EFL Pre-Service Teachers' Perceptions of CLIL

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Abstract

This study aims to investigate EFL pre-service teachers' perceptions of CLIL concerning what CLIL is, what CLIL provides, what CLIL requires, who should implement CLIL, and where CLIL teachers should be trained. The participants were EFL pre-service teachers studying in the faculty of education, Mahasarakham University, Thailand. Questionnaires were used to collect the data after the introduction of CLIL. The findings revealed that most of the participants knew the notion of CLIL as they had taken the teacher training course. The majority of the participants viewed that CLIL provided the opportunities to integrate language into the content subjects. They believed that CLIL helps students develop both language skills and subject knowledge. However, it was revealed that the difficulties in CLIL implementation concerned content, a combination of culture to the lesson, and language (communication). The factors causing the difficulties were mainly related to teachers' lack of content knowledge, students' low English proficiency, and the difficult content interrelated to the technical vocabulary. Another factor directly related to CLIL was 4Cs integration into the lessons. It can be seen that although the EFL pre-service teachers have taken the CLIL training course, they still find CLIL difficult to apply and cannot make CLIL classes effective. The factors can be a guide to develop the CLIL training in order to produce qualified CLIL teachers. Content subject and language training, principles of 4Cs and of CLIL, as well as how to apply to the lessons should be highly emphasized in the training course.

Keywords: CLIL, CLIL training, EFL, perceptions, pre-service teachers

1. Introduction

Information and communication have been growing rapidly in the past decades. The world has become one big globe for people to share and make use of knowledge and information they acquire (Keyuravong, 2010). In the trend of globalization, English has been playing an important role among countries in educational, political, and social contexts. As a result, learning English has become important for learners worldwide. In Thailand, there have been many programs developed by the government and educational institutions to promote English education, for example, international schools, English curriculum, English Program (EP), Mini English Program (MEP), and International Study Programs.

Currently, the English language teachers with a good command of English language, knowledge of the content of subject areas, as well as knowledge of teaching methodology are in demand. This is because English language teaching and learning in Thailand has tried not only to teach English to develop the English language skills of the learners but also to teach the subject matters through the medium of English to serve the demand of the programs developed. As a result, the MOE has set up the Strategic Plan for Reforming the English Learning Process to Accelerate National Competitive Ability (2006-2010). The plan focuses on the establishment of the English Language Institution and Training for in-service Teachers of English. In addition, Punthumasen (2007) points out that Office of the Basic Education Commission has established two training centers, namely English Language Institution and English Resource and Institutional Centre as the centers for the development of Thai teachers of English in all regions in Thailand.

As having been trained EFL pre-service teachers for years, the researchers have introduced CLIL in order to help develop EFL pre-service teachers' ability to adapt methodological approaches to CLIL learning context. The researchers view CLIL as an approach that can deal with the ongoing English language teaching situation since it is considered advantageous to both teaching and learning content and language subjects. In addition, the beneficial effects of adoption of CLIL can be seen in various aspects including the teacher aspect. They become

more aware of the language features and non-language features. They also understand the importance of content in the language processing (Papaja, 2014).

However, it is not easy to develop a qualified CLIL teacher because implementing CLIL requires more than the ability to speak or listen in a language. Apart from being able to use the language as a tool in the class, the CLIL teacher needs to be linguistically aware, possessing insight into how language functions, (Papaja, 2014). In addition, the teachers' perceptions of CLIL, for instance, the awareness of and understanding about the purpose of CLIL can also influence the successful CLIL implementation. It is important that the teachers' perceptions be taken into account in training and developing the teachers' abilities to use methodological approaches in CLIL learning context. Therefore, this study aims to investigate the EFL pre-service teachers' perceptions of CLIL after introducing CLIL in an EFL pre-service teachers training course.

The findings of the study can be useful to the EFL pre-service teacher training as it reveals how EFL pre-service teachers perceive the implementation of CLIL in the classroom. It can be applied to develop the teachers' awareness of and understanding about the purpose of CLIL and how to implement CLIL in the classroom to promote their positive attitudes towards CLIL which will reflect their CLIL implementation.

2. Research Questions

This study aims to investigate the EFL pre-service teachers' perceptions of CLIL after introducing CLIL in an EFL pre-service teacher training course. The research questions are as follows:

  1. What are the EFL pre-service teachers' perceptions of what CLIL is?

  2. What are the EFL pre-service teachers' perceptions of what CLIL provides?

  3. What are the EFL pre-service teachers' perceptions of what CLIL requires?

  4. What are the EFL pre-service teachers' perceptions of who should implement CLIL?

  5. What are the EFL pre-service teachers' perceptions of where CLIL teachers should be trained?

3. Literature Review

3.1 Content and Language Integrated Learning (CLIL)

Content and Language Integrated Learning (CLIL) is a teaching approach to foreign or second language learning which a foreign/second language is used as a medium of instructions. CLIL is first developed in Europe in the 1990s. It has then been used extensively in others continents including Asia as a result of the change of the world of globalization. According to Coyle, Hood, and Mash (2010), CLIL is a dual-focused teaching approach that an additional language is used as a tool for learning and teaching. It is claimed as a dual-focused approach because of its emphasis on both content and language. In other words, in the process of teaching and learning, the focus of the lesson is not only the content but also the foreign language used in teaching and learning. Moreover, Marshland (1999) (in Papaja, 2014), defines CLIL as an approach which integrates content and language in order to achieve the designated goals of the education. In terms of teaching, it is claimed that CLIL involves learning to use language appropriately while using language to learn effectively (Coyle, Hood & Mash, 2010).

