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Becoming a Teacher of CLIL in Higher Education: A Pilot Study in Asia

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This study explores the developmental course of training to become a content and language integrated learning (CLIL) practitioner in higher education. Thirteen in-service teachers (five Japanese, four Taiwanese, two Chinese, one Filipino, and one Thai) wholly new to the CLIL approach received an intensive fortnight's training in CLIL. The training, following the CLIL model, started by introducing the theory, rationale and foundations of CLIL and concluded with a mini-CLIL teaching session from each teacher. Two quantitative surveys and a qualitative semi-structured survey yielded data on the trainees' experiences as course members. The results show that the teachers generally approved of CLIL, endorsing its effectiveness more than its efficiency. The teachers' self-confidence in English skills and their past teaching experiences seemingly affected their belief in CLIL's practices. Finally, the teachers revealed some challenges in implementing CLIL in general, in higher education, and in their specific culture-education contexts. The study made important contributions in the field, with its findings serving as valuable references for higher education, teacher-training programs, and interested teachers.

Keywords: ***content and language integrated learning (CLIL), English as an additional Language, higher education, teacher training***

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學習成為高等教育體系中的 CLIL 教師：以亞洲教師為個案研究

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本研究旨在探討高等教育教師學習「學科內容與語言綜合學習法」（content and language integrated learning, CLIL）提升教學的效果。十三位大學在職教師（五位日籍、四位台灣籍、兩位中國籍、一位菲律賓、及一位泰國籍）參與為期兩週的 CLIL 密集師資訓練課程。課程從引領教師認識 CLIL 教學理論及原理開始，以實作及試教作為收尾。為評估教師參與學習 CLIL 教學的成效，研究採用兩份量化問卷及一份半結構質性問卷收集相關資料。研究結果顯示，參與教師普遍認同 CLIL 教學法，並認為其教學效果（effectiveness）優於教學效益（efficiency）。教師對 CLIL 教學實踐的信念，受到本身的英語程度及過往的教學經驗影響。參與教師對於 CLIL 於高等教育現場實踐，從所屬教育文化體系，提出存有的挑戰、困難，與困境。本研究為該領域帶來重要貢獻，其結果得提供高等教育發展 CLIL 教學之參照、師資培訓機構推動 CLIL 參考，及有志投入 CLIL 教學的教師了解 CLIL 教學法的本質等資訊。

關鍵詞：以英語為外語、高等教育、教師訓練、學科內容與語言綜合學習

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1. Introduction

The popularity of content and language integrated learning (CLIL) over the last two decades has prompted educators and researchers to discuss its pedagogical basis, practices, and potential in various contexts. CLIL is a term first adopted in Europe in 1994 (Eurydice, 2006). Soon afterward, its practice became popular in most European countries (Lopriore, 2020) and was introduced to many education systems in other continents (Hanesová, 2015; Heras & Lasagabaster, 2015). In technical terms, CLIL can be understood as "a dual-focused approach in which an additional language is used for the learning and teaching of both content and language" (Coyle, Hood, & Marsh, 2010, p. 1). This is regarded as a relatively natural approach where learners may have more chance of being exposed to and acquiring linguistic input from a foreign language through authentic materials (Coyle, 2007; Coyle et al., 2010). The linguistic skills learned in CLIL are then applied to the transfer of information in authentic communicative contexts (Lasagabaster, 2008), rather than language exams. In core values, CLIL is a learner-centered (or learner-friendly) approach (Mehisto, Marsh, & Frigols, 2008), whereby CLIL teachers first analyze and prioritize the needs of their learners and, in response, create or adapt materials that integrate the language skills required to aid learners to access subject content. Taken together, the instructional practice and essential values may explain why scholars (Coyle, 2007; Dalton-Puffer, 2007; Dalton-Puffer, Nikula, & Smit, 2010; Lasagabaster, 2008; Van Kampen, Admiraal, & Berry, 2018) believe that CLIL can lead to meaningful, successful, and positive learning outcomes – improving not only the language skills required for studying a subject but also subject knowledge. These features of CLIL have further justified the claim that it reflects several important learning principles in the field of language acquisition, including cognitive learning theories, bilingual education and immersion, and content-based language

learning (Coyle et al., 2010; Dale, Van Der Es, & Tanner, 2011; Dalton-Puffer, 2011; García & Wei, 2014). Many empirical studies have also lent support to the theoretical endorsements described here (Agustín-Llach & Canga Alonso, 2016; Catalán & Llach, 2017; Forey & Cheung, 2019; Heras & Lasagabaster, 2015; Lo & Jeong, 2018; Ruiz de Zarobe & Zenotz, 2015; Yang, 2017).

However, approval for the instructional suitability of CLIL has mostly been based on the empirical support for it amongst students. Fewer publications have addressed teachers' pedagogic perspectives on CLIL (Dalton-Puffer & Smit, 2013; Mearns, de Graaff, & Coyle, 2020; Pérez-Cañado, 2012). Assessing whether teachers would also recommend CLIL is thus an urgent issue calling for an investigation. A particularly helpful line of inquiry would be to examine the perspectives and perceptions of in-service teachers with regard to CLIL when they have learned about this approach to teaching. In light of this, the present study aims to trace the development of CLIL skills by considering the experience of a group of in-service teachers who joined an intensive training program to use CLIL in their teaching. Their perceptions of both learning about the approach and of actually teaching with it were quantitatively and qualitatively examined. It was anticipated that investigating these would give different grounds for assessing the pedagogical feasibility of the CLIL approach from the standpoint of teachers and probably offer invaluable accounts for tailoring current or future CLIL programs. The research questions of the paper were thus formulated as follow:

1. What are the in-service teachers' pedagogical perspectives of CLIL after learning about it?
2. What is the experience of learning to become a CLIL teacher?

