



**Cross-curricular collaboration in a CLIL bilingual context:
the perceptions and practices of language teachers and
content subject teachers**

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ABSTRACT

Content and Language integrated learning (CLIL) revolves around the dual goal of language acquisition and content knowledge; therefore, cross-curricular collaboration between language and content teachers is one of the key factors for the success of CLIL education. This study investigates multiple aspects of cross-curricular collaboration in a Vietnamese CLIL program, including teachers' beliefs about pedagogic roles, professional support provided, and actual cross-curricular collaboration implemented. Data collected from eight teachers through semi-structured interviews were coded for emerging themes using thematic analysis, and relevant documents were analysed as complementary data. The findings indicate that the teachers viewed their pedagogical responsibilities and foci rigidly within their discipline, rather than as a dual-focused role of both language and content teaching. Additionally, a mismatch between professional support provided by the school and by the program designers was identified, indicating insufficient training and supervision in the implementation of the program. Although there was evidence of teacher collaboration, the practice still lacked consistency and systematicity due to issues such as workload, schedule and motivation. The findings from this study have important implications for professional development and curriculum design in CLIL bilingual programs to facilitate successful cross-curricular collaboration.

Key words: content and language integrated learning (CLIL), bilingual education, cross-curricular collaboration, collaboration practice, professional support.

INTRODUCTION

Content and Language Integrated Learning (CLIL) has been considered as an innovative educational approach that caters for both language acquisition and content learning simultaneously. With its well-documented advantages and flexibility in application, CLIL has been regarded as an established educational approach across Europe and currently extending to many different classroom settings worldwide. In the English as a Foreign Language (EFL) context in Asia, various schools have been incorporating CLIL elements into their curriculum to provide rich opportunities for language learning, including increased second language (L2) exposure and content engagement. Therefore, it is necessary for CLIL teachers to recognise the interconnectedness of these two elements and then accommodate a dual-focused role of both content and language teaching. Cross-curricular collaboration is essential for making that process possible, as well as for ensuring the success of these programs. Indeed, many researchers concur that a close partnership between L2 and subject teachers is instrumental in implementing the integrated curriculum of CLIL programs (Pawan & Ortloff, 2011; Álvarez, 2016; Lo, 2020). Such a partnership allows for adequate integration of language and content in curricular planning, pedagogical methods, material design, assessment instruments, and so on (Álvarez, 2016). However, the practice of cross-curricular collaboration is contingent on a number of issues such as teachers' perceptions of their roles, schools' level of support, and opportunities for professional development. Studies focusing on English as a Second Language (ESL) CLIL contexts have shown that the actual implementation of cross-curricular collaboration is generally less than perfect, no matter how essential it is acknowledged as being. Such studies are still lacking in EFL settings, where CLIL is increasingly adopted. Hence, the current study aims to explore the problems underlying insufficient collaboration in a Vietnamese bilingual program where a commercially promoted CLIL curriculum is in use. By investigating the teachers' orientations in tandem with the school's availability of pedagogic guidance and the administrative support, the study aims for a more holistic analysis of the issue.

LITERATURE REVIEW

Content and Language Integrated Learning (CLIL): benefits and challenges

CLIL refers to a pedagogical approach “that integrates language and content learning; planning for, fostering and assessing both” (Brown & Bradford, 2017, p. 331). There have been different implementations of CLIL in various educational settings, however, the common premise is to provide “dual-focused education” (Coyle et al., 2010, p. 6) of subject matter and foreign language. In this paper, we consider CLIL as a bilingual program in which certain

subject-matter classes are taught in L2 by content teachers along with EFL lessons delivered by language teachers, a practice requiring team teaching between the two. In other words, this CLIL structure entails the provision of content and language lessons within an integrated curriculum for the students' concurrent development of both.