Based on CLIL pedagogical framework, in order to integrate CLIL effectively, four elements included in the 4Cs framework need to be considered. The 4Cs framework involves four aspects: content, communication, cognition, and culture (Coyle, Hood & Mash, 2010). According to Coyle (2006), the 4Cs Framework considers integrating learning (content and cognition) and language learning (communication and cultures). The framework suggests effective CLIL takes place through progression in knowledge, understanding of the content, engagement in cognitive processing, interaction in the communicative context, developing appropriate language knowledge and skills as well as acquiring an intercultural awareness. To conclude, CLIL is a flexible approach that language and non-language or content subjects are integrated in the mutually beneficial way in order to provide educational outcomes for the widest range of learners (Coyle, 2006).

3.2 The Current Status of CLIL in Thailand

Foreign language teaching and learning have become the challenge for education in every continent of the world due to the global changes, the technological evolution, including the rapid growth of knowledge in all areas (Coyle, Hood, & Marsh, 2010). Similar to many countries, the demand for English in Thailand has been increasing rapidly in the last ten years because of the globalization that influences the economy. As a result, the Thai government has been willing to enhance the English proficiency of Thai students as well as to prepare Thai people for the high economic competition nationally and internationally (Prasongporn, 2009). In order to promote the improvement of English Language capabilities in Thailand, the Ministry has allowed the educational

institutions to run the English study programs, such as international schools, English curriculum, EP programs, and international study programs (Punthumasen, 2007). These programs require the pedagogical approaches which English is used as a tool to teach and learn while the content of the subject is mutually emphasized. This situation led to the attempt to seek for the appropriate teaching approach for the programs. CLIL seems to be a teaching approach that meets all of these demands.

A small-scale CLIL project was set up in six schools to create and implement a learning module in relation to the integration of authentic content and English language, according to the principles of CLIL (Prasongporn, 2009). The feedback from the teachers and the students from the project showed that the students enjoyed the CLIL class and have improved their confidence in sharing knowledge in English. Additionally, it is found that the teachers were satisfied with CLIL as it strengthened their teamwork (Prasongporn, 2009). It seemed that the result of the small-scale CLIL project was positive. However, when it comes to the real class, there are many voices from the teachers regarding difficulties in CLIL implementation. To illustrate, the most discussed difficulty expressed by the teachers is teachers' language proficiency. According to Geringer (2003) (in Noom-ura, 2013), most of English teachers in Thailand stated the problems in teaching in the similar ways. The problems include the teachers' teaching strategies, the teachers' English proficiency, and the teachers' ability in teaching listening, speaking skills as well as language and cultures. All of these factors can greatly hinder the successful use of CLIL in the Thai education. One of the key factors influencing the quality of teaching and learning is the quality of the teachers. A CLIL course requires knowledgeable teachers in both content and language. It will be difficult to control the class and manage the procedures planned in the lesson plan when the language teachers lack the content knowledge. Furthermore, the 4Cs framework can also be a barrier to CLIL implementation. The teachers have to aware that the chosen content and activities are appropriately integrated to the 4Cs in order to increase the effectiveness of the CLIL (Suwannoppharat&Chinokul, 2015). It can be concluded that the main factor which has a great impact on CLIL classroom is obviously the teachers. Therefore, implementing CLIL in Thai mainstream classes requires a good teacher development plan. The provision of pre-service and in-service training to enhance English language proficiency including the development of CLIL methodologies and skills will help develop CLIL integration in the future (Prasongporn, 2009). To develop the plan for in-service or pre-service EFL teacher training, it is necessary to explore the stakeholders' views, especially teachers' views, towards CLIL. The information about how the teachers' perceive CLIL can be great evidence for training course development in terms of what to provide and what and how to prepare the teachers for CLIL to fill the gaps and to enhance the teachers' competence in implementing CLIL in the classroom successfully.