2. Literature Review

2.1 Theoretical Support for CLIL

The popularity of CLIL may be ascribed to the fact that it reflects the important characteristics of several teaching methods in the field of language learning. First, originally inspired by immersion programs and bilingual education, CLIL shares some of their important features (Heras & Lasagabaster, 2015). To begin with, CLIL, like

immersion and bilingual education, creates an educational context in which a second or a foreign language is used for academic instruction. In this context, it is anticipated that students' second/foreign language will improve over time but not at the cost of acquiring the subject matter (Lasagabaster & Sierra, 2009). Similar to bilingual immersion, CLIL bases its practice on a communicative approach (Coyle et al., 2010), aiming to nurture students' abilities to transmit subject information in authentic contexts through a second/foreign language (Lasagabaster, 2008). In addition, CLIL resembles the content-driven approach (Coyle, Van Deusen-Scholl, & Hornberger, 2008), in that it is primarily employed to teach non-language subjects. However, unlike the content-driven approach, CLIL is dual-focused, seeking to achieve a balance between the learning of a subject and the language used for studying it (Ting, 2010), even though in practice striking a strict balance between language and content may not always be easy (Dalton-Puffer, 2007; Mehisto, 2008). This goal of CLIL mirrors that of content-based instruction (Arnó-Macià & Mancho-Barés, 2015). Specifically, both approaches seek to help learners acquire the knowledge of a subject by using a foreign language as the medium of instruction (Larsen-Freeman & Anderson, 2013; Lasagabaster & Sierra, 2009). The learning and use of both the knowledge and language are, as a result, expected to mutually reinforce one another (Dupuy, 2000; Huang, 2011). Furthermore, CLIL-centered activities are by nature examples of task-based language teaching (Banegas, 2012; Lasagabaster & Sierra, 2009; Mayo & Ibarrola, 2015). They expose learners to authentic contexts where they are given various opportunities to use the target language to complete the tasks given them, with the ultimate goal of improving their learning outcome, linguistic performance, and motivation to learn (Ellis, 2000; Skehan, 1996; Willis, 1996; Willis & Willis, 2007, 2009). The strong theoretical supports for CLIL may explain why modern advocates of it (Aguilar, 2017; Cenoz, 2015) continue to endorse the claim made by its early advocates (Marsh, 2008; Mehisto et al., 2008), in that CLIL is an umbrella term encompassing a range of educational approaches.

2.2 Empirical Support of CLIL

An increasing number of empirical studies has also been conducted which consistently

verified the pedagogical effects of CLIL, particularly in contexts where English as a foreign language (EFL) is used as a medium of instruction. For example, Aguilar and Rodríguez (2012) reported that a great majority of their EFL students positively described their CLIL experiences and acknowledged that CLIL empowered them to develop language comprehension (e.g., vocabulary and listening). Heras and Lasagabaster (2015) reported that CLIL is effective in moderating gender differences in learning motivation and improving both genders' learning of English vocabulary. Similarly, Agustín-Llach and Canga Alonso (2016) and Catalán and Llach (2017) concluded that EFL students of CLIL outperformed their counterparts who received no CLIL instruction in vocabulary. Yang (2017) took a further step to investigate the effects of CLIL in helping EFL students by means of language learning strategies (i.e., metacognitive strategies) and found positive evidence associated with improved language performance. Yang's finding corresponds to that of Ruiz de Zarobe and Zenotz (2015), that CLIL students trained to use reading strategies improved in both metacognitive awareness and language performance. Most recent studies have also generated evidence in favor of CLIL. For example, Lo and Jeong (2018) presented a case study where young learners (8th graders) of CLIL greatly improved their writing skills in argumentative essays, developing coherence and academic language. Additionally, Forey and Cheung (2019) looked into the field of physical education (PE) and found that their PE teachers who practiced CLIL developed enhanced awareness of the role that language plays in communicating effectively in class. Their students also improved writing in English and performance in PE exams. Collectively, these findings not only lent support to CLIL's effects on improving both linguistic aspects and content knowledge, but also prove the approach to be motivating – important empirical outcomes that verify the theoretical effects expected of CLIL as discussed above.

However, it is noteworthy that the growing support for the pedagogic suitability of CLIL has mostly drawn upon empirical evidence of students' performance. In contrast, investigations specifically researching the perspectives and perceptions of teachers using CLIL have been fewer (Dalton-Puffer & Smit, 2013; Mearns et al., 2020; Pérez-Cañado, 2012), despite the fact that CLIL programs for teacher training have been launched in many different institutions. In particular, in-service teachers' experiences of learning to become

practitioners of CLIL have received no equivalent attention or evaluation. Exploring this is especially important because the role of teachers in CLIL clearly affects CLIL success (Butler, 2005; Mearns et al., 2020; Pavón Vázquez & Rubio, 2010; Yang, 2016). This is further evidenced in Kung's (2018) survey report, in which nine college teachers in Taiwan who taught subjects using CLIL without having been trained or learned about it beforehand confessed great concern over this pedagogy in Taiwan. The great majority of them even described their CLIL classes as "dry," "hard" and "fixed" (Kung, p. 103), expressions that would probably never occur to advocates of CLIL, given its nature. The specific case study of Kung lends further support to the proposition by Lopriore (2020) and MacGregor (2016), in that becoming a CLIL teacher requires the development through a specific teacher education program. In turn, it highlights the need to investigate the perspectives on CLIL amongst in-service teachers who have received proper training about teaching with CLIL. Finally, a CLIL study as such would be especially significant when conducted with teachers who work in educational systems where deductive and teacher-centered lecturing is still dominant in most classes, such as Japan (Falout, Elwood, & Hood, 2009; Saito, 2019; Stroupe, Rundle, & Tomita, 2016; Sugita McEown, Sawaki, & Harada, 2017) and Taiwan (Chou, Su, & Wang, 2018; Hung, 2018; Lin & Lee, 2015; Smith, 2011; Wang & Tsai, 2012).

