Teaching CLIL to Primary School Students Under Taiwan's Bilingual 2030 Plan

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Abstract

Bilingual education has been gaining worldwide attention, and in line with this, "Taiwan's Bilingual 2030 Plan" has been introduced to enhance citizens' bilingual abilities. As part of this initiative, the implementation of Content and Language Integrated Learning (CLIL) has been encouraged in compulsory-level schools in Taiwan. However, there is a need to establish comprehensive systems and standards for CLIL; hence, it is essential to examine the experiences of teachers who have implemented CLIL in primary school settings, especially considering that second language education officially begins in grade three in Taiwan. This study aimed to collect feedback from 42 teachers who had approximately four years of experience in teaching CLIL. A questionnaire comprising ordinal and open-ended questions was administered to gather the information. The results revealed that teachers had positive experiences with CLIL, scoring an average of 3.8 out of 5. Moreover, both language and content knowledge in primary-level schools were reported to have been enhanced, with an average score of 4.0 for each. On the other hand, challenges and concerns were identified and classified into three categories: curriculum, students, and teachers. The study also pinpointed the specific difficulties faced by students and provided recommendations to address them. Furthermore, teachers reflected on their opinions regarding self-improvement before, during, and after implementing CLIL. The valuable feedback from this study is expected to contribute to the successful implementation of CLIL in primary schools and enhance the overall quality of bilingual education in Taiwan.

Introduction

With the influence of globalization, being multilingual has been seen as a necessary skill for international communication and competitiveness (Lara & Pedrosa, 2018), particularly English is regarded as one of the dominant languages and an essential ability for opening the gateway to globalization (National Development Council, 2018). Since 2002, Taiwan has been promoting an English-friendly living environment, promote International Living Environment Plan, and English Proficiency Enhancement Plan. Recently in August 2018, "Taiwan's Bilingual 2030 Plan" has announced by the Executive Yuan and launched formally in 2019 to bolster English education ranging from public primary schools to life-long learning, from educational institutes to government officials. Immersion, English as immersion, English as a Medium of Instruction (EMI), and Content and Language Integrated Learning (CLIL) have been advocated depending on goals and settings. Particularly, with a dual focus on learning content knowledge and language skills simultaneously and target at cultivating general public'

s English proficiency and overall competitiveness, and second language (L2) learning starts from the third grade in public elementary schools based on Curriculum Guidelines of 12-Year Basic Education published in 2014 by MOE. CLIL has been promoted to primary school bilingual education by the Ministry of Education (MOE) since 2019 (Kao, 2023).

However, CLIL is still in its early stages of implementation in Taiwan (Chen, Kao, Tsou, 2020; Kao, 2020). Consequently, schools and teachers are not fully prepared in terms of curriculum design, teaching methodologies, authentic materials, assessment evaluation, administrative facilitation for CLIL teacher training programs, and standards for qualified CLIL teachers. Therefore, it is crucial to explore teachers' feedback on CLIL implementation on primary school students in order to suggest continuous facilitation, modifications, and the establishment of a comprehensive system to ensure satisfactory learning and teaching experiences.

Research Questions
1. What are teachers' experiences in teaching CLIL to primary school students as part of Taiwan's Bilingual 2030 Plan?
2. Based on teachers' experiences of teaching primary school students with CLIL, what suggestions can be proposed for the three phases of preparation, implementation, and post-implementation of CLIL?

Literature Review
The rise of globalization has brought about an increased focus on bilingual education, driven by the need for intercultural communication and the growing prominence of English in educational settings. Bilingual classrooms now incorporate various approaches, such as immersion, English Medium Instruction (EMI), and Content and Language Integrated Learning (CLIL), each varying in the extent of English language usage and the goals. Among these approaches, CLIL has gained recognition for its numerous academic benefits and has been implemented in primary and secondary schools in English as a Foreign Language (EFL) settings (Bailey, 2015).

This section provides an introduction to bilingual education in Taiwan and highlights the importance of CLIL within this context. It explores the theoretical foundations behind teaching CLIL to primary school students, shedding light on pedagogical approaches for each stage of CLIL implementation.

Bilingual Education in Taiwan
Bilingual refers to an individual who can communicate appropriately in various contexts using two languages (Forman, 2010). With globalization, there is a growing need for bilingual education, which has been implemented in several countries and praised due to the increased motivation, positive attitude, and future possibilities (Calderón & Morilla, 2018). To keep up with the overall competitiveness, MOE of Taiwan has provided first graders with one to two hours of Compulsory English classes every week during their school years since 2002 (Nunan, 2003). Besides, in 2015, Tainan City also set up the Second Official Language Office and launched twenty-five projects in a ten-year plan to build a bilingual city. Since 2017, CLIL has been promoted in primary education as part of bilingual education in Taiwan to equip the youth with global competence (Tsou & Kao, 2018) and cope with international competitive environments (Yang & Gosling, 2014). There are various approaches to bilingual education, but why is CLIL chosen as the preferred approach? In the next section, the core features of CLIL will be explained on its significance and effectiveness.

Why CLIL

Content and Language Integrated Learning (CLIL) is a prominent teaching approach widely adopted in numerous international contexts, especially in Europe, promoting CLIL implementation in the educational system. With a dual-focused on learning and teaching content knowledge and language skills, namely, using another language as a medium to teach and learn non-language subjects (McDougald, 2015). The core features of CLIL can be summarized by the 4Cs: content, communication, culture, and cognition. Content refers to subject knowledge; communication refers to spoken and written language used for communication purposes, including meaning, thoughts, attitudes, and opinions; cognition refers to critical thinking skills; culture refers to the small unity of global (Calderón & Morilla, 2018). Teachers incorporate these four essential elements and deliver to students which ensure students not only gain content knowledge but also develop the language proficiency, cultural understanding, and critical thinking skills.

In terms of learning, CLIL is considered an effective way to equip learners with language skills in that content knowledge and cognition are acquired through a foreign language (Lasagabaster & Sierra, 2009; Llinares &Morton, 2017). Learners learn content knowledge and language skills in a target language (Calderón & Morilla, 2018), particularly reinforcing the cognitive domain (Pladevall-Ballester, 2016); meanwhile, they gain high levels of proficiency in reading and listening (Tedick & Wesley, 2015) and communicative skills are enhanced through gaining more exposure and opportunities for production (Korosidou & Griva, 2014). In foreign language learning, CLIL provides learners with L2 exposure without requesting extra time in the curriculum (Bailey, 2015). In short, learners' receptive and productive competence are also noteworthy in terms of linguistic benefits (Yang, 2015).