3.3 Teachers' Perceptions of CLIL

Teachers' perceptions have been one of the main focuses in the educational field. Many educators and researchers have studied teachers' perceptions of their particular areas as the perceptions are found to be an effect on how they teach and how they deal with the classroom. Teachers' perceptions of CLIL are recently investigated by many researchers worldwide with the purpose to gain the insight of the CLIL to seek for a way to the successful CLIL implementation. The results found in many studies showed similar perceptions of the CLIL teachers both in the positive and negative aspects. Strotmann et al. (2014) surveyed the teacher profiles and experiences in CLIL courses at the tertiary level in Spain. Most of the teachers expressed that they made their own decisions to teach the content subjects in English with the most popular reasons that they loved English and they enjoyed teaching in English and different cultures. However, some teachers expressed that they taught in English because they were asked to do so by the administrators without readiness and training to teach in English. Consistently, McDougald (2015) carried out the research on the Columbian primary, secondary and university teachers' perceptions of CLIL. Most of the teachers showed the lack of readiness to teach subjects in English of the CLIL teachers. Many of them have been forced to teach a subject in English although they do not have knowledge of the particular content. In addition, they were assigned to teach content subjects in English due to their good English language competence without considering if the teachers were well-trained on how to teach content through language or not. Moreover, it is found that the teachers do not seem to have the awareness of how to adapt materials to the students' needs and interests appropriately. The lack of knowledge of CLIL and the lack of good training can cause a difficulty in teaching. Thus, the majority of the teachers expressed that they preferred to receive training in speaking academic English and they were also interested in receiving CLIL training (Strotman el al., 2014). In addition, Yang (2016) revealed the identical findings on his investigation of the stakeholders' perceptions in relation to CLIL in higher education in Taiwan. The teachers expressed that CLIL had advantages, such as bringing more overseas students to study in Taiwan's universities. Nevertheless, insufficient CLIL teachers were the major burden most mentioned. The teachers argued that CLIL should be

integrated into the classroom, but the problem was the lack of qualified teachers. They reported that the current CLIL classroom only focuses on giving the lectures through English without accommodating both content and language which led to learners' dissatisfaction with CLIL education. Therefore, the preparation of qualified CLIL teachers in terms of how to integrate language into content teaching was suggested. Apart from the lack of readiness and qualified teachers regarding the knowledge of CLIL, language proficiency of both teachers and students is also one of the challenges for CLIL classroom. The evidence was found in the study by Arnó-Macià and Mancho-Barés (2015). They reported that the language proficiency of both teachers and students was perceived as the main challenge to CLIL implementation. Teachers stated that the language demands that CLIL poses to students including affective factors such as anxiety reflect an awareness of language. Aguilar and Rodrı́guez (2012) also found that most of the teachers stated that it was difficult to communicate in English as their knowledge of English vocabulary was insufficient. The obstacles hindered the successful CLIL classroom noted including the lack of suitable materials, time limitation in lesson preparation, and teachers' English level. The teachers expressed that they needed a support to help improve their English skills, especially English speaking skills and vocabulary. Similarly, Infante, Benvenuto, and Lastrucci (2009) reported in their studies that the teachers had some problems in applying CLIL, for example, the lack of teaching materials, the lack of collaboration, and the difficulties in integrating content and language properly. Overall, the teachers showed a positive attitude towards CLIL but they showed the need of substantial and systematic training. Thus, the study suggested that language training and teacher training is crucial. Providing teacher training, the teachers can enhance the quality of CLIL pedagogy employed. Moreover, they can achieve the level of language and content competence required for the CLIL classroom. So far, we have seen that CLIL has been implemented in many countries, yet it seems that the implementation has not been successful. The main factor obstructing the successful CLIL classes is that the CLIL teachers are not well-trained to apply CLIL. Therefore, the researchers have included CLIL in the EFL pre-service teacher training course with the intention to prepare the EFL pre-service teachers for CLIL implementation. The exploration of the EFL pre-service teachers' perceptions of CLIL can be essential for developing the CLIL training to be the most effective for EFL pre-service teachers.

4. Research Methodology

4.1 Participants

The participants of this study consisted of 139 EFL pre-service teachers studying in the first semester of the academic year 2017 in the faculty of education, Mahasarakham University, Thailand. All of them have taken teaching methodology courses which include CLIL training before responding to the questionnaires. In each course, they had opportunities to apply the teaching theories and approaches through peer teaching throughout the courses. They also gained real teaching experiences as they were assigned to apply their lesson plans to the English classroom at schools.

4.2 Research Instrument

In order to arrive at the answers to the research questions, questionnaires were used as the instrument to collect the data. The questionnaires consisted of two main parts. The first part consisted of 34 items related to the research questions. A Likert scale was used, ranging from strongly agree to strongly disagree (scoring from five to one). The second part consisted of five open-ended questions requiring the participants to refer back to their experiences implementing CLIL in the classroom.

4.3 Data Collection and Data Analysis

To investigate the English pre-service teachers' perceptions of CLIL, the researchers introduced CLIL based on theoretical and methodological aspects to the participants. After the introduction of CLIL, the questionnaires were administered. The data obtained from the questionnaires were analyzed for percentage, Mean and Standard deviation. The data analyzed were categorized based on the research questions and were presented in tables. The first set of five items tried to find out the EFL pre-service teachers' perceptions of what CLIL is, the second set of fourteen items investigated what CLIL provides, the third set of ten items sought to examine the requirement of CLIL, the fifth set consisting of three items showed the views of the EFL pre-service teachers on who should implement CLIL, and the last set of two items provided the information about where CLIL teacher should be trained.