3. Methods

3.1 The Participating Teachers

The consenting participants were 13 in-service college teachers who enrolled in an intensive CLIL training program at a higher education institution in an English-speaking country. Four of them (two males, two females) were from Taiwan; two (female) from China; five (two males, three females) from Japan; one (male) from the Philippines; and one from Thailand. Two of them were between 25 and 34 years old, 10 between 35 and 44, and one between 45 and 54. Nine had doctoral degrees and four had master's degrees. Their academic specialties were in economics, education, computer science, TESOL and linguistics, medicine, and others. Most of them had taught in higher education for at least two years. Only two (T8 and T9) had not yet had formal teaching experiences when the

present study started because they were in-service teachers who had just started their careers. Nevertheless, it should be noted that T8 and T9 had reported some less formal teaching experiences, including assisting their colleagues in teaching practices and private tutoring experiences. Their perspectives and perceptions as beginning in-service teachers should also generate valuable accounts in a study as this. Finally, to all the participants, English is a foreign language. Additionally, none of them had ever previously learned or taught using CLIL. Table 1 demonstrates the overview of demographic information of the trainees.

Table 1. Overview of Trainees' Demographic Information

Trainee	Region	Sex	Age range	Years of teaching	Highest degree	Specialist field
T1	Taiwan	F	35-44	10	Doctorate	Economics & Education
T2	Taiwan	M	35-44	5	Doctorate	Computer Science
T3	Taiwan	M	35-44	9	Doctorate	TESOL & Linguistics
T4	Taiwan	F	45-54	17	Doctorate	Human Resources
T5	China	F	35-44	5	Doctorate	Law
T6	China	F	35-44	7	Doctorate	Ethics
T7	Japan	M	35-44	12	Master's	Law
T8	Japan	F	35-44	0	Master's	Environmental Management
T9	Japan	M	25-34	0	Doctorate	Biology
T10	Japan	F	35-44	2	Master's	Environmental science
T11	Japan	F	35-44	11	Doctorate	Medicine
T12	Philippines	M	25-34	4	Master's	TESOL
T13	Thai	M	35-44	16	Doctorate	Psychology

Note. The participating trainees are called T1 (for Trainee 1) … T13 (Trainee 13) to preserve anonymity.

3.2 The CLIL Training Program

The teachers followed an intensive 38-hour CLIL training program for higher education teachers, which occupied two two-hour sessions every weekday afternoon for nine days (36 hours) and a final two-hour reflective session. The sessions were co-taught in English by three experienced teacher-trainers. Following the practices and values of CLIL,

these trainers exposed the trainees to hands-on experiences of teaching CLIL while learning about it. In Week One, the trainees learned the history, theory, rationale and foundations of CLIL, based on writings by Bentley (2010), Coyle et al. (2010), Deller and Price (2007), Mehisto et al. (2008), and others. Then they were shown how to adapt material for and deliver a CLIL lecture. They studied CLIL-based tasks (e.g., content-based tasks that integrated content and language for learners); techniques of scaffolding students' learning in CLIL; and ways to accommodate learners' needs before launching CLIL (e.g., analyzing learning styles and offering learning strategies). In Week Two, they learned how to give effective instructions and lectures in CLIL, focused on effective instructions in an additional language by following CLIL principles in designing and evaluating lectures; and for teaching several CLIL-based tasks. Finally, they designed and delivered a 15-minute mini-teaching session that embodied CLIL, with their peer trained teachers serving as the CLIL students during the mini-teaching.

3.3 Data Collection

Three surveys administered to the trainees' directly after the program finished were used to examine the trainees' perceptions of their learning experiences. Two surveys were quantitative and the third was a semi-structured qualitative survey.

Survey of Trainees' Self-confidence in English. This short survey, containing five 5-point Likert-scale items, was first used to reveal the trainees' confidence about their general English skills, from speaking and listening to reading and writing. This particular survey was thought necessary because, as Lopriore (2020) points out, teaching in a foreign language (in this case, English) increases the challenge for subject teachers. Moreover, Yang (2016) also warns that a teacher's language skills may affect the success of CLIL lessons. Quantifying the trainees' self-judgement about their English abilities may thus tell us something about their experiences of learning to teach with CLIL.

Survey of Trainees' Perspectives on CLIL. This survey asked for the trainees' perspectives on and perceptions of CLIL after having learned to teach with it. It was designed using a 5-point Likert-scale and had 12 items that the present researcher self-created with references to the common descriptions and discussions about CLIL's

pedagogical suitability from previous studies (Dalton-Puffer & Smit, 2013; Kung, 2018; Pérez-Cañado, 2012; Yang, 2016). Specifically, the survey investigated four general dimensions of judging a pedagogical approach from a teacher's perspective: pedagogical effectiveness (Items 1~3); pedagogical efficiency (Items 4~7); teaching preferences (Items 8~10); and future practices (Items 11~12). Items 1~3 focused on effectiveness, asking the trainees how far they agreed that CLIL would produce the teaching and learning results that were intended. Items 4~7 centered on efficiency, asking how far they agreed that CLIL was efficient for themselves and students. Note that different from effectiveness, pedagogical efficiency is understood as the quality of being able to get teaching and learning tasks appropriately done without wasting time or energy. Items 8~10 asked whether CLIL fit their teaching preferences. Items 11~12 asked whether they would implement CLIL in their future classes and how they would probably feel about it. The survey had good expert validity, approved by three other experts in the field. Its wording and ideas were also tested by five other in-service teachers. The final version was then administered in this study.

Semi-structured Qualitative Survey. To explore the trainees' qualitative perspectives on and perceptions of CLIL, they were asked to complete a semi-structured survey, involving eight open-ended questions. They sought information about what the trainees' experiences of learning to teach through CLIL had been; what difficulties they had had when learning about and teaching through CLIL during the course; what differences they perceived between CLIL and their past teaching or learning experiences; how they would describe their CLIL students (i.e., the other trained in-service teachers of the program) in the mini-CLIL-teaching project; and others. The participants were invited to respond freely to the survey; they could write either formally or informally.