Empirical research findings have proven the effectiveness of CLIL in L2 achievement, regarding overall language proficiency (Pérez-Cañado, 2018), receptive skills (Canga-Alonso, 2015; Castellano-Risco, 2018) and productive skills (Pérez-Cañado & Lancaster, 2017). Positive results about students' subject-matter performance in CLIL classrooms have also been reported. For example, Surmont et al.'s (2016) longitudinal study of 107 students in Belgium shows higher Mathematics attainment by CLIL students than non-CLIL students after 10 months. It was hypothesized that CLIL positively influences students' metalinguistic awareness and cognitive development, which results in better academic outcomes (Surmont et al., 2016).

Given the desired advantages in both content and language development, CLIL has gained increasing popularity in many Asian countries. In Thailand, it was implemented more than a decade ago and the new educational policy, *English for Integrated Studies* (EIS), suggests using English in regular content classrooms to foster students' L2 development; however, several problems in the implementation were noted such as content teachers' low English proficiency, the lack of official training and insufficient support structure in EIS schools (Kewara & Prabjandee, 2018). In Vietnam, the Ministry of Education and Training (MOET) proposed *Project 2020* to encourage bilingual studies in the formal education system. From the academic year 2011–2012, several content subjects have been delivered in English in piloted high schools, in anticipation of nationwide implementation by 2020 (MOET, 2010). However, similar to the case of Thailand, many Vietnamese public schools have failed to successfully follow this approach due to the shortage of qualified teachers, materials and training (Thuy, 2018).

A number of private institutions in Vietnam have responded to these challenges by recruiting subject-qualified teachers and employing an internationally designed CLIL curriculum in coordination with the national curriculum (Chi, 2017). The CLIL curriculum usually includes several subject areas and is developed with the aim of delivering a counterbalanced instruction, i.e. EFL lessons address linguistic demands that might be created by specific content matter, while content classes offer opportunities for extended language practice. However, many of these institutions still face the challenge regarding the scarcity of CLIL-qualified teachers who can counterbalance language and content delivery (Ball et al., 2015). In CLIL, teachers are expected to incorporate a dual focus on both language and content into their lessons, instead of operating as two types of teachers with different pedagogic roles

(Pavón-Vázquez & Ellison, 2013). Nonetheless, most teaching staff appear to be inadequately prepared and teacher preparation has not been commensurate with the increasing implementation of CLIL (Bonnet & Breidbach, 2017). For example, content teachers who are native or fluent speakers may not suit CLIL settings if they fail to make their instruction comprehensible for low L2-proficiency learners (Ball et al., 2015). On the other hand, it is observed that language-trained teachers often use fragmented content topics to deliver linguistic components, while, ideally, these topics should be selected systematically and consistently across the curriculum (Butler, 2005).

Considering the lack of sufficiently competent CLIL teachers, interdisciplinary collaboration becomes a solution to help increase pedagogical expertise of teachers and facilitate the dual-focused goal of CLIL (Lo, 2020). Especially in the EFL contexts, where students lack regular exposure to the target language, collaboration between content and language teachers becomes even more imperative, since it helps make academic content more accessible to learners while reinforcing L2 learning development (Tajino et al., 2016).

L2-content cross-curricular collaboration

L2-content cross-curricular collaboration refers to a kind of interdisciplinary teamwork that synthesizes the knowledge, skills and understandings from both language and content subject teachers (Lo, 2014). Specifically, while content teachers contribute their knowledge in the subject curriculum, language teachers share their expertise in L2 acquisition and language teaching pedagogies, which contributes to a more consolidated approach of teaching. Lo (2020) proposes four possible collaborative practices that can be applied in broader socio-linguistic contexts:

- Theme-based collaboration: language and content teachers design lessons based on identified common themes so that “key concepts and vocabulary items related to the chosen theme can be recycled across the curriculum” (p. 38);
- Generic academic skills: language and content teachers identify generic skills, and then accordingly revise lesson objectives and materials to reinforce them across subjects;
- Genre-based collaboration: language and content teachers outline common genres in their subjects and support one another for better teaching of these genres;
- Project-based learning: The two groups of teachers provide collective support in a cross-curricular project.