Regarding a non-linguistic domain, CLIL increases learners' learning motivation and interest (Pladevall-Ballester, 2019), while meaningful interaction occurs naturally in CLIL classes (Marsh, 2008). Motivation is a determinant factor leading to successful foreign language learning, especially for young learners, and the degree of motivation may decline depending on psychological and educational issues (Lasagabaster, 2011). Compared to English as a Foreign Language (EFL) classes, students are more motivated in CLIL classes (Lasagabaster, 2011).

With both linguistic and non-linguistic benefits of CLIL in educational contexts, it is desirable to explore in-depth teachers' experiences teaching CLIL to primary school students in EFL settings. Furthermore, the feedback from the teachers on the front lines gives more clues and thoughts to improve and achieve better CLIL teaching and learning experiences.

Teaching Primary School Students CLIL

It is important to highlight that teachers implementing CLIL should not have high expectations regarding learners' English proficiency in the subject matter (Bailey, 2015). Unlike English as a Medium of Instruction (EMI), CLIL does not require learners to have a specific level of English proficiency (Graddol, 2006). Consequently, CLIL teachers should have lower expectations, and in some cases, no expectations regarding learners' English proficiency in the subjects. The primary focus should be on developing both subject knowledge and language skills. Instead, the focus would be fairly on subject knowledge and language skills.

From prior studies, teachers felt inadequate preparation (Bailey, 2015), inexperience, untrained issues (Campillo, Sánchez, & Miralles, 2019; Yang & Gosling, 2014), and no standards for the qualification of CLIL teachers (Yang & Gosling, 2014), besides, in Taiwan, only 10.5% of

teachers are capable of teaching bilingually in 2021 (Huang,2021）. Moreover, the eligibility of teaching CLIL is another concern that most learners declared native-speaker teachers are more eligible than non-native-speaker teachers to be CLIL teachers and to teach CLIL courses since CLIL teachers are responsible for delivering content knowledge in a target language, namely, the dual aim of achieving both content learning and target language use (Rafi & Morgan, 2023), to be brief, local teachers are less confident in teaching CLIL.

With regard to curriculum, some teachers pointed out the authenticity of materials (Yang & Gosling, 2014); clear and concise activities and practical indications are required to teach various subject areas in the classroom (Bailey, 2015). Concerning actual practice in classrooms, classroom language is another concern, such as the percentage and timing of using the first language or the target language (Yang & Gosling, 2014) since CLIL teachers in Taiwan mentioned that they required additional language support ((Yang & Gosling, 2014). Translanguaging has been considered a flexible way of using multiple languages to enhance the communication between students and teachers (Duarte, 2019); as a consequence, the employment of translanguaging in the classrooms is contemplated since most learners prefer that teachers switch to L1 whilst explaining complex concepts, and with additional language support, learners reported having them prepare for CLIL classes to provide them with orientation courses that develop academic study skills. CLIL is to deliver content knowledge and language skills, so it is necessary to consider students' perspectives.

As for the willingness and feedback from previous studies, teachers reported that CLIL is beneficial for the learners and helps learners develop both subject knowledge and language skills (McDougald, 2015; Tedick & Wesley, 2015; Pladevall-Ballester, 2016). Therefore, teachers are interested in utilizing CLIL in their teaching contexts regardless of the concern about the workload of CLIL implementation. However, due to implying challenges for teachers in several aspects, it is necessary to examine CLIL teachers' experiences on CLIL implementation and further categorize the feedback to develop feasible solutions and constructive suggestions for future bilingual education. Several studies investigated tertiary CLIL (Yang, 2015), and some investigated CLIL in primary English education (Bailey, 2015; Campillo et al., 2019; Fielding, 2014).

This study aims to investigate teachers' feedback on Content and Language Integrated Learning (CLIL) in primary English education in Taiwan. As Taiwan has been actively promoting foreign language learning at the primary school level and more schools have adopted CLIL due to the influence of the 2030 Bilingual Policy, this research seeks to understand teachers' perspectives and experiences in implementing CLIL in this specific context. The following section provides a detailed explanation of the research design of this study.

Methodology
Participants
Forty-two local Taiwanese teachers from various schools were invited by the researcher to participate in the study. The participants were selected without any form of oppression. They were experienced teachers who had been teaching English for many years and had also gained experience in CLIL for primary school students.

Among the participants, there were 39 females (93%) and 3 male teachers (7%), with Mandarin Chinese being their mother language. Regarding educational qualifications, 17 of the participants (40.5%) held a bachelor's degree, 23 (54.8%) held a master's degree, and two of them held a doctoral degree (4.8%). Out of the participants, 29 (69%) were English majors,

while others specialized in fields such as business, art, education, music, mass communication, or chemistry. Additionally, 22 participants (52%) had previous study or work experience abroad, while the remaining 20 had not lived abroad before.

In terms of self-reported English proficiency, 33 participants (78.5%) rated their English proficiency as above the upper-intermediate level, while 11 (21.5%) considered their proficiency level to be below intermediate. Fifteen teachers had been teaching for less than ten years, while the remaining 27 participants had been teaching English for over ten years, with an average teaching experience of 12 years. On average, the participants had 3.3 years of experience in teaching CLIL. The information provided by the participants was categorized and presented in Table 1 below.

Table 1

Teachers' Background Information

Items	Answers
Gender	3 males (7%); 39 females (93%)
Degree	17 bachelors (40%), 23 masters (54%), 2 doctorals (6%)
Major	29 English majors (69%)
	13 non-English majors (21%)
Self-reported English Proficiency	33 above the upper-intermediate level (78.5%)
	11 below the upper-intermediate level (21.5%)
Average Years of Teaching English	12 years
Average Years of Teaching CLIL	3.3 years
Abroad Experience	22 With (52%)
	20 Without (48%)

Instrument & Data Collection

An introduction to CLIL was served before the questionnaire, then questionnaire comes after (see Appendix A). The questionnaire was provided in both English and Mandarin Chinese translations (see Appendix B). The study aims to investigate primary school teachers who have experience with CLIL teaching. As teachers are expected to have prior knowledge of CLIL, an introduction to CLIL will be provided before administering the questionnaire. The questionnaire of this study was adapted from the Questionnaire on Teacher's Attitudes, Perceptions & Experiences in CLIL (McDougald, 2015), and the questions were selected from McDougald's questionnaire based on realizing teachers' experiences in CLIL, additionally, open-ended questions were added to the current questionnaire in order to gather comprehensive insights into the teachers' experiences and perceptions regarding the implementation of CLIL in primary school settings.