5. Research Findings

After analyzing the data among 139 participants from the questionnaires, the findings can be presented as follows;

Table 1.EFL pre-service teachers' perceptions of what CLIL is

Statements	Strongly agree (%)	Agree (%)	No idea (%)	Disagree (%)	Strongly disagree (%)	Mean	SD
1. CLIL is an approach to teach and learn a content subject e.g. mathematics, science, geography etc. through a foreign language.	68.35	31.65	0	0	0	4.68	0.47
2. CLIL focuses on both content and language.	62.59	33.09	2.88	1.44	0	4.57	0.63
3. CLIL lessons include content, communication, cognition and culture.	76.26	22.30	1.44	0	0	4.75	0.47
4. Language is used to learn and communicate in CLIL classroom.	46.04	48.92	3.60	1.44	0	4.40	0.63
5. Language is both content and medium of instruction in the classroom.	33.81	56.12	6.47	2.88	0.72	4.19	0.74

Table 1 highlighted the EFL pre-service teachers' perceptions of what CLIL is. The results showed that the majority of the participants (76.26%) strongly agreed that CLIL lessons include content, communication, cognition, and culture. 68.35% also agreed that CLIL is an approach to teach and learn content subjects such as mathematics, science, and geography through a foreign language. The least agreed statement was that language is both content and medium of instruction in the classroom (33.81%).

Table 2. EFL pre-service teachers' perceptions of what CLIL provides

Statements	Strongly agree (%)	Agree (%)	No idea (%)	Disagree (%)	Strongly disagree (%)	Mean	SD
1. CLIL helps students develop only their language skills.	8.63	16.55	8.63	41.01	25.18	2.42	1.27
2. CLIL helps students develop only their subject knowledge.	2.88	17.99	7.91	44.60	26.62	2.26	1.13
3. CLIL helps students develop both their language skills and subject knowledge.	56.83	38.13	5.04	0.00	0.00	4.53	0.58
4. CLIL can increase students' motivation to learn.	30.22	46.04	20.86	2.88	0.00	4.04	0.80
5. CLIL can promote students' personal and cultural development as well as progress in language learning and use.	20.14	58.99	20.14	0.72	0.00	3.99	0.66
6. CLIL enables students to see the importance of four skills (reading, writing, listening, speaking).	18.71	57.55	16.55	5.76	1.44	3.86	0.83
7. CLIL provides learning contexts related to the needs and interest of students.	13.67	62.59	15.11	7.91	0.72	3.81	0.80
8. CLIL offers direct opportunities to learn through language and to make meaning that matter.	10.07	56.83	10.79	0.72	0.00	4.19	0.65
9. CLIL supports the integration of language into the content subjects.	61.15	33.09	5.76	0.00	0.00	4.55	0.60
10. CLIL helps to focus on the interrelationships between language development and thinking skills.	38.13	54.68	6.47	0.72	0.00	4.30	0.62
11. CLIL offers opportunities to interact face to face and through the use of new	25.90	41.73	27.34	5.04	0.00	3.88	0.85

technologies, e.g. the internet.							
12. CLIL is an appropriate tool for exploring the links between language and cultural identity, examining behaviors, attitudesand values.	22.30	62.59	14.39	0.72	0.00	4.06	0.63
13. CLIL involves contexts and content enriching the learners' understanding of their own culture and those of others.	24.46	55.40	16.55	3.60	0.00	4.01	0.75
14. CLIL strengthens intercultural understanding and promotes global citizenship.	26.62	48.92	21.58	2.88	0.00	3.99	0.78

Table 2 showed the EFL pre-service teachers' perceptions of what CLIL provides. 61.15% identified that CLIL supports the integration of language into the content subjects. It was closely followed by the opinions of 56.83% of the participants that CLIL helps students develop both their language skills and subject knowledge. On the contrary, 2.88% least agreed that CLIL helps students develop only their subject knowledge.

Table 3. EFL pre-service teachers' perceptions of what CLIL requires

Statements	Strongly agree (%)	Agree (%)	No idea (%)	Disagree (%)	Strongly disagree (%)	Mean	SD
1. CLIL requires more subject knowledge than teachers of English possess.	23.74	39.54	19.42	15.83	1.44	3.68	1.05
2. CLIL requires more methodology knowledge than teachers of English possess.	16.55	46.04	23.74	12.23	1.44	3.64	0.95
3. CLIL requires lots of time for lesson preparation and teaching.	53.96	33.81	7.91	2.88	0.72	4.38	0.81
4. CLIL requires new teaching materials.	38.13	46.76	10.07	5.04	0.00	4.18	0.81
5. CLIL requires large administrative support.	31.65	42.45	20.86	5.04	0.00	4.01	0.86
6. CLIL requires cooperation with subject teachers.	51.08	38.85	8.63	1.44	0.00	4.40	0.71
7. CLIL requires the collaboration of subject area specialists and language specialists to design the course.	53.24	40.29	5.04	0.72	0.72	4.45	0.69
8. CLIL can be achieved by a team working collaboratively to choose an appropriate theme and to identify key concepts and process.	44.60	46.76	7.91	0.72	0.00	4.35	0.66
9. CLIL is possible only with intermediate students of English.	13.67	23.02	25.90	28.78	8.63	3.04	1.19
10. CLIL is possible only for both young learners and older learners.	10.79	31.65	19.42	26.62	11.51	3.04	1.22

Table 3 illustrated the EFL pre-service teachers' perceptions of what CLIL requires. The results indicated that *"CLIL requires lots of time for lesson preparation and teaching"* was strongly agreed (53.96%). *"CLIL requires the collaboration of subject area specialist and language specialist to design the course"* was rated 53.24%. In contrast, 10.79% agreed that CLIL is possible only for both young learners and older learners.

