means.

The dependent *t*-test analysis revealed the overall M and SD of both groups of scores. Thus, the overall mean of scores in post-test is higher ($M = 7.0725$, $SD = 0.312$) than the average of a set of scores in pre-tests ($M = 6.5708$, $SD = 0.361$). In order to define if the average difference between two variables is statistically significant the researcher referred to the last table in the SPSS output. The information in Table 1 presents the main values of the paired-samples analysis such as *t*-value, degrees of freedom (*df*), and significance level (*Sig.*), which enables to detect the statistical significance of the difference between variables.

Table 1. Paired-Samples T-Test Results for TSS data

| | | Paired Differences | | | | | |
		M	SD	N	t	df	Sig.
Teacher Self-Efficacy beliefs	Posttest Pretest	0.50167	0.17812	28	13.798	23	.000*

* < 0.05

The results presented in Table 1 indicated that the means of two groups of variables (pre-tests and post-tests scores) are statistically different. The dependent samples *t*-test was associated with a statistically significant effect (Huck, 2012), $t(23) = 13.79$, 95% CIs [0.42, 0.57], $p < .05$. As the t-test revealed that the mean of the post-test scores is greater ($M = 7.0725$) than the mean of those from pre-tests ($M = 6.5708$), it can be concluded that the participants' self-efficacy beliefs in teaching raised significantly after they went through the CLIL teacher training course. Besides finding the statistical significance of the difference between two means, it is important to detect the effect size of the results as well. Estimating the effect size allows the researchers to find out the practical significance of the difference what demonstrates that the difference is truly meaningful and to what extent it is significant (if the effect is large, moderate, or small) (Huck, 2012). The effect size of the present results was found by estimating Cohen's *d* value via the online calculator. Thus, the effect size in the present research is d = 1.48 and considered as a large effect (Cohen, 1992).

The interview analysis yielded 3 major themes related to teacher self-efficacy and CLIL-based teaching: instructional categories, classroom management, and student engagement. Relating to the first theme, which is about the Turkish EFL pre-service teachers' beliefs of their knowledge and capabilities in instructional strategies they would use generally in teaching CLIL-based instruction, all six participants expressed their raised self-efficacy beliefs for using CLIL strategies in their future teaching practices. The following statements illustrate their sense of efficacy in using CLIL-based instructional strategies after the training:

In terms of teaching content, with the help of a subject teacher, I think I would be able to use

CLIL instructional strategies in my teaching. (Participant 3)

I think I have enough knowledge about CLIL instructional strategies from our Language Acquisition course. (Participant 4)

Among CLIL instructional strategies, all six participants mentioned the role of rich input and authentic materials. They also expressed the importance of scaffolding techniques, the use of real-life situations and strategies to activate higher order thinking skills, collaborative work, 4Cs instruction, and integration of relevant content into lesson plans. Finally, differentiated methods and student-centred instruction were also noticed as crucial in CLIL teaching by the interview participants.

Classroom management as the second theme pertaining to the participants' self-efficacy beliefs and CLIL-based instruction seemed not to be as easy as it was thought. The half of the participants (3/6) reported that they did not feel self-confident in their abilities to manage the classroom as they have no teaching experience in CLIL. Despite the theoretical knowledge the pre-service EFL teachers received during the training sessions, their lower sense of self-efficacy in managing CLIL classrooms were evident and especially linked to their lack of experience with this approach:

I don't have the competencies in managing EFL classroom as I'm only a second-year student but if I had an opportunity, I would definitely teach by CLIL. (Participant 5)

However, some of the participants (3/6) mentioned techniques to manage the classroom that they would experience in their future practice:

To get the students' attention the topic is very important so that the teacher should choose the relevant topic, which is not boring, which is different. (Participant 2)

For the higher level, students managing the CLIL classroom would be easier; For instance, I would manage the disruptive students by some warm-up activities, group activities, competitions, and

collaborative works. (Participant 3)

As can be seen in the interview data, it becomes clear that the participants were able to relate the instructional strategies they learned during the CLIL training to the classroom management techniques.

Student engagement as the third theme pertaining to self-efficacy beliefs about teaching CLIL was also evident and all the participants provided specific examples for engaging students in CLIL lessons. These include, but not limited to, group-work, collaboration, peer-feedback, games, realistic situations, problem-solving tasks, interactive instruction, and secure classroom environment. Some of the responses illustrating the pre-service teachers' self-efficacy beliefs about student engagement in CLIL lessons are presented below:

To engage the students in CLIL lessons you should make the lessons more interactive. (Participant 1)

I would incorporate CLIL activities related to the students' real life so that they will be more willing to share with their peers and teacher. (Participant 2)

As indicated in the interviews, the participants were more confident in their capabilities to engage their potential students in CLIL lessons as they demonstrated their knowledge and awareness of certain strategies and techniques constructed during their CLIL teacher training. Thus, the participants were able to connect instructional strategies with methods needed for the classroom management and student engagement in CLIL lessons.