Teaching Experiences of CLIL Implementation on Primary School Students Questionnaire (TEC) was consisted of three sections: participant's background information, a series of five-point Likert scale ordinal questions, and open-ended questions. Part one focused on collecting essential background information from the participants. This included details such as their age, gender, educational background, years of experience in teaching English, years of experience

in teaching CLIL, self-rated English proficiency, and whether they had any experience living abroad. Part two comprised a series of five-point Likert scale ordinal questions. These questions were designed to assess the participants' knowledge of CLIL and their experiences with its implementation. The Likert scale allowed participants to express their perspectives quantitatively, rating their level of agreement or experience on a scale ranging from strongly disagree to strongly agree. Finally, part three consisted of open-ended questions, providing participants with an opportunity to provide qualitative responses. They were encouraged to share their favourite aspects of CLIL implementation, identify any aspects they considered less favourable, and reflect on potential areas for self-improvement in relation to CLIL implementation.

Each participant completed the online questionnaire individually using Google Forms, ensuring that their responses were not influenced by others. There were no time constraints imposed on completing the questionnaire, allowing participants to provide thoughtful and accurate responses. To address any uncertainties or unclear information, the teachers' emails were collected through the Google system, enabling further clarification or follow-up, if necessary. By employing these three parts, the questionnaire aimed to gather comprehensive insights into the teachers' experiences and perceptions regarding the implementation of CLIL in primary school settings. The questionnaire sought to capture a holistic understanding of their perspectives, enabling a deeper exploration of their experiences and attitudes towards CLIL.

Results and Discussions

The data from part II of the TEC questionnaire provided insights into five perspectives: teachers' CLIL knowledge, positive CLIL experiences, improvement in language development and subject knowledge, and support on CLIL implementation. These perspectives were explained as follows (see Table 2).

Table 2
Teachers' Feedback on CLIL in Five-Point Likert Scale. (5 highest)

Questions	Average	SD
CLIL Knowledge (No.1, 2)	3.9	0.58
Positive CLIL Experiences (No. 3,4,5, 8, 12)	3.68	0.85
Beneficial on Subject and Language Development (No.9,10)	3.95	0.9
Support of CLIL Implementation (No.6)	3.43	1.07
Substantial Amount of Time to Prepare (No.11)	4.59	0.7

Questions one and two assessed teachers' knowledge of CLIL, and the average score was 3.9 and a standard deviation (SD) of 0.58. Questions three, four, five, eight, and twelve focused on teachers' positive experiences with CLIL, resulting in an average score of 3.68 and an SD of 0.85. For language learning and subject knowledge acquisition, questions nine and ten received an average score of 3.95, with an SD of 0.9. Regarding support for CLIL implementation, the average score for question six was 3.43, with an SD of 1.07.

Notably, the findings indicate that teachers possess a certain degree of background knowledge in CLIL and have generally had positive experiences while teaching CLIL to primary school students, aligning with Taiwan's 2030 Bilingual Policy. However, it is important to

acknowledge that teachers face a significant time investment in preparing for CLIL classes, as evidenced by the score of 4.59 for question eleven, with an SD of 0.7. This substantial preparation time could potentially impact teachers' willingness to implement CLIL in primary school classrooms.

In response to research question one: "What are teachers' experiences in teaching CLIL to primary school students as part of Taiwan's Bilingual 2030 Plan?", the participants expressed that CLIL had beneficial impacts on both language development and subject knowledge for primary school students. They were appreciative of the opportunity to participate in related research in the future. However, the participants also highlighted certain challenges, for example, limited support and the time-consuming nature of CLIL were mentioned as significant hurdles. In order to address these challenges, it is suggested that feasible solutions be systematically designed, proposed, and implemented, with a focus on enhancing facilitation and cooperation among administrators, peers, language teachers, subject teachers, and the teachers themselves.

The third section of the TEC questionnaire consisted of open-ended questions categorized into three aspects of curriculum, students, and themselves, respectively, based on teachers' CLIL teaching experiences (see Table 3).

Regarding the curriculum aspect, participants pointed out that CLIL effectively integrates both subject knowledge and language skills, making the learning process interesting and enjoyable. Moreover, CLIL was seen as being closely connected to daily life, promoting meaningful learning and representing a potential trend for future language education. However, certain drawbacks were also mentioned. First, CLIL may not be suitable for all subjects, which could potentially increase the cognitive load for students. Second, the implementation of CLIL may reduce the time available for learning other subjects. Last, evaluating the learning process and outcomes of CLIL required considerable effort and resources.

On the students' aspect, the positive side that participants reflected was CLIL enabled students to think, reflect, learn, communicate, and share ideas in English, meanwhile, learn subject knowledge and language simultaneously. During the process, the collaboration between high and low achievers was bolstered. Nonetheless, it was noted that while some participants showed proficiency in acquiring subject knowledge in English, others required additional background information or language skills, especially among primary school students who were just starting formal education and had limited exposure to English instruction. Furthermore, the differing levels of language proficiency among students could result in some losing interest in CLIL classes when faced with challenges.

From the perspective of teachers, a number of them expressed satisfaction with the approach of simultaneously teaching subject knowledge and language. They found that incorporating body language in their instruction facilitated students' understanding and comprehension. However, several drawbacks were highlighted, falling into the subcategories of time-consuming, effort-intensive, and impacting motivation and willingness. Participants mentioned that CLIL demanded a significant amount of time for lesson preparation and cramming before classes. Additionally, they had to attend training programs and workshops to enhance their CLIL teaching skills. Some schools even required collaboration between subject teachers and English teachers for lesson planning. It was noted that only a portion of CLIL teachers were motivated and willing to teach CLIL, while the lack of qualified CLIL teachers posed another challenge.

Table 3

Teachers' Feedback Based on CLIL Teaching Experiences

Category	Feedback	Examples
Curriculum	Positive	Integration of subject knowledge and English.
		Provide a great variety in teaching.
		Make learning interesting and enjoyable.
		Meaningful learning.
		Connect to the students' daily lives.
		Learn by doing.
		The trend for future language education.
	Negative	Not applicable in all the subjects that could increase cognitive load.
		Insufficient administrative support.
		CLIL implementation eliminated the time of learning other subjects.
		Hard to examine the process and learning outcome.
Students	Positive	Immerse in an English-speaking environment.
		To think, reflect, learn, communicate and share ideas in English.
		Obtain both content knowledge and target language competence.
		Collaboration between high and low achievers.
	Negative	Not everyone is capable of learning the subject knowledge in English.
		Some of them lost the interest and just quit.
		Insufficient subject knowledge.
		Not easy for primary school students.
Teachers	Positive	Enjoy teaching subject knowledge and language simultaneously.
		Teachers' body language may help.
	Negative	Teachers need to obtain subject knowledge and relevant terms in English.
		Teachers need to spend extra time making worksheet and PowerPoint slides.
		Teachers need to come up with scaffolding plans to assist low achievers.
		Teachers need to prepare materials with differentiated levels.
		Teachers need to spend more time explaining the subject knowledge at the beginning of the class.
		Insufficient qualified CLIL teachers.
		Not every CLIL teachers is motivated and willing to teach CLIL.