Table 4. EFL pre-service teachers' perceptions of who should implement CLIL

Statements	Strongly agree (%)	Agree (%)	No idea (%)	Disagree (%)	Strongly disagree (%)	Mean	SD
1. CLIL should be implemented by subject teachers.	10.07	53.96	11.51	23.02	1.44	3.48	1.00
2. CLIL should be implemented by language teachers.	15.83	51.08	10.07	22.30	0.72	3.59	1.03
3. CLIL should be implemented by language teachers in collaboration with subject teachers.	67.63	29.50	2.88	0.00	0.00	4.65	0.54

Table 4 presented the result of the EFL pre-service teachers' perceptions of who should implement CLIL. The result indicated that the participants (67.63%) strongly agreed that CLIL should be implemented by language teachers in collaboration with subject teachers. In contrast, only 10.07% agreed that CLIL should be implemented by subject teachers.

Table 5. EFL pre-service teachers' perceptions of where CLIL teachers should be trained

Statements	Strongly agree (%)	Agree (%)	No idea (%)	Disagree (%)	Strongly disagree (%)	Mean	SD
1. CLIL teachers should be trained via in-service teacher training conducted by Ministry of National Education.	22.30	43.17	28.06	5.76	0.72	3.81	0.88
2. CLIL teachers should be trained at universities via a pre-service teachers training course.	42.45	48.20	8.63	0.72	0.00	4.32	0.66

Table 5 illustrated the EFL pre-service teachers' perceptions of where CLIL teachers should be trained. According to the result, 42.45% strongly agreed that *"CLIL teachers should be trained at universities via a pre-service teachers training course"* while 22.30% agreed that *"CLIL teachers should be trained via in-service teacher training conducted by Ministry of National Education."*

Table 6. EFL pre-service teachers' perceptions of the difficulties in implementing CLIL in the classroom

Difficulties	No.	Percentage (%)
Content	77	55.40
Combination of culture to the lesson	63	45.32
Combination of cognition to the lesson	44	31.65
Language (communication)	61	43.88
Material preparation	43	30.94
Lesson planning	36	25.90
Classroom management	44	31.65
Other	3	2.16

Table 6 showed the EFL pre-service teachers' perceptions of what they found difficult when implementing CLIL. Among eight difficulties provided, the content was most identified (55.40%). The second most identified (45.32%) was a combination of culture to the lesson. The third most identified (43.88%) was language (communication).

To get insightful data on what causes the difficulties, the data from open-ended questions were analyzed as shown in table 7 below.

Table 7. EFL pre-service teachers' opinions on the causes of the difficulties

Causes	No.	Percentage (%)
Students		
1. Students' low language proficiency	28	17.39
2. Students' lack of motivation	3	1.86
3. Students' different learning styles	1	0.62
Teachers		
4. Teachers' content knowledge, eg. math, science, etc.	42	26.09
5. Teachers' language proficiency	3	1.86
6. Teachers' knowledge of CLIL	3	1.86
Content		
7. Difficult and complicated content	21	13.04
8. Vocabulary (Technical terms)	12	7.45
Lesson Planning		
9. Activities and lesson planning	2	1.24
10. 4Cs integration to the lessons and activities	18	11.18
Others		
11. Materials and equipment used in the classroom	12	7.45
12. Time management	7	4.35
13. Classroom management	9	5.59
Total	**161**	**100.00**

Table 7 showed the participants' responses to the open-ended questions *"What do you think causes the difficulties?"* The causes of the difficulties were classified into five aspects concerning CLIL implementation: students, teachers, content, lesson planning, and others. The aspects most mentioned were teachers, students, and contents. Teachers' content knowledge was most frequently stated (26.09%). One of the participants noted that she had a problem when integrating CLIL in her lesson due to the unfamiliarity with the content.

"I think content is difficult when implementing CLIL because English teacher has only knowledge of English. I am not proficient in another subject so content in another subject is difficult to learn and to prepare the lesson. I also don't know well enough how to teach and explain the content to the students."

Similarly, another participant stated that her content subject knowledge, especially the complex content of high school level caused a difficulty in explaining and answering unexpected questions from the class.

"Some content such as Math, Science, History, and Geography are difficult for a language teacher to understand especially the contents in upper-level learners (Mattayom 4-6). I took a lot of time for preparing how to teach the content because I am not good at other subjects. Also, when the students asked about the content irrelevant to the context being taught, I could not answer or explain to them."

In addition to teachers' content knowledge, the second cause of the difficulties was relevant to students. 17.39% pointed out that students' English language proficiency which was generally low caused difficulties in implementing CLIL. A participant explained that students' knowledge of English vocabulary had an impact on teaching and learning process in CLIL classroom.