Recent studies have indicated that effective cross-curricular collaboration can increase students’ academic achievement, and facilitate professional development and successful CLIL implementation (Lo, 2015; Voogt et al., 2016). For instance, Lo’s (2015) study of a small-

scaled content-based instruction project in Hong Kong reveals that through collaborative teaching, teachers developed a deeper understanding of the learning needs and made the necessary changes in their pedagogical foci, which was ultimately conducive to their students' L2 development. Similar results were obtained in Fan and Lo's (2016) quasi-experimental study of an English-medium secondary school. Their analysis of test scores reveals that the experimental group significantly outperformed the comparison group in terms of academic writing proficiency. Some other empirical studies have shown that teachers' involvement in collaborative work such as curriculum coordination and co-teaching induces their professional enrichment (Voogt et al., 2016; Álvarez, 2016). According to these researchers, teachers' cross-curricular collaboration helps them gain autonomy, develop curriculum design expertise and update their pedagogical skills, as well as subject matter content knowledge.

Nevertheless, this process is not always seamless. Lo (2020) underlines that psychological and pedagogical challenges could impede effective cross-curricular collaboration. Firstly, the "psychological" challenge refers to the fact that teachers usually develop their own set of epistemological beliefs and may not recognise the dual role of a CLIL teacher (Lo, 2020). Indeed, even within the same CLIL context, content teachers and language teachers might perceive their professional roles very differently. Trent's (2010) study showed that there was rigid disassociation in terms of curricula, responsibilities and alignment of teaching practices between content and language teachers working at four different English-medium secondary schools. Similarly, Tan (2011) reported the case of a Malaysian bilingual school where Maths/Science teachers did not acknowledge any language-related responsibilities. This led to a lack of commitment for L2-content collaboration, which potentially limited students' opportunities for content and language learning simultaneously (Tan, 2011). As teachers' beliefs of their pedagogic roles strongly indicate their readiness for collaboration, investigation into this issue can help understand whether cross-curricular collaboration and implementation of dual teaching roles is possible in a certain context. Secondly, the pedagogical challenge indicates the usual lack of shared goals and pedagogical foci between content and language teachers. For example, content teachers are inclined towards subject pedagogies and fail to address various language aspects such as grammar and genre features pertaining to their disciplines (Koopman et al., 2014). Meanwhile, in the absence of clear curriculum coordination and guidance, language teachers might struggle to exploit content matter of academic texts in their teaching of linguistic components (Creese, 2010). In addition, contextual challenges such as school policy, time constraints and interpersonal relationships among teachers can also impede effective cross-curricular collaboration (Lo, 2020).

Theoretical frameworks explaining cross-curricular collaboration

Two major theoretical frameworks are focused on in the present study: Lo (2015) and Davison (2006) (for the details, see references). Firstly, Lo's (2015) framework depicts the concepts and mechanism of L2-content cross-curricular collaboration in detail. It firstly highlights "whole-school policy, structural and attitudinal support" as a necessity for effective cross-curricular collaboration (Lo, 2015, p. 458). In the framework, cross-curricular collaboration is defined as a process involving content and language teachers, with their expertise in the respective curriculum, interacting to reach mutual understanding. By collaborating across disciplines, teachers gain fuller awareness of students' needs, better understand L2-content integrated teaching practice and stay engaged in a continuous process of curriculum mapping and modification. The teachers then become able to set more compatible learning objectives, incorporate them into the lessons, and ultimately make adjustments to their pedagogical foci and practices. All of these changes are subsequently conducive to more integrated lessons that facilitate students' development of both language and content.

In addition, Davison's (2006) framework identifies five collaboration stages between L2 and content teachers, namely *pseudo-compliance*, *compliance*, *accommodation*, *convergence* and *creative co-construction*. Each stage is analysed by the teachers' attitude, effort, perception of achievement and expectations of support. At the lowest stage, *pseudo-compliance*, teachers explicitly or implicitly reject the idea of collaboration, show little time investment, achieve no positive outcomes and view partnership as "short-lived innovation" (Davison, 2006, p. 470). In contrast, at the highest stage of *creative co-construction*, collaboration is strongly endorsed, curriculum plans are co-constructed between L2 and content teachers, achievements are illustrated across the curriculum, and teacher-based professional development is normalised.