More importantly, this study aims at exploring the positive and negative feedback based on teachers' experiences and what teachers could do to improve CLIL implementation. The participants' reflections could be categorized into three parts: before, during, and after the class (see Table 4).

Table 4

Teachers' Feedback on Self-Improvement

	Reflection on Self-Improvement
	Realize the specified goals of CLIL programs.
	Plan SOP and standards on curriculum design, implementation, and evaluation.
	Attend workshops, seminars, and training programs.
	Spend more time preparing for CLIL classes.
Before the Class	Plan and design scaffolding strategies.
	Seek help from the administration actively.
	Seek help from experienced CLIL teachers.
	Co-prepare and co-teach with subject or language teachers.
	Give a placement test to students.
	Create a enjoyable environment and create chances to motivate students.
During the Class	Encourage students to interact and engage.
	Use more body languages and assisted props or tools.
	Sharpen up the language skills and obtain subject knowledge in English.
After the Class	Observe others' CLIL classes for more ideas and improvements.
	Practice more before classes.

In responding to research question two: "Based on teachers' experiences of teaching primary school students with CLIL, what suggestions can be proposed for the three phases of preparation, implementation, and post-implementation of CLIL?"

Based on teachers' feedback, effective preparation before the class is essential for successful CLIL implementation. To achieve this, firstly, teachers need to clearly understand the specified goals of CLIL programs and accordingly plan, design, and execute activities to attain those objectives. Developing Standard Operating Procedures (SOP) and curriculum design standards would provide a more systematic approach, streamlining the planning, execution, and evaluation processes. Second, participating in workshops, seminars, and training programs is crucial for teachers to stay updated and acquire more information and strategies for effective CLIL instruction. Collaborating with the administration and other CLIL or subject teachers is also important to facilitate the exchange of information and ideas, leading to more feasible ways of supporting students and promoting cooperation among teachers.

A suggested solution is to have students undergo a placement test, enabling teachers to tailor materials and activities based on their individual language proficiency and subject knowledge levels. This personalized approach can reduce student frustration and enhance their engagement in the CLIL classes. One of the challenges highlighted by teachers is the varying language proficiency and subject knowledge levels among students, which makes it more difficult for teachers to conduct activities and adjust the difficulty of teaching content accordingly. Furthermore, some students tend to lose interest in CLIL classes, particularly when they encounter difficulties in comprehending and presenting the learning content. Addressing these issues requires teachers to employ diverse instructional strategies and provide additional support to engage all students effectively and sustain their interest in CLIL learning. During the class, teachers play a crucial role in creating an engaging and enjoyable learning environment for students. To enhance student motivation, teachers should encourage active

participation and interaction among students. This can be achieved by providing opportunities for students to collaborate with their peers and engage in various activities that promote language acquisition and subject comprehension. Teachers can employ strategies such as utilizing body language, incorporating props and tools, and employing visual aids to facilitate student understanding and comprehension. These techniques can help students grasp key concepts more effectively and make the learning experience more interactive and enjoyable.

After the class, teachers have ongoing responsibilities (see Table 5), including refining their language skills and expanding their subject knowledge in English. Engaging in observations of other CLIL classes can provide valuable insights and ideas for enhancing their own teaching practices. For new CLIL teachers, dedicating extra time to practice and familiarize themselves with teaching subjects in English is essential, as proficiency in this area can be developed through training. Furthermore, experienced CLIL teachers could offered insightful suggestions based on their own encounters, serving as a valuable resource for educators to adjust, modify, and implement CLIL effectively for primary school students. These suggestions open a window of opportunity for continuous improvement and refinement of CLIL approaches in the educational setting.

Table 5

Suggestions for CLIL

Domain	Suggestions
Administration	Hold workshops, seminars, CLIL training programs, and conferences.
	Standards for qualified CLIL teachers.
Curriculum	Specify the learning objectives and goals.
	Provide guidance, resources, materials, and assistance.
Actual Practice	Cooperation with language and subject teachers.
	Eliminate teaching hours to have more flexible time for preparations.
	Learners' language proficiency is a concern.
	Not feasible in elementary schools due to the limited teaching hours.
	Not applicable in elementary schools due to the limited bilingual environment.

Furthermore, teachers shared their observations regarding the difficulties encountered by primary school students during CLIL implementation (see Table 6). The difficulties could be classified into language proficiency, knowledge, and evaluation. The teachers reflected that students needed scaffolding of subject knowledge and language skills in order to comprehend and express the ideas especially primary school students with very limited life experiences.

According to the participants' reports, primary school students face difficulties in simultaneously comprehending and integrating content knowledge and language skills. Evaluating academic performance becomes challenging due to the absence of established criteria or benchmarks for assessment. Additionally, certain parents encounter obstacles in providing support to their children due to their limited language proficiency and unfamiliarity with the subject matter. Consequently, students lack parental support when previewing and reviewing the content.

Table 6

Difficulties Primary School Students Faced.

Domain	Example
Language Proficiency	Students struggle with using and comprehending the content in English.
Knowledge	Limited prior knowledge related to content.
	Too much content knowledge along with language skills to absorb.
Evaluation	No standards for students to prepare for the academic evaluation.
	Parents have trouble reviewing the content with their kids.

Drawing from the teaching experiences of primary school teachers in CLIL, a collection of positive and negative feedback was obtained, accompanied by valuable suggestions for future implementation and self-reflection on personal growth. The subsequent section will provide a conclusion.

Conclusion

CLIL, a global phenomenon, offers numerous advantages, including the simultaneous development of language skills and subject knowledge. In Taiwan, it holds a significant position in the Bilingual 2030 Plan, particularly in specific educational stages. Nonetheless, implementing CLIL presents its fair share of obstacles. Achieving successful implementation of CLIL requires a shared dedication among education policymakers, educational institutions, administrators, educators, students, and parents. This commitment entails being open-minded, adaptable, and committed to lifelong learning, enabling all stakeholders to embrace the continuous changes and challenges that come with CLIL.