3.4 Data Analysis

Quantitatively, a set of descriptive statistics was used to analyze the data obtained from the quantitative survey. This was conducted using IBM SPSS 23.0 package and MS Excel. The former calculated the mean scores and standard deviations of the survey scores collected; the latter illustrated the results with charts.

Qualitatively, the specific method of analysis suggested by Moustakas (1994) was

used to scrutinize the qualitative data collected from the trainees, with the aim of characterizing their experiences of learning to teach through CLIL. Specifically, the current researcher first considered all the statements that the CLIL trainees had written and then put them all into a list. Next, any unclear or irrelevant statements or expressions were removed from the list. The remaining parts were then categorized into different *thematic portrayals* according to their different characteristics and features. The portrayals then served as a basis for reconstructing the trainees' experiences. The final description of the trainees' experiences as a whole was then presented using the thematic portrayals identified.

4. Quantitative Results

Table 2 presents the trainees' self-confidence in using English as an additional language. The overall mean scores of the trainees' as a group are 3.57 (*SD* = 1.09). On a 5-point Likert scale, this suggests that, collectively, the participants were not strongly confident in their English abilities. Additionally, they seemed to be more confident in reading (*M* = 4.00, *SD* = .58) than in writing (*M* = 3.69, *SD* = 1.03), speaking (*M* = 3.46, *SD* = 1.20) and listening (*M* = 3.31, *SD* = 1.38). Individually, T2, T3, T5, T6, T8, T10, T12, T13 showed high confidence in their English skills (average scores: T2: 4.00, T3: 4.60, T5: 4.00, T6: 4.00, T8: 4.00, T10: 4.00, T12: 5.00, T13: 4.00); T11 had fair confidence (3.40); but T1, T4, T7, and T9 had no confidence of their English abilities (average: T1: 2.40, T4: 2.60, T7: 1.80, T9: 2.60).

Table 2. Descriptive Statistics for the Survey Results of Self-confidence in English Skills

Items	T1	T2	T3	T4	T5	T6	T7	T8	T9	T10	T11	T12	T13	*M*	*SD*
1. Overall	2.00	4.00	5.00	2.00	4.00	4.00	1.00	4.00	2.00	4.00	3.00	5.00	4.00	3.38	1.26
2. Speaking	2.00	4.00	5.00	2.00	4.00	4.00	1.00	4.00	3.00	4.00	3.00	5.00	4.00	3.46	1.20
3. Listening	1.00	4.00	4.00	4.00	4.00	4.00	1.00	4.00	1.00	4.00	3.00	5.00	4.00	3.31	1.38
4. Reading	5.00	4.00	4.00	3.00	4.00	4.00	4.00	4.00	3.00	4.00	4.00	5.00	4.00	4.00	.58
5. Writing	2.00	4.00	5.00	2.00	4.00	4.00	2.00	4.00	4.00	4.00	4.00	5.00	4.00	3.69	1.03
Average	2.40	4.00	4.60	2.60	4.00	4.00	1.80	4.00	2.60	4.00	3.40	5.00	4.00	3.57	1.09

Note. T1 = Trainee 1.

Table 3 shows the level of the trainees' belief in the teaching and learning effects of CLIL. Overall, the trainees highly approved of the CLIL approach (M = 4.01, SD = 1.01). They agreed that CLIL was pedagogically effective (M = 4.10, SD = .83), believed that it met their teaching preferences (M = 4.21, SD = 1.00), and considered putting it into their future practices (M = 4.15, SD = .94). These results tend to suggest that the trainees believed in the pedagogical suitability and feasibility of CLIL for their teaching. However, they gave CLIL's pedagogical efficiency slightly lower scores (M = 3.71, SD = 1.14), revealing their reservations about it.

Table 3. Trainees' Perspectives on CLIL: descriptive statistics

Dimensions	Items (Numbers and descriptive summary)	Min.	Max.	*M*	*SD*
Pedagogical effectiveness	1. CLIL is effective for teaching.	2.00	5.00	4.08	.95
	2. CLIL is effective for learning.	2.00	5.00	4.08	.86
	3. I can effectively use CLIL in teaching.	2.00	5.00	4.15	1.14
	Sub-total of Items 1-3	2.00	5.00	4.10	.83
Pedagogical efficiency	4. CLIL is efficient for teaching.	1.00	5.00	3.62	1.19
	5. CLIL is efficient for learning.	1.00	5.00	3.69	1.25
	6. CLIL is time-consuming for teachers.*	1.00	5.00	3.69	1.44
	7. CLIL is time-consuming for students.*	1.00	5.00	3.85	1.34
	Sub-total of Items 4-7	1.50	5.00	3.71	1.14
Teaching preferences	8. I like the CLIL approach in general.	2.00	5.00	3.92	1.12
	9. CLIL is suitable for me to teach with.	1.00	5.00	4.15	1.21
	10. CLIL fits my teaching styles/preferences.	1.00	5.00	4.54	1.23
	Sub-total of Items 8-10	1.33	5.00	4.21	1.00
Future practices	11. I will use CLIL in teaching in future.	3.00	5.00	4.54	.88
	12. Teaching with CLIL will make me anxious*.	1.00	5.00	3.77	1.17
	Sub-total	2.00	5.00	4.15	.94
Overall	Total average of items 1-12	1.67	4.83	4.01	.85

**Note*. Items 6, 7, and 12 are negative statements, so presented here are inverted scores, with 1 indicating the least anxiety and 5 the strongest, for consistency in calculating scores.