Overall, both of these frameworks complement each other, in the sense that Lo's framework provides an overview of collaboration structure and its underlying mechanisms, whereas Davison's framework details varying levels of teacher collaboration in practice.

Research on cross-curricular collaboration: literature gaps

As previously reviewed, a small number of studies have shed light on the topic of L2-content cross-curricular collaboration from different aspects, such as teachers' attitudes and beliefs (Tan, 2011; Lo, 2014), the mechanisms of cross-curricular collaboration (Lo, 2015; Voogt et al., 2016) and its effectiveness (Fan & Lo, 2016, Álvarez, 2016). However, there are certain gaps in the literature regarding the research scope and context. Firstly, very few empirical studies have explored the practicality of cross-curricular collaboration in relation to the school's planning and professional development. Secondly, while a body of research has investigated the implementation of cross-curricular collaboration in ESL settings, little is known

about the emerging CLIL in EFL contexts, such as bilingual programs adopting an external integrated curriculum. This study addresses these gaps by exploring teachers' beliefs and practice of cross-curricular collaboration with reference to the support structure in a CLIL bilingual program that implements Cambridge Lower Secondary curriculum in Vietnam. The research questions formulated for that aim are:

1. What are the language and content teachers' beliefs about their pedagogic role in a Vietnamese CLIL context?
2. What are the professional training and support provided to the teachers regarding cross-curricular collaboration?
3. How do the teachers practise L2-content cross-curricular collaboration in the program?
4. What are the perceived barriers to the teachers' cross-curricular collaboration practice?

For Peer Review

METHODOLOGY

The selected case is a CLIL bilingual education program that integrated the Cambridge Lower Secondary Program into a Vietnamese curriculum. Along with six Vietnamese-medium subjects, five Cambridge-curriculum subjects such as Mathematics, Integrated Science, EFL, Global Perspectives (GP) and Information and Communications Technology (ICT) are taught entirely in English. The coursebooks and other official curricular materials used in this program are designed by Cambridge Assessment International Education (Cambridge Assessment International Education, 2017). Eight teachers of the school's bilingual program participated in this study. Table 1 below shows the participants with pseudonyms and related information for reference.

Table 1. *Participants in the study*

NAME OF PARTICIPANTS	SUBJECT(S) TAUGHT	ADMINISTRATIVE ROLE	YEARS OF TEACHING EXPERIENCE	
			In general	In CLIL context
Stephany	EFL	n/a	4	2
Cole	Maths	n/a	11	3
William	ICT	n/a	6	5
Lucas	Science	n/a	11	7
Jack	GP	n/a	7	4
Emily	EFL	Principal	10	7
Sarah	ICT	Vice principal & Program coordinator	20	20
Brian	EFL & GP	n/a	12	7

The data for this study were collected through interviews and analysis of certain key documents. The aim of conducting interviews was to explore the participants' view of their pedagogic roles and their experiences in cross-curricular collaboration. Each of the eight participants attended a semi-structured interview lasting approximately 30 to 45 minutes. Next, key documents such as training materials and curriculum mapping guidelines, which are considered as assisting tools for teacher collaboration, were analysed (Lo, 2020; Lin, 2017). For this, we identified such documents that accompany the Cambridge Lower Secondary Curriculum and investigated which of these documents were actually used by the school and whether the school provided any relevant materials to the teachers. By comparing these documents provided by the Cambridge Lower Secondary Curriculum and the school, the

researchers were able to cross-reference the degree of professional support suggested by the program designers and the actual application by the school administration.

In data analysis, two theoretical frameworks by Lo (2015) and Davison (2006) are used to support the analysis of cross-curricular collaboration from different perspectives, i.e. its mechanisms and the stages of application at the school. Together with the issues identified in the literature review, these frameworks informed the possible themes that might emerge in the research. To illustrate, as it is suggested that teachers' beliefs regarding pedagogic roles and foci directly affect their collaborative practice (Tan, 2011; Lo, 2014), a set of interview questions on this major theme was constructed. Accordingly, with thematic analysis, the researchers looked for relevant emerging themes and interpreted these themes with reference to the premises of these theoretical frameworks.