This study presents significant feedback and meaningful recommendations derived from teachers' experiences, offering valuable insights to researchers, educators, and schools. The primary objective is to support the successful implementation of CLIL in primary schools by exploring teachers' perspectives and addressing the challenges and frustrations encountered by CLIL educators. By doing so, the research aims to alleviate the frustrations of CLIL teachers and promote the development of well-structured CLIL systems that contribute to the advancement of bilingual education in primary schools.

Appendix A

親愛的老師您好:

雙語教育推行的同時，內容和語言的整合學習(CLIL)盛行於各學習階段，此研究是希望透過了解老師對於 CLIL 實行上的回饋與評價，再麻煩老師們詳細閱讀以下內文後，再進行問卷填寫，問卷已附在此文章後，您的回饋將以匿名方式處理，僅供學術研究使用。

CLIL 介紹

CLIL 課程的 4C 要素 (The 4Cs Framework)

1. Content 知識內涵

content （知識內涵） 指的是學習者所習得的學科知識， Cyole (2013) 將它稱作 subject matter，中文稱作學科本質或學科本位，指的是該學科的特質與地位，以及其所涵蓋的

知識體系及範圍。CLIL 中 content（知識內涵）的培養是為開發及加深學生對該學習領域的精熟度。

2. Communication 溝通傳遞

communication 是溝通，而溝通又分為輸入及輸出兩個面向，由這個角度切入，來理解 communication（溝通傳遞）在 CLIL 中的概念，就會變得相當容易。 Communication （溝通傳遞）指的就是語言學習 (language learning) 和語言使用 (language using) 兩個面向。

語言學習 (language learning) :CLIL 的雙學習目標是語言與內容。因此，語言在 CLIL 課程中也是學習目標。以台灣發展的 CLIL 教育而言，我們的語言學習目標便是通曉英文。語言使用 (language using)：語言使用指的是在課室中，老師與學生所使用的語言。以台灣發展的 CLIL 教育而言，CLIL 課室的目標語是英文，還有可能出現母語—中文，以輔助學生的英文學習。

3. Cognition 認知發展

CLIL 所提的 cognition（認知發展）概念，主要是根據布魯姆的認知領域目標分類 (Bloom's Taxonomy) 來延伸。CLIL 中的 cognition（認知發展）便是化用認知金字塔的概念，強調在設計 CLIL 課程時，應顧及認知範疇各層面的培養，因為每個層次都是環環相扣且相互依存，想要學生展現高層次的認知表現，需強化各層次的認知。

B. S. (1956). "Taxonomy of Educational Objectives, Handbook I: The Cognitive Domain." New York: David McKay Co Inc. 示意圖

4. Culture 文化內涵

在 CLIL 的框架中，culture（文化內涵）廣義而言指的是培養學生的國際情懷與跨文化理解。例如，課程可以引介與文化相關的實例或語境，或融入各類議題（可參考：十二年國教 19 項議題融入）以促進多元思考。

*雙語教育實務篇：如何在教室中應用 CLIL 教學法。Corporate Language Network。民國 111 年 3 月 10 日，取自：https://cln-asia.com/2021/04/19/雙語教育實務篇：如何 在教室中應用-CLIL-教學法/

有效的 CLIL 課程需要達到的目標

1. 知識與技能的提升、深化對課程內容的理解
2. 發展適當的語言知識和技巧
3. 發展系統性思考等高層次認知
4. 與合適的語境 (context) 互動，交互作用創造高層次理解
5. 深化跨文化意識，理解自我與他人的差異

如何規劃 CLIL 課程？
教師應具備的能力

在著手設計 CLIL 課程前，教師應深入了解 CLIL 的理論與背景，自身也須具備進行 CLIL 課程的語言能力，以國家的雙語教師標準而言，教師需達到 CEFR B2（聽說讀寫）的標準。更重要的是教師應具備反思能力，除了確認學生的先備知識與預測學生可能會有的學習困難外，在課程進行中也要時時利用策略與技巧，引導學生做高層次的思考與啟發後設思維。

學習材料的揀選

為培養語言與學科知識雙面向，在設計課程的學習目標時，語言學習目標與學科內容學習目標需環環相扣。除了培養學科知識外，也需回歸學科本質，發展學生對該科的英語學術語言能力。舉例而言，若是一堂雙語的科學課程，學習素材的揀選絕不能脫離科學的範疇（如：操作實驗），所欲發展的英語能力也應該與科學有關聯（如：閱讀英文科普文章、期刊、論文），而非純粹培養學生日常英文用語，如此一來才能發展學生在科學領域的學術語言能力。

學習素材的揀選要能讓學生接觸與學習主題相關的語境 (context)，例如文章、影片、雜誌、圖表等媒介，並且要能滿足視覺、聽覺、觸覺、操作等不同學習風格的學習者，實作任務與評量最好也都要從真實的生活情境出發。透過搭鷹架的方式逐步讓學生逐步培養語言與內容兩層面的認知，最終達到應用、評估、創造等高層次的學習表現。

*鄒文莉、高實玫主編 (2018/11)。CLIL 教學資源書--探索學科內容與語言整合教學 (Exploring CLIL: A Resource Book)。**台北：書林出版社。**ISBN 978-957-445-815-8

CLIL 教學的核心精神

4C's（content, communication, cognition, culture）理論，一個成功的 CLIL 課程架構應該包括四個重要面向；學科內容教學幫助學生了解相關課程的知識、技能等；語言溝通訓練幫助學生使用語言學習及進行課室互動；認知訓練幫助學生發展思考技巧，促進概念形成；提升文化認知幫助學生了解他人的看法、學習跨文化交流。
學習活動設計以完成任務為導向而語言為達成任務的工具；鷹架式語言教學；學習成果可以分為概念、過程及語言三項；儘量以學習單取代文章以避免錯誤理解；鼓勵同儕溝通；提供引導式學習幫助學生理解多媒體教材；支援學生的產出；了解並支援學生各種思考習慣。CLIL 授課可以是由具有英語教學熱誠的領域教師在課程中將英語使用及學習融入，或者是對學科內容有興趣的英語科教師將學科內容融入英語學科的教學中，又或者是由英語科和領域教師的協同教學。

教師的任務

一般而言，領域教師通常是知識的傳遞者，透過解說、舉例及討論，領域教師協助學生理解學科內容，例如生物學科的動植物、數學學科的代數或幾何、健康學科的牙齒保健等主題。術科教師例如體育、美術、音樂教師則透過示範和講解，培養學生的技能。英語科老師的教學重點包括基本的聽、說、讀、寫技巧，教師任務包括講解課文、介紹單字文法等。國小階段的另一教學重點是學生的口說素養，使用英語進行溝通，表達自己的想法。英語科的老師可以被視為教練，透過示範，鼓勵學生使用英語執