Figure 1 illustrates the individuals' scores in the CLIL survey and their English confidence. The trainees who were highly confident in their English also believed strongly in the pedagogical suitability of CLIL (see T2 ($M_{English}$ = 4.00, M_{CLIL} = 4.00), T3 ($M_{English}$ = 4.00, M_{CLIL} = 4.17), T5 ($M_{English}$ = 4.00, M_{CLIL} = 4.50), T6 ($M_{English}$ = 4.00, M_{CLIL} = 3.83), T8 ($M_{English}$ = 4.00, M_{CLIL} = 3.92), T10 ($M_{English}$ = 4.00, M_{CLIL} = 4.67), T12 ($M_{English}$ = 5.00, M_{CLIL} = 4.75), and T13 ($M_{English}$ = 4.00, M_{CLIL} = 4.67). In contrast, those with little self-confidence in English tended to endorse CLIL less (see T7 ($M_{English}$ = 1.80, M_{CLIL} = 3.17), T4 ($M_{English}$ = 2.60, M_{CLIL} = 3.67), and T9 ($M_{English}$ = 2.60, M_{CLIL} = 1.67)). Two exceptions to this tendency were T1 ($M_{English}$ = 2.40, M_{CLIL} = 4.25) and T11 ($M_{English}$ = 3.40, M_{CLIL} = 4.83), showing relatively low confidence in English but strong faith in CLIL. The mixed findings required qualitative explanation.

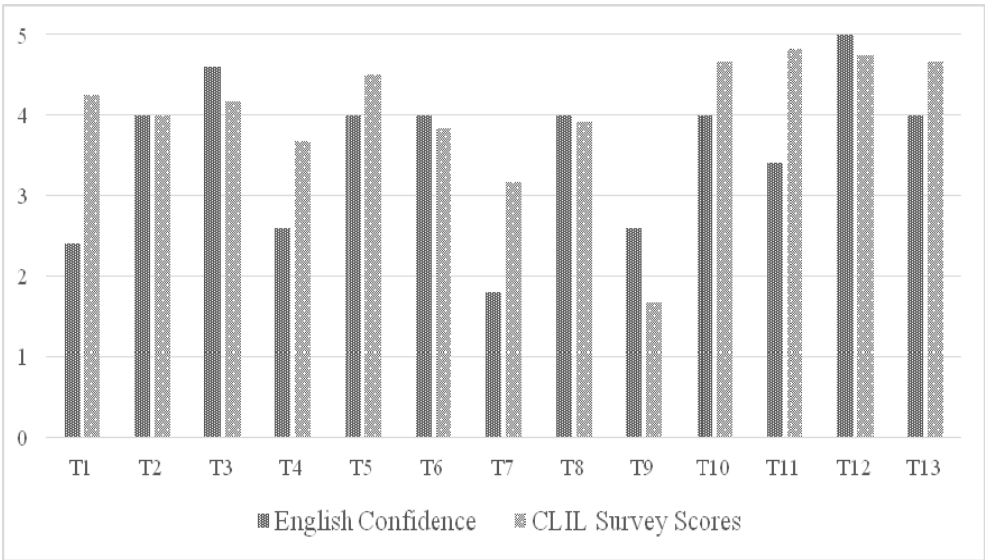

Figure 1. Trainees' CLIL Scores and Confidence in English

5. Qualitative Results

The final account of the trainees' development into CLIL teachers reveals a seesaw struggle between positive beliefs and reality concerns in higher education. The trainees' educational beliefs, past experiences, language abilities, course focuses, learners' profiles, demands from need, and other factors, were all considered in the analysis. The results are presented in the six discussions below, representing the trainees' perspectives on and perceptions of becoming a CLIL teacher after training.

1. Endorsement for CLIL: learner-centered, active, and effective approach. The great majority of the trainees commented favorably on several pedagogical features of CLIL, believing in its effectiveness. Collectively, after learning about the CLIL approach through CLIL, the trainees deemed it to be a "learner-centered," "learner-friendly," or "learner-first" approach (T2, T3, T4, T7, T9, T10, T11, T12). As some trainees wrote, CLIL practices mean "student first … for my teaching" (T7); "the concept of CLIL is based on learners first" (T11); CLIL "creates friendly learning environment for learners (T3, T4, T10); and it offers "learner center based teaching skills" for teachers" (T2).

Furthermore, to most of the trainees, CLIL also encapsulated the nature of "active learning" (T3, T5, T7, T8, T10, T11, T12). The comments of T3, T10, and T11 further pinpoint this feature. T3 wrote that "CLIL is like active learning. It gives learners many chances to think actively and to learn actively by doing or experience." T11, who also approved of CLIL as "active learning," further remarked that CLIL "improve[d] [her] experience" of active teaching even though she had practiced different active learning approaches in her past five years of teaching. In the same way, T10, also a practitioner of active learning for years, acknowledged the active aspect of CLIL to be superior to her past teaching, and highlighted that with CLIL, "it would be *easier* for students to follow the contents and also for lecturers to know what students need and whether they meet the outcome or not."

CLIL also generates opportunities for interaction amongst students (T1, T3, T4, T7, T9, T10). For example, both T7 and T10 called CLIL "interactive learning," to which T7 also added that pair or group tasks are especially "useful" for learners. T1 also commented that

such an "interactive learning model … adds happiness into students' learning and makes learning relatively easier for them." T3 further noted that "[he] can picture that if [he] uses CLIL, there will be a lot more interactions in [his] future classes than in the past, perhaps not just between [him] and the students but also amongst students." T9 also wrote about the interactive feature of CLIL and believed in its importance. However, he added that such a learning model might fit younger students (e.g., middle school) better than adults.