For Peer Review

FINDINGS

Research question 1

Different views toward teaching roles

There is a marked variation in the teachers' perception of their pedagogic roles in the program. Firstly, four teachers indicated that their key roles revolved around their own discipline only, as illustrated below.

"[My roles are] to think about the English curriculum, how to work with the students and make sure that the students can meet all of the outcomes by the end of the year" (Stephanie, EFL)

"Our role is to provide the situation, opportunity and motivation for the kids to be able to pick up the information they need for the course" (Jack, GP)

Meanwhile, the other four teachers stated that their key roles involved facilitating student learning in a broader manner, beyond their discipline-related boundary. They expressed a strong belief in the necessity of the synthesis of skills and knowledge from both language and content in their teaching:

"Every teacher here within the content area, including Science, has to be an English language teacher as well" (Lucas, Science)

"We have to develop their digital literacy ability, but of course we have to support their learning in general; so actually, the idea of cross-curricular is very important in ICT." (William, ICT)

"The key role is to teach students Maths while teaching them English at the same time." (Cole, Maths)

Teachers' pedagogical foci: Limited L2-content integration

The interview data further indicated that when it came to their pedagogical foci, all the content teachers placed considerable emphasis on their subject area, with surprisingly less attention to language skills, even with those who previously implied their dual-focused role. This was revealed in their lesson objectives, time distribution and personal view of the role of language in content curriculum. In particular, it was reported that all content teachers spent only an insignificant amount of time, if any, on language development and half of them did not set linguistic objectives in their lessons, as illustrated in the extracts below.

"I wouldn't set language aims for each lesson. I would say 95% of my class wouldn't have English language goals" (Jack, GP)

“We have this kind of small talk during the class when they [students] say something that is not correct or not in the proper terms. We don’t have it in the plans, it’s more like something that happens in the class”. (William, ICT)

“I spend maybe about only 1% of my lesson on English.” (Cole, Maths)

Several factors may elucidate such practice, the most important of which is the lack of integration in the curriculum planning. It was stated that there was no explicit mapping or integration of language and content in the syllabi; hence, the teachers usually adapted their own ways of language support for the students based on their pedagogical competence (William, ICT). However, three out of six content teachers acknowledged that they were not well equipped with proper language teaching strategies. Most of them (5/6) reported only using simple methods of language scaffolding, including providing more linguistic input, slowing down speaking speed and giving short definitions of scientific terms:

“We try to expose the students to specific articles with technical words.” (William, ICT)

“I have the students organise words. They write it in English [and...] in Vietnamese. Then they write a short definition or some symbol of it.” (Cole, Maths)

“I add some vocabulary; if it’s simpler words, I will integrate them within the lesson. If it’s complicated, I pre-teach them. After that, it’s not much more.” (Lucas, Science)

In addition, language skills were not included in the marking criteria for the assessment of Maths, Science, GP and ICT; hence, content lessons were geared towards subject-matter attainment only. The third reason lies in students’ strong English proficiency and quick grasp of new vocabulary, which makes language teaching plays less of a role in content lessons, as Lucas continues to explain:

“If my students are beginners, it changes the structure of the lesson. I had to do a lot of work and revision in English, probably a third of the lesson on English. But here, I can spend about 90% on Science, 10% on English”. (Lucas, Science)

Apparently, the same strategy is true for EFL teachers. All of them centralised their lesson objectives on linguistic skills; meanwhile, content integration only occurred in some “random topics” or in general contexts, such as when they helped students analyse instructions on exam papers (Stephanie, EFL). The few content areas they were able to support usually relate to social science, especially in terms of academic writing skills (Emily, EFL). All EFL teachers also agreed that ICT, Maths and Science were “jargon-based” subjects and it was the content teachers’ responsibility to “make students aware of the jargons associated with their subjects from very early on” (Stephanie, EFL). This is actually in accordance with all the content teachers’ beliefs, as demonstrated below.