行溝通任務。一般來說，國中小領域教師的教學重點傾向於理解內容，而英語科教師的授課內容則以溝通能力的培養為主。

* CLIL 教學創新的英語學習環境／以溝通為重 用中英雙語學習專業科目。**English Career 第 67 期**。民 111 年 3 月 10 日，取自:
https://www.englishcareer.com.tw/learning/clil/

成大教授：CLIL 不等於翻譯教學

不過，原本是用中文進行授課的音樂、體育、自然科學等課程，如何讓學生在學習這些學科內容的同時，也熟悉英語的溝通表達技巧呢？此外，各科目一線教師是否還需要具備英語授課能力才能實行 CLIL 教學法？對此，國立成功大學外國語文學系教授鄒文莉在「2018 跨領域／跨語言教學國際研討會」中指出，CLIL 教學法並不等於全英語授課（English as a medium of instruction, EMI），而是應把 CLIL 課程放在語言教學的系統下看待。也就是說，各科目教師在課程中能自由決定什麼時機應該用中文上課，什麼時機可以適當加入英文；並視學生的英語程度，與英語教師討論出合適的英語教學比例，再透過鷹架理論，適當帶入現實生活經驗。在實際運用上，香港元朗出生長大的香港大學教授 Angel Lin 提出了一個三階段的教學架構，能夠用以教授自然科學的 CLIL 課程。此三階段架構包括：一、利用不同媒介的學習資源創造豐富的體驗情境；二、使用中文或英文製成的主題文章及影音內容，讓學生熟悉學科內容概念與語言的使用，並讓學生投入閱讀及做筆記；三、讓學生在情境中使用日常用語及學術語言描述學到的內容及體驗。

* CLIL 教學創新的英語學習環境／以溝通為重 用中英雙語學習專業科目。**English Career 第 67 期**。民 111 年 3 月 10 日，取自:
https://www.englishcareer.com.tw/learning/clil/

Questionnaire on Teachers' Experiences of CLIL Implementation on Primary School Students

The information and feedback will be presented anonymously in the study and only used for research purposes.

Part I. Teacher's Background Information.

1. Age: ☐ 30-35 ☐36-40 ☐41-45 ☐ 46-50 ☐51-55 ☐56-60

2. Gender: ☐ female ☐ male

3. Mother Language: ☐ Mandarin ☐ English ☐ others:_____

4. Educational background: ☐ bachelor's degree ☐ master's degree ☐ doctoral degree

5. Major: _____

6. English Proficiency:

   ☐elementary ☐intermediate ☐upper intermediate ☐advanced ☐mastery

7. Years of English Teaching:_____years

8. Years of Teaching Primary School Students CLIL:____

9. Experience of Living Abroad: ☐Yes. How many years? _____ Purpose: _____ ☐No.

Part II. Five-Point Likert Scale Survey.

If you strongly agree with the statement, please circle 5. If not, please circle 1.

	Question	Five-Point Likert Scale
1	I know what CLIL is.	5 4 3 2 1
2	I have sufficient knowledge and skills in teaching CLIL.	5 4 3 2 1
3	I am confident in teaching primary school students CLIL.	5 4 3 2 1
4	I am fully prepared before teaching CLIL.	5 4 3 2 1
5	My experience in teaching CLIL is positive.	5 4 3 2 1
6	I am fully supported by the administration on CLIL implementation.	5 4 3 2 1
7	It is feasible to teach CLIL to primary school students.	5 4 3 2 1
8	Based on your experiences, does CLIL create an enjoyable learning environment for teachers?	5 4 3 2 1
9	Based on your experience, does CLIL help students develop their language skills?	5 4 3 2 1
10	Based on your experience, does CLIL help students develop their subject knowledge?	5 4 3 2 1
11	Based on your experience, does CLIL require a lot of time to prepare?	5 4 3 2 1
12	I am interested in participating in future CLIL research projects.	5 4 3 2 1

Part III. Open-Ended Question. Teachers' Feedback on CLIL Implementation.

13. What do you like about CLIL implementation for primary school students?
14. What DON'T you like about CLIL implementation to primary school students?
15. What can be improved on your CLIL teaching?
16. Any other suggestions regarding CLIL implementation?
17. What strategies did you use to assist CLIL teaching?
18. From what you observed, what difficulties did the primary school students face?

Appendix B

Dear teacher,

Alongside bilingual education, Content and Language Integrated Learning (CLIL) has become prevalent at various stages of learning. This study aims to gather feedback and evaluations from teachers regarding the implementation of CLIL. After thoroughly reading the following content, please fill out the attached questionnaire. The feedback will be treated anonymously and used solely for academic research. Thank a lot!

Introduction to CLIL

The 4Cs Framework of CLIL Courses

1. Content

Content refers to the subject matter that learners acquire. Cyole (2013) refers to it as subject matter, which is the essence and position of the discipline, including its knowledge system and

scope. The content in CLIL aims to develop and deepen students' proficiency in the learning domain.

2. Communication

Communication refers to the act of conveying and exchanging information. In the context of CLIL, communication can be divided into two dimensions: input and output. Therefore, understanding the communication concept in CLIL becomes relatively straightforward when viewed from this perspective.

On language learning domain, CLIL aims to achieve dual learning outcomes in language and content. Therefore, language is also a learning objective in CLIL courses. In the case of CLIL education in Taiwan, the language learning objective is proficiency in English. On language using domain, it refers to the language employed by teachers and students in the classroom. In the context of CLIL education in Taiwan, the target language in CLIL classrooms is English. However, there may be instances where the native language, such as Chinese, is used to support students English learning.

3. Cognition

The concept of cognition in CLIL is primarily based on Bloom's Taxonomy, which classifies cognitive domain objectives. In CLIL, cognition refers to applying the cognitive pyramid concept, emphasizing cultivating various levels of cognition in designing CLIL courses. Each level of cognition is interconnected and interdependent, which enables students to demonstrate higher-level cognitive performance; it is necessary to strengthen cognition at each level.

4. Culture

In the framework of CLIL, culture refers to the cultivation of students' international awareness and cross-cultural understanding in a broad sense. For example, the curriculum can introduce cultural examples or contexts or incorporate various issues to promote diverse thinking, such as integrating the 19 topics in the Twelve-Year Basic Education Curriculum .