Overall, our analysis of semi-structured interviews indicated the current sense of efficacy of Turkish EFL pre-service teachers in terms of instructional strategies, classroom management, and student engagement. The results demonstrated the participants' raised confidence in using the instructional strategies and methods for the student engagement whereas their self-efficacy beliefs about classroom management

are still negative due to the lack of teaching experience. Finally, interviews also revealed that the CLIL teacher training had a positive effect on their beliefs about their own abilities and competencies in two out of three abovementioned categories of language teaching.

The Turkish EFL Pre-Service Teachers' Attitudes towards CLIL

In this study, SPSS was used to produce a descriptive analysis of the normally distributed data obtained from the Attitude and Experiences in CLIL questionnaire. The descriptive analysis enabled to find the means (*M*) and standard deviations (*SD*) of the scores for each of 17 items of the questionnaire (see Table 2).

As it is seen from Table 2, the highest mean score of the responses was found for the item 7 (*M* = 4.68, *SD* = 0.670). This shows that the participants had a clear understanding about the main aim of CLIL – its ability to teach both the language and the content of the subject simultaneously. In alignment with this, the two reversing items (item 5 and item 6) had the lowest mean score (*M* = 1.29) indicating a negative attitude to the statements that CLIL helps learners to develop only the language or only the content respectively.

Table 2. Descriptive statistics for Attitude and Experiences in CLIL data (n=28)

Items	*M*	*SD*
1. I would like to know more about CLIL.	4.14	1.044
2. I would like to be given the opportunity to teach subject content (Mathematics, Science, Art, Music, Geography, Literature, Social Studies...) through English.	4.11	1.100
3. My experience in teaching subject content through English has been positive.	3.79	1.101
4. CLIL benefits students.	4.61	.497
5. CLIL helps students develop only their language skills.	1.29	.460
6. CLIL helps students develop only their subject knowledge.	1.29	.460
7. CLIL helps students develop both their language skills and subject knowledge.	4.68	.670

8.	CLIL requires more methodology knowledge than ELT teachers possess.	3.96	.838
9.	CLIL requires more subject knowledge than teachers ELT teachers possess.	4.18	.772
10.	CLIL requires a lot of time (both lesson planning and teaching).	4.43	.690
11.	CLIL requires new teaching materials.	4.39	.685
12.	CLIL requires a lot of administrative support.	4.39	.497
13.	CLIL requires cooperation with subject teachers.	4.46	.838
14.	CLIL is only possible with intermediate students of English.	1.64	.989
15.	CLIL is only possible with young learners.	1.64	.989
16.	CLIL only possible with older students.	1.46	.838
17.	I would be interested in future CLIL projects.	3.93	1.052

The next higher average mean belongs to the item 4 ($M = 4.6$) which claims that CLIL is beneficial for the students. This demonstrates that the majority of the participants strongly agree with the statement. A set of items also turns out to have high mean scores (items 9, 10, 11, 12, and 13) showing that CLIL requires more subject knowledge, time, and new teaching materials, as well as greater support from the administration. From this, it can be concluded that the participants have all shared the right view that CLIL is a complex approach which requires more efforts than the usual EFL lessons. Additionally, the majority of the participants seem to have positive views about CLIL in terms of wishing to get more knowledge about it and the interest in the future studies on CLIL as indicated by their responses to item 1 ($M = 4.14$) and item 17 ($M = 3.93$). Finally, a set of reverse items ($M = 1.64$ for item 14, $M = 1.64$ for item 15, and $M = 1.46$ for item 16) shows that CLIL is possible with learners from a varying age range.

Providing more insights into the attitudes of Turkish EFL pre-service teachers towards CLIL approach, our interviews have revealed 3 major aspects of the participants' attitudes: their understanding of the term CLIL, competencies they gained to teach through CLIL, and their attitude towards the role of CLIL in Turkish EFL curriculum. To start with the first category, 6 participants shared a clear understanding of the meaning of the term CLIL and its main aim as 'to teach a subject in a foreign

language through integrating content and language simultaneously'. The following excerpt illustrates how the participants define the term CLIL:

> I think that CLIL is about content and language integrated learning and it's a good method because its' not only about focusing on grammar or on content but also on general knowledge about the world, the culture. (Participant 3)

As for competencies gained to teach through CLIL, all participants reflected their positive perceptions. They shared common agreements that they constructed their basic knowledge-base through the CLIL teacher training:

> I think I definitely possess the main information about CLIL as last year I received some background knowledge on CLIL, and this year, with your training I got more information on CLIL; and maybe I will use it in my future teaching practice, especially it would be really appropriate for intermediate and advanced learners. (Participant 3)

Attitude towards the role of CLIL in Turkish EFL curriculum as the last category revealed that all the participants had generally positive attitude towards incorporating CLIL in the Turkish EFL curriculum. They referred to their own learning experience stating that current English language instruction at schools has certain drawbacks and it could be possible to eliminate those by implementing CLIL in EFL curriculum:

> CLIL should play a really strong role in the Turkish EFL curriculum; the administration of the schools should consider it as a very important approach. (Participant 1)

> Teachers should be well prepared and more teacher trainings on CLIL should be provided before they start teaching. (Participant 2)

Grammar-focused instruction, uninteresting topics, focus only on the lower order thinking skills, and insufficient teacher preparation were found to be the most frequent

reasons for the relatively ineffective language instruction mentioned by the participants.