2. Likelihood that English as an Additional Language Limits CLIL. Given that English as an additional language would be the main medium in implementing CLIL lessons, several trainees described this as one of the greatest challenges in their classes. T12, a confident English speaker, was concerned that students' English proficiency would not be enough to cope with CLIL practices. T13 foresaw mutual difficulty for himself and his students in making himself understood by his students in English. Likewise, T7 was worried that most of his students were Japanese, whose speaking skills were low, and that "[his own] English skills are still insufficient" for delivering an effective Law lesson through CLIL. T9 had the same problem, commenting: "I felt disappointed with my English skills many times" in the training. Similarly, T8, as the coordinator of a program, was worried whether the English abilities of the teachers in her program would support CLIL: "I do need more [teachers in my program] who can teach contents in English but there are not so many who can do it." T4 conceded that "English is one key factor that [prevents me from serving] as a CLIL teacher." T1's elaboration on this predicament is particularly clear:

> "A great challenge in teaching with CLIL would be my English skills because it requires more oral communication and discussion in English as a medium. It would thus be a challenge that I have to tackle when I have to guide my students to talk more or go deeper in discussion."

It should also be noted that another reason why English may restrict the practice of CLIL is the need to use the language in the discipline. For example, as T7 said, "law is a system that is applicable only in Japan, so it is difficult to teach (in English) and there is little demand for teaching law in English." A similar concept was raised by T11, who thought of "implementing CLIL skills for [her medical] classes in first language" rather

than English. T9 also wrote that he would consider practicing the principles of CLIL for workshops, "[b]ut the workshop will be held in Japanese," suggesting that he did not see the need to teach in English.

3. CLIL Effects Repressed by Culturally Specific Factors. The effects of CLIL are likely to be somewhat limited when implemented in regions such as those in Asia. As highlighted in some of the trainees' accounts, shyness or passivity seems to be a shared educational-cultural specific feature in their background. The trainees also listed these qualities as possible obstacles to implementing CLIL. T1 addressed this as a common issue for learners in Asia and offered a possible explanation for it: "I think the greatest challenge (in implementing CLIL) is that Asian students are relatively unreceptive to active learning models, especially given that before college, they were mostly taught in conventional, traditional lectures." T3, in addition to implying that students being quiet can be a disadvantage to CLIL practices, also worried that he might "end up pushing or forcing his (quiet, inactive) students to engage themselves in CLIL learning", in view of the rather different nature of CLIL from conventional learning models in Taiwan. T4 also worried that CLIL might fail in Taiwan's educational setting because most students were "passive learners." Half of the trainees from Japan raised the same issue: "University students in Japan are usually shy. They prefer passive learning rather [than] interactive" (T9) and "My students are shy in the class, so there may not be so much speaking out loud" in CLIL classes" (T10). T10 was also uncertain about whether she "would get so much attention from [her] Japanese students, since they tend to be shy in the class." T8 also stated that "some of [her] students will be shocked or intimidated by the way of learning because [her] students (most of them are Japanese) may not be used to this kind of activing learning."

4. Special Challenges in Higher Education. Several trainees collectively pointed out a special challenge that may hinder higher education from fully embracing CLIL: the great body of the content and knowledge of a subject that CLIL can afford. For example, despite warmly endorsing the overall effects of CLIL, T1 warned that "some time for class would be spent on (CLIL) tasks … in comparison to the conventional teaching approach, CLIL would cover relatively less content of the subject." T2 had the same misgiving: "CLIL in some ways … reduce your course schedule (content) … how to adapt your current teaching

material" would thus be the first challenge to consider. Likewise, T9 conceded that "medical students have almost fully packed curriculum and don't like time-consuming activities … the curriculum manager won't allow [him] to give time-consuming ones." T10 also thought about "adapt[ing] some classes in the [new] semester" but not all. This dilemma is particularly clearly illustrated in the feedback of T3, whose courses in college were mostly about English composition:

> "I guess another challenge of me doing CLIL is how much I can teach with CLIL. There's a great deal of different language and writing skills, and even different writing styles to cover in a semester … CLIL tasks need more time to do than lectures … I can probably teach some with CLIL, like important or difficult aspects of a unit, but I guess that would still be done at the cost of other content ... I am not sure if that would cause me to rush to finish other parts as a result."

5. Experiencing CLIL and Enhanced Faith in It. Despite the concerns addressed above, learning through the CLIL approach enabled most of the trainees to experience and understand what CLIL is and in turn to develop enhanced beliefs in CLIL. For example, learning CLIL through doing CLIL persuaded T4 and T5 that CLIL was indeed an effective pedagogy to adopt. T10 also experienced similar effects of CLIL in person: "the amount of information given (in the training) was really a lot, but since we learned through CLIL approach, it was [easier to take in] than I could have been with conventional lectures." T2's understanding of CLIL was greatly improved during Week Two when he "start[ed] to using [CLIL] rules, principles … to teach …" Only then did he realize "what CLIL teach[es] [him]." T8's faith in CLIL was also strengthened after training in CLIL, concluding that "now I strongly believe the CLIL works best in my class." T3's feedback further showed how experiencing CLIL personally changed his attitudes and beliefs regarding it. As he said, "I thought CLIL was just one of the many TESOL theories I'd learned, but 'newer' … I also thought I'd be listening to just theories or lectures." However, after attending, T3 was surprised: "they (the lecturers) taught CLIL using CLIL and I experienced CLIL first-hand … I was overwhelmed with CLIL … I enjoyed it myself so much!" T1 shared something of the same change:

> "Before taking part, I thought CLIL was a serious method about how to teach in English and had an emphasis on English language, so I was just thinking of attending to improve my English. It was surprising to me that the way I learned here was similar to the game-based learning, task-based learning that I myself use … so from Day 1 to the end, I enjoyed the training."