* Corporate Language Network. (2022). Dual Language Education in Practice: Applying CLIL Teaching Method in the Classroom. Retrieved March 10, 2022, from https://cln-asia.com/2021/04/19/dual-language-education-in-practice-applying-clil-teachi ng-method-in-the-classroom/

Goals to be achieved in an effective CLIL course

1. Enhancement and deepening of knowledge and skills and a better understanding of the content.
2. Development of appropriate language knowledge and skills.
3. Cultivation of higher-order cognitive skills, such as systematic thinking.
4. Interaction and mutual understanding with suitable contexts create a higher comprehension level.

5. Deepen cross-cultural awareness and understanding of differences between oneself and others.

How to plan a CLIL course?
Required Abilities of Teachers
Before designing a CLIL course, teachers should have a deep understanding of the theory and background of CLIL. They should also possess the certain language proficiency to conduct CLIL lessons. According to the national standards for bilingual teachers, teachers should achieve a CEFR B2 level on listening, speaking, reading, and writing. Furthermore, it is crucial for teachers to possess reflective skills. Apart from identifying students' prior knowledge and anticipating potential learning difficulties, teachers should continuously employ strategies and techniques during the CLIL classes to guide students in higher-order thinking and foster metacognition.

Selection of Learning Materials
To cultivate both language and subject knowledge, the learning objectives in curriculum design should interconnect language learning goals with subject content goals. In addition to developing subject knowledge, it is essential to return to the core value of subjects and foster students' English academic language proficiency. For instance, in a bilingual science class, the selection of learning materials should never deviate from the realm of science (e.g., conducting experiments), and the desired English language abilities should be relevant to science (e.g., reading scientific articles, journals, and papers), rather than solely focusing on everyday English usage. This approach ensures the development of students' academic language proficiency in science.

The selection of learning materials should expose students to relevant contexts related to the topic, such as articles, videos, magazines, charts, and other media. Moreover, the materials should cater to different learning styles, including visual, auditory, tactile, and kinesthetic learners. Ideally, practical tasks and assessments should also be based on authentic real-life situations. Students gradually develop their awareness of language and content by scaffolding the learning process, ultimately achieving higher-level learning outcomes such as application, evaluation, and creation.

* Zou, W., & Gao, S. (Eds.). (2018). *Exploring CLIL: A Resource Book.* Taipei: Shulin Publishing. ISBN 978-957-445-815-8.

The Core Principles of CLIL Teaching
The 4C's: content, communication, cognition, culture; that emphasizes integrating four critical aspects in a successful CLIL curriculum. First, content instruction helps students understand relevant subject matter knowledge and skills. Second, communication training enables students to use language for learning and classroom interactions. Third, cognition training fosters

critical thinking skills and concept formation. Fourth, cultural awareness enhances students' understanding of different perspectives and promotes cross-cultural communication.

Learning activities are task-oriented, with language as a tool to accomplish tasks. Scaffolding language instruction is provided. Learning outcomes encompass conceptual understanding, processes, and language development. Learning materials are designed to replace excessive explanation on texts to avoid misinterpretations. Peer communication is encouraged, and output is supported and valued. Guided learning approaches are employed to help students understand multimedia materials. Different thinking habits of students are acknowledged and supported.

CLIL instruction can be delivered by subject teachers with a passion for English language teaching, integrating English language use and learning into their subject classes. It can also be implemented by English language teachers interested in the subject matter, integrating subject content into their English language instruction. Alternatively, collaborative teaching can be conducted by both English language and subject teachers.

Teacher's Roles and Responsibilities
Generally, subject teachers serve as knowledge facilitators, assisting students in understanding subject matter through explanations, examples, and discussions. For instance, biology teachers help students comprehend topics such as plants and animals, mathematics teachers cover algebra or geometry, and health teachers educate students on dental care. Skill-based teachers, such as physical education, art, and music, focus on developing students' abilities through demonstrations and explanations.

English language teachers, on the other hand, emphasize essential listening, speaking, reading, and writing skills. Their tasks include explaining texts, introducing vocabulary, and teaching grammar. Another important focus in primary education is developing students' oral proficiency and ability to communicate and express their ideas in English. English language teachers can be seen as coaches who demonstrate and encourage students to use English to accomplish communicative tasks.

In general, the teaching emphasis of subject teachers in primary and junior high schools tends to be content comprehension, while English language teachers primarily focus on developing communication skills.

* Innovative English Learning Environment in CLIL Teaching: Emphasizing Communication through Bilingual Learning of Professional Subjects. *English Career* (67). Retrieved from https://www.englishcareer.com.tw/learning/clil/

CLIL Professor from the National Cheng Kung University: CLIL Does Not Equal Translation Teaching

However, how can students become familiar with English communication and expression skills while learning these subjects like music, physical education, and natural sciences that were originally taught in Chinese? Moreover, do subject teachers need to possess English teaching abilities to implement CLIL methodology? In the "2018 Interdisciplinary/Interlanguage Teaching International Symposium," Professor Zou Wenli from the Department of Foreign Languages and Literature at National Cheng Kung University pointed out that CLIL methodology does not equate to complete English-medium instruction (EMI). Instead, CLIL courses should be viewed within the framework of language teaching. In other words, subject teachers can decide when to use Chinese or English in their classes, considering students' English proficiency. They can discuss with English teachers to determine an appropriate balance of English instruction and then incorporate scaffolding theory and real-life experiences. In practical application, Professor Angel Lin from the University of Hong Kong, who was born and raised in Yuen Long, Hong Kong, proposed a three-stage teaching framework for CLIL courses in natural sciences. This framework includes: 1) creating rich experiential contexts using various learning resources; 2) using Chinese or English texts and audiovisual materials to familiarize students with subject concepts and language usage and engage them in reading and note-taking; 3) allowing students to use everyday language and academic terminology to describe what they have learned and experienced within the context.

* CLIL Teaching: Innovative English Learning Environment Focusing on Communication through Bilingual Instruction in Specialized Subjects. *English Career*, 67. Retrieved from https://www.englishcareer.com.tw/learning/clil/

References

Bailey, N.M. (2015). Attaining Content and Language Integrated Learning (CLIL) in the Primary School Classroom. *American Journal of Educational Research, 3*, 418-426.

Calderón Jurado, B., & Morilla García, C. (2018). Students' Attitude and Motivation in Bilingual Education. *International Journal of Educational Psychology, 7*(3), 317–342.

Campillo, J. M., Sánchez, R., & Miralles, P. (2019). Primary Teachers' Perceptions of CLIL Implementation in Spain. *English Language Teaching, 12*(4), 149-156.