“We don’t have a specific strategy to support EFL, but one of the things we can do to help is to teach technical vocabulary in ICT.” (William, ICT)

“Most of the work in EFL for Science class is vocabulary-based.” (Lucas, Science)

Another theme emerging from the interviews is that although most teachers (6/8) recognised a need to integrate English and content in their lesson, many of them (4/8) were uncertain of what to include and how different disciplines should be incorporated. Stephanie and Brian’s comments exemplify this problem:

“Maybe we could link the curriculum, so that each time we move on to a new topic in the subjects, I will be aware of that in my EFL. I will spend one or two lessons of my curriculum time to reinforce what they are learning. But I don’t know if that’s something the other teachers can do in their subjects, or it needs to be the responsibility of the EFL teacher.” (Stephanie, EFL)

“It would be a possibility [to support students in content learning]. But if I could do it, that wouldn’t be enough. And the kids have enough access to their subject teachers.” (Brian, EFL)

Research question 2

The availability of external professional support

To begin with, the school under research adopted the Cambridge Lower Secondary Program and used its designed curriculum sets. The program embodies the educational concept of CLIL and provides various forms of support in curriculum integration and teacher training for bilingual education (Cambridge Assessment International Education, 2017). In terms of educational resources for schools, they offer a number of curricular documents called *The Cambridge Teacher Series*, two of which directly address language support in content classrooms and vice versa (Cambridge Assessment International Education, 2021). These are:

- Language awareness in teaching: A toolkit for content and language teachers (Timothy Chadwick, 2012)
- CLIL essentials for Secondary school teachers (Peeter Mehisto, 2017)

The first document presents theoretical arguments of the language issues in content classes and then suggests a pedagogical toolkit that is compatible with the CLIL approach. Academic language lies at the centre of this toolkit and three areas of language support in content lessons were suggested, namely content vocabulary, functional language and language skills. Additionally, the document highlights the dual responsibility of a content teacher: “to teach content and support language”, along with the notion that “language teachers are the best resource a school has to help facilitate this” (Chadwick, 2012, p. 3). Based on this toolkit,

Cambridge Assessment International Education also offers an online training course named *Language Awareness in Teaching* for CLIL teachers. The second document addresses the interface of language and content in a more detailed manner. It breaks down elements of the academic language of Geography, History, Mathematics and Science in consideration of related learning skills. It also mentions terminologies simultaneously with typical functions, strategies and grammar structures.

Another teacher support document named “Cambridge Checkpoint Science: English Language Skills Teacher’s Support”, designed by Jones and Burbeary (2018), focuses on crucial English language points that frequently occur in the Cambridge Secondary Science curriculum. Specifically, this document draws mapping grids between the Science topics and particular language points. Subsequently, examples of the target language in science contexts and relevant exercises are provided to support the teaching of academic language skills within Biology, Chemistry and Physics.

Internal adaptation and guidance

Regardless of the availability of external support, neither any formal relevant training nor official coordination between L2 and content curriculum were reported to have been among the school’s practice. Document analysis from school meeting minutes revealed a lack of attention to L2-content integration and teachers’ collaboration, accordingly. There were also no official records of curriculum mappings between language and content subjects. Additionally, none of the aforementioned documents about cross-curricular collaboration were introduced to teachers or incorporated into internal professional development provision. Teachers’ interviews further elucidated this issue:

“In terms of teaching teachers how to support one another in the curriculum, I can’t say I have any specific training on that.” (Stephanie, EFL)

“It [professional support] has not been that helpful. A lot of teaching has been intuitive and I think people learn it on the job as well” (Cole, Maths)

“All curriculum mapping for subject specifics are about subject content, but not in terms of language acquisition. Even though it is a bilingual program, it is not really integrated enough.” (Sarah, ICT)

In their practice, the teachers often regarded L2-content mapping as “a differentiated task rather than EFL mapped through-out the subject curriculum” (Sarah, ICT). In other words, the integration of language in subject curricula mainly involves catering for students’ problems with language proficiency rather than developing content-relevant academic language skills. This may be incongruous with the curriculum design that the school adopted, which

significantly emphasizes the language, as both a subject and a medium of teaching (Cambridge Assessment International Education, 2017). From the school's management perspective, integrating external training into internal support scheme could be an expensive investment that they were reluctant to make; hence, "it is about individuals [teachers] doing their own professional development" (Sarah, vice-principle).