6. Discussion and conclusion

This study has provided insights into the effect of introductory CLIL-based training on Turkish EFL pre-service teachers' self-efficacy beliefs and their attitudes towards CLIL approach in English language instruction. The study has indicated an increased level of self-efficacy beliefs in Turkish EFL pre-service teachers. Relying on this, it can be argued that the implementation of the introductory CLIL teacher training facilitated the participants' raised sense of self-efficacy beliefs unlike some previous research (De Mesmaeker & Lochtman, 2014; Yessenova, 2017). One major implication of this study is that CLIL training seems to be effective for improving self-efficacy beliefs of teachers when it is provided or included in pre-service EFL teacher education programs. This is also relevant to the current trend for the expanding use of CLIL in K12 language instruction in several EFL contexts and thus our study addresses a potential need for preliminary CLIL training integrated into pre-service English language teacher education programs. The findings of this study may also help future teachers raise their self-efficacy beliefs, trigger administrators and teacher trainers to draw upon the study with respect to the need to enhance CLIL teacher training for future EFL teachers and how to enable them to incorporate it in a practical way.

Regarding self-efficacy beliefs, this study also suggests that the three major categories play a salient role for Turkish EFL pre-service teachers in CLIL-based teaching: instructional categories, classroom management, and student engagement. This clearly implies an important aspect of CLIL training in pre-service teacher education program in the sense that it should emphasize especially practical strategies or equip them with necessary tools for CLIL implementation. A variety of instructional strategies, such as rich input, authentic materials, scaffolding, real-life situations, activating higher order thinking skills, collaborative work, 4Cs instruction, relevant content, differentiated methods, and student-centered instruction, seem to be important for boosting pre-service teachers' self-efficacy for using CLIL in teaching English. As for student engagement, our study indicates that pre-service EFL teacher have become

quite confident in a variety of strategies, such as group-work, collaborative learning, peer-feedback, games, realistic situations, problem-solving tasks, interactive instruction, and secure classroom environment. These answers reflect the participants' high sense of self-efficacy regarding the instructional strategies and strategies for student engagement CLIL approach requires. However, Turkish EFL pre-service teachers' sense of efficacy in classroom management turned out to be relatively low, and the main reason mentioned by all the participants is the lack of teaching experience. Thus, one such implication of our study also relates to the provision of opportunities for implementing CLIL in pre-service English language teacher training. These CLIL-based teacher education training courses should also integrate the practical or actual implementation aspect of it as much as possible.

This study also highlights the importance of revealing the pre-service teachers' attitudes towards CLIL. Similar to previous work on CLIL (Bozdoğan & Karlıdağ, 2013; Dalton-Puffer et al., 2009; Pokrivčáková et al., 2013; McDougald, 2015; Soler, Gonzalez-Davies & Inesta, 2017), this study demonstrates the participants' positive attitudes towards CLIL. Turkish EFL pre-service teachers in our study support CLIL implementation or instruction and its influence on learners' language development. As the participants have also become aware of the necessity for effective preparation for CLIL implementation that requires more time, teacher effort, collaboration among colleagues, administrative support, and additional teaching materials (Kewara & Prabjandee, 2018), it is highly crucial to create such awareness and cultivate positive attitudes towards the role of CLIL in English language curriculum not only for its positive outcomes in students' academic achievements and individual development but also challenges to be faced. Integrating CLIL-based training into pre-service EFL programs would also help eliminate or reduce the heavy focus on grammar-based instruction and enable language teachers and learners to be involved in more authentic or communicative language instruction.

The study is limited to a specific group of pre-service teachers at a foundational university in Turkey. Therefore, the primary goal of the research was not to generalize the outcomes but gain deeper insights into the perspectives and beliefs of Turkish EFL

pre-service teachers about CLIL and teaching in general before and after the implementation of CLIL teacher training course. However, it is also quite likely to transfer the results and implications of this study to similar contexts where EFL pre-service teacher education is provided through structured program at undergraduate level. It is important to conduct further research on pre-service language teachers, their self-efficacy beliefs, the role of CLIL-based practicum or implementation, and other factors that might be influential in CLIL instruction or teacher preparation in similar contexts.

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