"Most of the students don't understand the lesson because they don't know the meaning of the English words. Also, students cannot present the result of the experiment because they don't get familiar with the words used in the experimental process. The steps of doing the experiment are quite complex which can make the students confused and do the wrong step. Then, it leads to the incorrect result."

It was also found that the low level of Thai students' English skills made the lesson difficult to teach. Classroom interaction did not occur since the students did not understand the lesson in English. The participant's opinion was presented below.

"Basically, Thai students are not familiar with English language so it causes to CLIL class. Their English four skills are weak. While I was teaching, the students could not interact with me because they did not understand. Finally, it was the difficulty."

The third cause of the difficulties frequently mentioned (13.04%) was related to the content. According to the result, the difficult content interrelated to the technical terms used in the lessons. It had the effect not only on teaching and learning but also on time management and lesson planning. The evidence is shown as follows:

"Content is considered the difficulty. The first step in making a lesson plan is to choose appropriate content for students. Some content is complex and too difficult for explaining. The difficult and complex content make me spend too much time simplifying the content. Moreover, students may spend too much time to understand the content when it is too complex."

Moreover, some participants noted that what made the content even more difficult was the unfamiliar technical vocabulary appeared in the lessons. The participants demonstrated that they had a problem explaining the technical terms to the students. As a result, those complex contents with technical terms sometimes created a lot of confusion to students.

"Some content subjects contain a lot of technical terms and the content may be difficult. Some topics are very difficult and there are a lot of technical terms that can cause confusion to students. It is also difficult to describe some technical words to students by using a foreign language."

Table 8. EFL pre-service teachers' opinions on how they deal with the difficulties

How to deal with the difficulties	No.	Percentage (%)
Difficulties related to students		
1. Try to engage students in the lessons and activities.	3	2.16
2. Find materials such as cartoon, multimedia that relate to students' interests.	2	1.44
3. Try to pay attention to all of the students equally.	1	0.72
Difficulties related to teachers		
4. Ask a subject teacher for suggestions.	14	10.07
5. Consult with the expert/ lecturer/ seniors.	6	4.32
6. Learn and find more information about the content subject.	28	20.14
7. Anticipate the problems that might occur and prepare the solutions beforehand.	3	2.16
8. Prepare both content and language before teaching in the class.	12	8.63
9. Find the information about how to implement CLIL from the internet.	6	4.32
10. Rehearse before teaching in the classroom.	10	7.19
Difficulties related to content		
11. Use simple English words and simplify the content and classroom language.	24	17.27
12. Provide guideline to students before having them do an activity.	2	1.44
13. Use visual support (pictures, VDO, audio, etc.)	5	3.60
Difficulties related to lesson planning		
14. Change to more suitable the topic/ activities	6	4.32
15. Find the example of activities and adapt to the lesson	6	4.32
Difficulties related to other aspects		
16. Prepare and check all of the materials and equipment before starting the class.	4	2.88
17. Prepare the lesson which was suitable for the class and did not require too many materials.	7	5.04
Total	**139**	**100.00**

When asked *"How did you deal with the difficulties?"* the participants responded as demonstrated in Table 8. Three ways to deal with the difficulties mostly stated were 1) learning and finding more information about the content subjects, 2) using simple English words and simplifying the content and classroom language, and 3) asking a subject teacher for suggestions. Learning and finding information about the content subjects was most mentioned as a way to deal with the difficulties regarding the teachers' content knowledge which was also the most demonstrated as a difficulty found in CLIL implementation. 20.14% expressed that they had to find more information about the content they were going to teach from books and also on the internet so as to learn and to ensure that they truly understand the lesson. One of the participants responded that:

"I studied more and dig deep in detail of the content related to the subject I taught. I think the most important thing the teacher should do before teaching is that the teacher should understand the content well."

Similarly, another participant expressed that:

"I studied the content well before teaching because I needed to make sure that I understood the content very well before I taught."

Furthermore, using simple English words and simplifying the content and classroom language was second most identified (17.27%). Many participants responded that they used simple English words and simplified the content as a way to deal with the difficulties regarding students' English language proficiency, the difficult and complex contents as well as the technical vocabulary. To illustrate, a participant explained that:

"I tried to explain the meaning of the technical vocabulary by using simple words and I also communicated with my students using basic sentences and easy vocabulary to make the lesson easy to understand."

Another participant responded in a similar way. In order to deal with the students with low English proficiency, she simplified the content of the lesson taught and used easy words to give instructions. She commented that:

"When I taught the weak students, the content which is difficult by nature is even more difficult for them to understand. Thus, I simplified the content of the lesson, gave instructions by using very simple words and adjusted the lesson plan to the level of the students appropriately.

Asking a subject teacher for suggestions was another way frequently used to cope with the difficulties regarding CLIL implementation. 10.07% answered that due to their lack of content knowledge; they asked for suggestions from a teacher or a friend who taught the particular subject such as mathematics and science.