Chen, F., Kao, S. M., & Tsou, W. (2020). Toward ELF-informed bilingual education in Taiwan: Addressing incongruity between policy and practice. *English Teaching & Learning, 44*(2), 175-191.

De Diezmas, E. N. M. (2016). The impact of CLIL on the acquisition of L2 competencies and skills in primary education. *International Journal of English Studies, 16*(2), 81-101.

Duarte, J. (2019). Translanguaging in mainstream education: A sociocultural approach. International. *Journal of Bilingual Education and Bilingualism, 22*(2), 150-164.

Fan-Wei, K. U. N. G. (2018). "English-only or nothing": Practitioners' perspective on the policy and implementation of CLIL in higher education. *Education Journal, 46*(1), 93-115.

Fielding, R., & Harbon, L. (2014). Implementing a Content and Language Integrated Learning Program in New South Wales Primary Schools: Teachers' Perceptions of the Challenges and Opportunities. *Babel, 49*(2), 17-27.

Forman, S. R. (2010). Ten principles of bilingual pedagogy in EFL. *The NNEST LENS: Nonnative English speakers in TESOL.*

Graddol D. (2006). *English Next*. British Council Publications.

Kao, Y. T. (2022). Understanding and addressing the challenges of teaching an online CLIL course: a teacher education study. *International Journal of Bilingual Education and Bilingualism, 25*(2), 656-675.

Kao, Y. T. (2022). Exploring translanguaging in Taiwanese CLIL classes: an analysis of teachers' perceptions and practices. *Language, Culture and Curriculum*, 1-22.

Korosidou, E., & Griva, E. (2014). CLIL approach in primary education: Learning about Byzantine art and culture through a foreign language. *Studies in English Language Teaching*, 2(2), 216-232.

Kramsch, C. (2014). Teaching foreign languages in an era of globalization: Introduction. *The Modern Language Journal, 98*(1), 296-311.

Lara, M.D., & Pedrosa, A.V. (2018). Teacher Perspectives on CLIL Implementation: A Within-Group Comparison of Key Variables.

Lasagabaster, D. & Sierra, J. (2009), Language attitude in CLIL and traditional EFL classes. *International CLIL Research Journal, 1*(2), 4-17.

Lasagabaster, D. (2011). English achievement and student motivation in CLIL and EFL settings. *Innovation in Language Learning and Teaching, 5*(1), 3-18.

Llinares, A., & Morton, T. (Eds.). (2017). *Applied linguistics perspectives on CLIL, 47.* John Benjamins Publishing Company.

Marsh, D. (2008). Language awareness and CLIL. In J. Cenoz J. & N. H. Hornberger (Eds.), *Encyclopedia of Language and Education: Knowledge about Language, 2*(6), 233-246. New York: Springer, 233-246.

McDougald, J. (2015). Teachers' attitudes, perceptions and experiences in CLIL: A look at content and language. *Colombian Applied Linguistic Journal, 17*(1), 25-41.

National Development Council. (2018). Blueprint for developing Taiwan into a bilingual nation by 2030. Retrieved from https://www.ndc.gov.tw/en/Content_List.aspx?n=D933E5569A87A91C&upn=9633B537E92778BB

Nikula, T. (2016). CLIL: A European approach to bilingual education. *Encyclopedia of Language and Education*.

Nunan, D. (2003). The impact of English as a global language on educational policies and practices in the Asia-Pacific Region. *TESOL Quarterly, 37*(4), 589-613.

Pladevall-Ballester, E. (2015). Exploring primary school CLIL perceptions in Catalonia: students', teachers' and parents' opinions and expectations. *International Journal of Bilingual Education and Bilingualism, 18*(1), 45-59.

Pladevall-Ballester, E., & Vallbona, A. (2016). CLIL in minimal input contexts: A longitudinal study of primary school learners' receptive skills. *System, 58*, 37-48.

Pladevall-Ballester, E. (2019). A longitudinal study of primary school EFL learning motivation in CLIL and non-CLIL settings. *Language Teaching Research, 23*(6), 765-786.

Rafi, A. S. M., & Morgan, A. M. (2023). Blending translanguaging and CLIL: pedagogical benefits and ideological challenges in a Bangladeshi classroom. *Critical Inquiry in Language Studies, 20*(1), 20-45.

Tedick, D. J., & Wesely, P. M. (2015). A review of research on content-based foreign/second language education in US K-12 contexts. *Language, Culture and Curriculum, 28*(1), 25-40.

Tsou, W. (2018, June). Implementing content language integrated learning (CLIL) in Taiwan-a review study. *In PIM 8th National and 1st International Conference*.

Tsou, W. L., & Kao, S. M. (2018). *Exploring CLIL: A resource book*. Bookman Books, Ltd.

Yang, W., & Gosling, M. (2014). What makes a Taiwan CLIL program highly recommended or not recommended? *International Journal of Bilingual Education and Bilingualism, 17*(4), 394-409.

Yang, W. (2015). Content and language integrated learning next in Asia: Evidence of learners' achievement in CLIL education from a Taiwan tertiary degree program. *International Journal of Bilingual Education and Bilingualism, 18*(4), 361-382.

CLIL教學創新的英語學習環境／以溝通為重 用中英雙語學習專業科目。*English Career* 第 67 期 。 民 111 年 3 月 22 日 ， 取 自 ： https://www.englishcareer.com.tw/learning/clil/CLIL 。 Teaching Innovation in an English Learning Environment, Emphasizing Communication, Learning Professional Subjects in Bilingual (Chinese-English). *English Career*, Issue 67. March 22, 2022. Retrieved from: https://www.englishcareer.com.tw/learning/clil/

黃琇屏Huang, H. P.（2021）。公立中小學雙語教育實施現況與挑戰。*臺灣教育評論月 刊*， 10(12)， 6-11。 Hwang, Hsiu-Ping (2021). The Current Situation and Challenges of Bilingual Education in Public Elementary and Junior High Schools (Chinese-English). *Taiwan Educational Review Monthly*, 10(12), 6-11.

雙語教育實務篇：如何在教室中應用 CLIL 教學法。Corporate Language Network。民 國111年3月10日，取自：https://cln-asia.com/2021/04/19/雙語教育實務篇 ： 如 何 在教室中應用-CLIL-教學法/。Bilingual Education Practices: *How to Apply CLIL Teaching Method in the Classroom* (Chinese-English). Corporate Language Network. (2022, March 10). Retrieved from https://cln-asia.com/2021/04/19/bilingual-education-practices-how-to-apply-clil-teaching-method-in-the-classroom/

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