T7 also experienced CLIL effects by learning through it, but in a different way with the help of peers in group work:

> "I think CLIL approach is good for students who are not good [at] studying. From my experience (in the CLIL program), sometimes I missed listening to some English and I could not understand what I should do next. But when the pair or group work began, my partner or group members taught me what I should do. That means that the CLIL approach (especially pair or group work) is useful to students who are not good [at] studying." (T7)

6. Transforming Future Classrooms in Higher Education: Starting Small. Although the trainees described possible challenges that may make it difficult for them to implement CLIL, their beliefs in the effectiveness of CLIL have compelled most of them to think of starting small. To begin with, T1 wrote that "[she] will integrate the concepts of CLIL into her courses … aiming at improving the effects of her teaching." T2, T4, and T5 will try adapt the CLIL teaching approach in the first few weeks to see the difference of student react. T3 commented that "I will definitely use CLIL but I won't just teach with only CLIL ... I would start with small changes, though. Then, see how much more else I can do to change." T11 has further planned what courses may have room for CLIL, such as "medical interview class" or "ethic class" where discussions are encouraged. The only ones who seemed likely to go beyond starting small were T8 and T12. T8 strongly believed that CLIL fits the need of the special program she is in: "I love the CLIL approach. I [will be] teaching the program for the students who are to study abroad … I will adapt almost all the CLIL approach to the whole course … [b]ecause the CLIL is what I need … to enhance students' skills for discussion and presentation … contents and language …" T12 was so

convinced by the CLIL approach that he planned to use it widely in all his classes.

In contrast, T7 and T9 were markedly hesitant to consider CLIL in their future classes. T7 conceded that "I hope so (as regards implementing CLIL in future) but it is difficult because my students are almost [all] Japanese … and my English skills is still insufficient." Similarly, T9, although thinking of practicing the active learning concept of CLIL in the future, wrote that: "I won't use CLIL approach in my lecture … I think CLIL [spirits] [will] work well on my workshop whose target is [not college students but] middle school students … But the workshop will be held in Japanese."

6. Discussion

This study, answering the urgent call of Dalton-Puffer and Smit (2013), Mearns et al. (2020), and Pérez-Cañado (2012) for more empirical studies on CLIL teachers' experiences, employed a blended approach to explore 13 in-service teachers' perspectives on and perceptions of learning to become practitioners of CLIL in higher education. The study first quantified the trainees' confidence in English skills and their pedagogical judgments on the effects of CLIL. It then looked into the qualitative accounts of their hands-on experiences of learning about CLIL using CLIL. The quantitative results show that eight teachers had high confidence in their command of English, one had fair confidence, but four had not. This aspect seems to have had some impact on their decision for adopting CLIL in their classes. It is also revealed that the teachers approved of the CLIL approach in a collective sense, with more endorsement for pedagogical aspects such as effectiveness and preference than for efficiency. Qualitative inquiry reveals that although the teachers faced some challenges and had certain reservations about CLIL, their faith in the effects of CLIL and enthusiasm for it outweighed these concerns. The mixed findings complement each other and merit discussion in this paper.

First, the trainee teachers' perspectives on the pedagogical effectiveness of CLIL lend support to the many previous CLIL claims and findings about CLIL's effects on students. As shown in the results of the current study, qualitatively or quantitatively, the teachers strongly endorsed the pedagogical effectiveness of CLIL in class, believing it to be capable

of improving their own teaching and thus benefiting student learning. Such beliefs were evident in the positive learner outcomes found in CLIL studies by, for example, Agustín-Llach and Canga Alonso (2016), Catalán and Llach (2017), Forey and Cheung (2019), Heras and Lasagabaster (2015), and Lo and Jeong (2018). They all reported that CLIL enhanced students' learning performances in either subject matter or English as an additional language; some CLIL students even outperformed their counterparts who received no CLIL treatment. It is also worth noting that after learning about and experiencing CLIL, the trainee teachers also acknowledged that CLIL is essentially a learner-centered or learner-friendly approach, corroborating the theoretical supposition by Mehisto et al. (2008). To some extent, the way that the teachers described CLIL as creating an interactive platform in class where English was used as a foreign language is also in agreement with the claim of Lasagabaster (2008), that language in CLIL is used for real communicative purposes.

Despite being effective and meeting theoretical descriptions, however, CLIL's pedagogical efficiency may discourage CLIL practices in higher education. This is evidenced in both the quantitative and the qualitative findings. First, compared to other pedagogical aspects (i.e., pedagogical effectiveness, teaching preferences, and future practices), CLIL's efficiency was the least endorsed. These results tend to suggest that the trainees believed in the pedagogical suitability and feasibility of CLIL for their teaching. However, they gave CLIL's pedagogical efficiency slightly lower scores (M = 3.71, SD = 1.14), revealing their reservations about it. The main reason for this was collectively illustrated in many of the trainee teachers' accounts: too time-consuming for students, too much subject content and knowledge to be covered with CLIL, too little time for CLIL tasks or activities, and too long a schedule to get through with CLIL. It is interesting that this seems to be a challenge that was relatively less touched upon in previous studies where the mainstream CLIL practices and studies have been reported from educational contexts other than college/universities in Asia. This specific finding serves as one of the main contributions of the current study to this field and justifies the research choice of this study.

Another unique challenge that may hold back CLIL effects or practices in higher education in contexts such as those in Asia is the education-culture-specific learner profile.

According to the trainee teachers, it seems that students from these contexts are generally shy or quiet in classes. This characteristic seems also associated with their passive learning style, which possibly results from the fact that they have always been exposed to teacher-centered lecturing where one-way deductive teaching (directly from teachers to students) dominates (Chou et el., 2018; Hung, 2018; Lin & Lee, 2015; Saito, 2019; Smith, 2011; Stroupe et al., 2016; Sugita McEown et al., 2017; Wang & Tsai, 2012). Although most of the CLIL trainees here considered themselves to be adaptable to CLIL, the reinforcement of the above learner characteristics may have an undesirable impact on effects of CLIL.