"I asked a teacher who taught the subject I taught in my CLIL class. I asked her about some points that confused me. I also asked her for suggestions on what was the appropriate content for my students' level and how could I scaffold students to help them understand the lesson. The subject teachers could give a good advice that was useful for lesson planning."

It can be seen that the cause of the difficulties in CLIL implementation mostly concerned the teachers' content knowledge. Most of the participants tried to learn and find more information about the content that they were going to teach in order to avoid the anticipated problems regarding their lack of content knowledge.

When asked, *"What is your suggestion for the EFL pre-service training course in terms of teacher preparation for CLIL implementation?"* the participants gave suggestions as illustrated in Table 9.

Table 9. Suggestions for the EFL pre-service teacher training course

Suggestions	No.	Percentage (%)
1. Teachers should know students' background knowledge so as to design a lesson and activities appropriately.	3	3.19
2. Pre-service teachers need training before implementing CLIL in the classroom.	14	14.89
3. Teachers should have a good knowledge of both content and the language.	10	10.64
4. Pre-service teachers should be trained in terms of language; i.e., English speaking skills.	7	7.45
5. Pre-service teachers should be trained in terms of the content subjects.	7	7.45
6. The course should provide more opportunities to pre-service teachers to practice in the training courses.	10	10.64
7. The course should provide more opportunities to teach in the real classroom.	2	2.13
8. The course should provide more sessions for CLIL training.	3	3.19
9. Different kinds of activities related to the 4Cs should be introduced in the course.	3	3.19
10. The principles of 4Cs/ CLIL and how to apply to the lesson needs to be explained clearly.	4	4.26
11. How content and language teachers can work cooperatively should be introduced in the training course.	16	17.02
12. Many kinds of teaching techniques need to be provided.	1	1.06
13. Apart from math and science, how to integrate CLIL to other subjects should be included.	2	2.13
14. Math and science lecturers should be invited sometimes to teach the basic knowledge of the subjects.	3	3.19
15. More textbook and materials that are suitable for CLIL lessons should be provided.	4	4.26
16. More CILL books should be provided.	5	5.32
Total	**94**	**100.00**

Table 9 showed the suggestions for the EFL pre-service teacher training course given by 94 out of 139 participants. As illustrated in Table 6 and Table 7, content was mostly perceived as a difficulty in implementing CLIL and the cause of the difficulty mostly identified was the teachers' lack of content knowledge. Thus, suggestions concerning the causes and the difficulties based on the participants' experiences were given. The suggestion that was most frequently given (17.02%) was *"how content and language teachers can work cooperatively should be introduced in the training course"*. The second most suggested (14.89%) was *"pre-service teachers need training before implementing CLIL in the classroom"*. Finally, the need for good knowledge of content subjects and language as well as the need for more opportunities to practice in the training course were the third most suggested (10.64%).

6. Discussions

The study investigated the EFL pre-service teachers' perceptions of CLIL concerning what CLIL is, what CLIL provides, what CLIL requires, who should implement CLIL, and where CLIL teachers should be trained. The study showed that most of the participants perceived CLIL as an approach to teach and learn content subjects through a foreign language. Content, communication, cognition, as well as cultures are the important components of CLIL lessons. It can be seen that most of the participants knew the notion of CLIL as they had taken the teacher training course. The majority of the participants viewed that the advantage obviously obtained from CLIL class was the opportunities to integrate language into the content subjects. Moreover, they believed that CLIL helps students develop both language skills and subject knowledge. Consistent with the findings reported by McDougald (2015), the participants responded that CLIL developed language skills and subject knowledge. Nonetheless, it was found that the majority of the participants noted that time was necessary for lesson planning and teaching. The current study also found that although CLIL provides advantages to the class, the participants identified that implementing CLIL requires lots of time for lesson preparation and teaching since CLIL lesson preparation involved more than one particular language focus of the lesson. It included, for language teachers, finding and learning about the content subjects taught as well as the preparation of materials used in the class such as materials for the scientific experiment. Many participants demonstrated that planning a CLIL lesson was time-consuming. They needed to spend quite a long time selecting an appropriate content, designing activities, and preparing materials which mostly for the experiment. Additionally, in Thailand, most of the content subject teachers are not proficient in English. In other words, they cannot communicate in English. From the participants' perspectives, expecting the content subject teachers to implement CLIL in the classroom seemed difficult to be possible. The participants believed that they could be qualified CLIL teachers if they were trained properly with the help of content subject specialists or teachers. Thus, they stated that CLIL should be implemented by the language teachers in collaboration with subject teachers to make successful CLIL class. It can obviously be seen from the EFL pre-service teachers' perceptions that it was not easy to implement CLIL since it requires many things from the teachers, especially their effort and time to learn unfamiliar content and to prepare appropriate materials for the class. Therefore, teamwork and collaboration with the subject teachers seemed to be helpful for EFL pre-service teachers in preparing the CLIL lessons. Similar to Çekrezi and Biçaku (2011), CLIL classes need many kinds of activities more than in normal classes. The materials used need to be accurate and well-prepared. It means that collaboration among subject and language teachers is strongly required in order to prepare accurate and appropriate materials with good time management.