The current findings also reveal a seemingly common difficulty for CLIL practices in the literature: the teaching and learning of the content in English as an additional language. On the one hand, many of the trainees stated that their English abilities may in a way moderate the actual effectiveness of CLIL in class, such as their own English proficiency preventing in-depth discussion in a CLIL tasks, their English not sufficient to support CLIL, or their students' English deterring them from learning effectively with CLIL. The results resonate with the outcomes of several previous CLIL studies. For example, Aguilar and Rodríguez (2012) identified the inadequacy of English lecturers' skills as the greatest negative aspect of their CLIL experiences; Lopriore (2020) noted that the teaching of content in English is "a double challenge;" the CLIL teachers in Kung (2018) admitted that their limited English made CLIL lessons stiff (dry and hard) to students; and students' insufficient English abilities were listed amongst the main concerns for the CLIL teachers in the study of Pladevall-Ballester (2015). Clearly, the success of a CLIL lesson in Asia where English is mostly learned as a foreign/second language may be subject to the language proficiencies of both lecturers and learners (Yang, 2016).

On the other hand, the demand of teaching context-specific subjects in English as an additional language also seems to influence whether or not CLIL will be practiced. As T7 specified, "… there is little demand for teaching law in English" in Japan. Additionally, although T9 appreciated the principles of CLIL as conducive to active and interactive learning, he felt that he would consider applying those elements only in his mother tongue (Japanese). Similarly, T11 also thought about implementing CLIL in a first language, rather than in English. In a similar and yet contrasting way, the demand of students to learn

English as an additional language, such as those in T8's future classes who will be studying in an English-speaking country in future, greatly enthused T8. As she pointed out, she was determined to fully adapt the CLIL approach for all her future courses.

The descriptive statistical results of this study complement the discussion about using English an additional language and teachers' faith in CLIL. As the results show, stronger beliefs in the overall instructional effects of CLIL seem associated with higher confidence in English (e.g., T2, T3, T8, and T10). In contrast, low expectations of the CLIL approach are associated with low confidence in English (e.g., T4, T7 and T9). Taken together, these quantitative results justify the contention above that English as an additional language can indeed impact in-service teachers' endorsement of CLIL. This finding is in line with the results of Aguilar and Rodríguez (2012) and Lopriore (2020). Both of the studies also reported that teaching in a foreign language affected their teachers' CLIL teaching experiences. However, there are two clear exceptions to this tendency (i.e., T1 and T11), making it worthy for further discussion. They both had less confidence in their English skills (M_{T1} = 2.40, M_{T11} = 3.40), but they both also strongly endorsed the pedagogical effects of CLIL (M_{T1} = 4.25, M_{T11} = 4.83). The reasons for this inconsistency vary, but the qualitative findings offer the most plausible explanations: their past teaching experiences and educational beliefs empowered them to embrace CLIL practices despite their self-perceived insufficiencies in English skills. As T11 stated, she had been practicing different active learning approaches in her past teaching for five years before taking part in the CLIL training. This long-term teaching practice of hers shows that she was a believer of similar educational practices, and her beliefs by nature are likely to have led her to acknowledge the effects of CLIL as a similar approach. Likewise, T1 also saw a connection of CLIL practices to the game-based learning and task-based learning approaches that she was accustomed to employing for her class.

Despite the controversies addressed above, the findings suggest one possible way of nurturing teachers' motivation to teach using CLIL in the future: engaging themselves in learning CLIL through CLIL. As a matter of fact, this way may also be the reason that the trainee teachers developed proper knowledge of CLIL as well as generally positive attitudes towards it. As observed in the trainees' qualitative feedback, personally experiencing how

CLIL works on oneself, rather than merely hearing about it or studying it, effectively changed one's perspectives on and perceptions of the effects of CLIL. This is evidenced in many of the teachers' descriptions where learning through a CLIL model made the learning of CLIL enjoyable (T1 and T3) and easier (T10). Doing so also improved their knowledge of it (T2, T5), gave them experiences of its effectiveness (T4, T7), and in turn increased their faith in CLIL (T8). This experience seems particularly helpful in contrast to the specific complaint made by the CLIL teachers in Kung's (2018) study: they cast doubts on their CLIL teaching skills because they themselves were never taught with CLIL "[either] as a student [or] a teacher in school" (p. 103).

7. Limitations and Suggestions for Further Studies

Although this study clearly illustrates the developmental process of becoming CLIL teachers in higher education, the research focus and methodology open up some opportunities for future investigations. First, the sample used in this study, to some rigorous researchers, may seem slightly insufficient although a mixed approach was used. Future CLIL studies may thus consider recruiting a larger sample from more varied contexts to shed further light on the experiences of learning to teach through CLIL. Likewise, it is worth noting that the CLIL approach may be more or less suitable for teachers who have different teaching styles and beliefs. Thus, it would be valuable for future researchers to take this aspect into consideration when exploring CLIL trainees' perspectives and perceptions. On a related note, the present study, like most previous studies in the field, addressed CLIL teachers' struggles with the foreign language issue from a macro perspective, failing to consider that English is used or needed differently in varied fields/contexts. CLIL teachers of different subjects, and their students alike, may in reality react differently to using a foreign language. Exploring in depth about this may bring forth meaningful contribution to the understanding of this persistent issue. Additionally, the focus of this study is exclusively on the development of CLIL teachers. What is needed now, also, are studies that follow these teachers' hands-on experiences of teaching CLIL-aided courses in their field. A longitudinal investigation on this would contribute much to our knowledge.

Following this line of inquiry, a cross-examination of the CLIL teachers' experiences and their students' perspectives would also be of great interest and value.

8. Conclusion

This study empirically examines 13 in-service teachers' experiences of learning to become CLIL practitioners. While the results tend to endorse CLIL's pedagogical aspects, such as effectiveness and preferences, more than its efficiency, the findings are particularly important for illuminating specific reasons for the seesaw struggle between favoring and discouraging CLIL in higher education, particularly in Asia. Institutions providing CLIL training for teachers in higher education may like to tailor their programs by considering more the attendees' educational beliefs, past teaching experiences, language abilities, learners' profiles, and the educational context.

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