According to the participants' experiences implementing CLIL in their classroom, three difficulties from three main aspects were identified. Most of the participants revealed that the difficulties in CLIL implementation mostly concerned content, a combination of culture to the lesson, and language (communication). The factors causing the difficulties were mainly related to teachers' lack of content knowledge, students' low English proficiency, and the difficult and complicated content interrelated to the technical vocabulary. The findings are in line with Noom-ura (2013), her study revealed that students were a factor obstructing successful CLIL teaching. The problems mostly highlighted included students' inadequacy in English practice, students' lack of opportunities for English exposure outside class, students' English knowledge and skills deficiency, students' problems with listening and pronunciation, and students' lack of confidence to communicate in English. Furthermore, Guillamón-Suesta and RenauRenau (2015) reported in their study that most of the main teaching difficulties occurred in CLIL class concerned the specific vocabulary of the subject, the structures and terms needed to explain, the low English level of students, the materials preparation and adaptation, and application of appropriate teaching methodologies. In addition to the difficulties causing by teachers, students, and the difficulty of the content, one factor directly related to CLIL was 4Cs integration into the lessons and activities. Lots of participants expressed that because the contents mostly taught were science and mathematics, integrating 4Cs, especially cognition and culture, to the activities was a difficult job for them as CLIL teachers. Consistently, Suwannoppharat and Chinokul (2015) demonstrated that the 4Cs framework is challenging for the EFL teachers.

Integrating 4Cs to teaching and learning takes time and may sometimes create lots of obstacles if the teachers lack training on implementing CLIL approach in the classroom.

In addition, most of the participants provided positive responses to CLIL although they found many difficulties when implementing CLIL in the class. Therefore, the participants suggested that EFL pre-service teachers need training at universities via a pre-service teachers training course before implementing CLIL in the real classroom. This showed that the participants believed that training at the university can be more effective than training via the in-service teacher training course conducted by Ministry of Education. It might be because a training course provided at the university is theoretically and practically intensive. As a prospective teacher, training at the university can be a good preparation for them to deal with any circumstances they might experience at their prospective educational institutions. Çekrezi and Biçaku (2011) stated that practically, it is appropriate to start training pre-service teachers at the university level. They should be trained in terms of knowledge about the CLIL approach, and integrated degrees should be offered to them. Moreover, the training course should train the EFL pre-service teachers to cooperate with subject teachers. Working with subject teachers can be helpful in terms of preparing accurate and appropriate contents for the CLIL lesson. Consistent with Yang (2016), CLIL teachers should be trained immediately. The important aspect that should be included in the training is cooperation among language and content teachers. Also, the workshops should emphasize how to integrate language teaching into content teaching. Apart from that, the participants required a good knowledge of both content and language so as to make a successful CLIL class. It was also found that EFL pre-service teachers needed English speaking skill training. They demonstrated that they sometimes had problems communicating in English in the class because of not being competent to speak English. This can be an indicator of the EFL pre-service teachers' English competence which was quite low in English speaking skills. It can be seen that even though the EFL pre-service teachers have taken the CLIL training course, they still find CLIL difficult to apply. More importantly, they still cannot make CLIL classes effective due to the factors regarding students, teachers, and content subjects. Therefore, those factors can be a guide to the development of the CLIL training so as to produce qualified CLIL teachers. Content subject and language training, English speaking skills, principles of 4Cs and CLIL, and how to apply to the lessons should be highly emphasized in the training course. Hillyard (2011) noted that it is important that CLIL teachers be effective in the language of teaching, explaining, giving instructions, eliciting techniques, the language of classroom management, and the language of learning activities. Furthermore, teachers must be trained in lesson planning. They should have knowledge of lesson preparation, the transformation of the plans into action, comprehension of second language attainment levels, enhancement of cultural awareness, and having knowledge and awareness of cognitive processes and strategies in the CLIL environment. In addition, as the current CLIL training is included as a part of the pre-service teachers training courses which many principles and methodologies of teaching are also highlighted, there might not be enough time to cover every aspect of CLIL. Consequently, as suggested by the participants, more CLIL books and resources should be provided in order to support their self-study which will help them develop their understanding about CLIL and help them put the theoretical principles into practice effectively.

7. Conclusion

This study aims to investigate EFL pre-service teachers' perceptions of CLIL. The findings revealed that most of the participants knew the notion of CLIL as they had taken the teacher training course. The majority of the participants viewed that CLIL provided the opportunities to integrate language into the content subjects. They believed that CLIL helps students develop both language skills and subject knowledge. However, most of them had difficulties concerning content, a combination of culture to the lesson, and language (communication). The factors were mainly related to teachers' lack of content knowledge, students' low English proficiency, and the difficult content interrelated to the technical vocabulary. Another factor was 4Cs integration into the lessons. It can be seen that although the EFL pre-service teachers have taken the CLIL training course, they still find CLIL difficult to apply and cannot make CLIL classes effective. Therefore, in order to produce qualified CLIL teachers, content subject and language training, principles of 4Cs and of CLIL, as well as how to apply to the lessons should be highly emphasized in the training course.

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