Research question 3

Communication across discipline boundaries

"Informal", "organic" and "natural" were the words that several teachers (5/8) frequently used to describe their collaboration practice. This is not surprising since there is "no mechanism, procedure or protocol for collaboration" provided to guide such practice (Lucas, Science). The teachers then mostly collaborated by exchanging information and supporting one another in cross-curricular teaching within their daily conversations. Extracts below exemplify this:

"We have a lot of communication about the students' ability. People discuss what they did or planned to do in class and how they collaborate to support the needs of both subjects." (Emily, EFL)

"The Maths and Science teachers focus on content purely. They're not trained to teach English language so I would tell them what they need to do more [in supporting students' language development], like to be more visual." (Brian, EFL)

"We talk to each other about what we teach all the time, constantly communicating about what he's using, what I'm using, so ideas will come up..." (Jack, GP)

Their collaborative discussion revolves around students' performance, pedagogical strategies and teaching content. Half of the participants explicitly acknowledged the importance of regular communication among teachers, saying that it can be more useful for their collaboration than traditional professional development. However, it appeared that their collaborative communication was not facilitated on any systematic basis; instead, it naturally emerged as a topic of their daily conversation.

Reinforcing common academic skills

Another type of collaboration practice termed "generic academic skills" was evident in the teachers' responses (Lo, 2020, p. 38). Teachers discussed their lesson focus with one another to identify common objectives, and then revised teaching materials to reinforce learning skills across EFL and content subjects. This practice, however, was mostly done between EFL and GP teachers, who believed that their disciplines were more closely linked than those of other subjects and EFL. The extracts below illustrate their collaboration:

“The GP teachers will ask me to set aside some time to go through the work with them about punctuation, grammar, types of vocabulary they can use, and how they can strengthen their introduction.” (Stephanie, EFL)

“I absolutely have leaned on the English language department quite a lot this year. The EFL teacher spent at least a month working on the writing skills and GP-focus work. I can see improvement in my students...” (Jack, GP)

Overall, writing and listening were the two generic academic skills that can be facilitated between EFL and GP. With regard to writing, English language teachers provide support in sentence/paragraph structures and essay organisation in their lessons, which was beneficial to the students in GP. In terms of listening skill, both teachers could design most of the materials in a content-based, authentic and meaningful manner to enhance the linguistic skills as well as real-world knowledge. Brian, who taught both EFL and GP, shared his unique experience of being both language and content teacher:

“I choose a fun topic from the GP and the students re-listen to the entire podcast to improve their listening. That podcast covered directly the GP, where we talked about criminality and justice [...] I choose what we do in GP to support daily what we do in EFL. Honestly, there were classes that weren't EFL or GP, but both of them.” (Brian, EFL and GP)

Brian, with his clear understanding of both subject curricula, illustrated that the integration of L2 and content can be a flexible and smooth process. It was also observed that when the teachers were acutely aware of their shared areas of teaching, cross-collaboration in reinforcing common academic skills was more evident.

Administration of cross-curricular projects

Another type of collaboration that was mentioned in teacher interviews is “project-based learning” (Lo, 2020). If the “generic academic skills” teaching mostly occurred between EFL and GP teachers, this collaboration practice included partnerships from various disciplines. The teachers, firstly, looked for the crossover in the curricula, and then established the goals and structure for the projects. The students subsequently conducted the projects under guidance, support and evaluation of both language and content teachers. This was where the students “put the skills into application and see the real-world purposes of what they are learning” (Sarah, ICT). Sarah also highlighted that even though the language and content subject teachers contributed to the projects differently, their support collectively facilitated the common goal of learning across the curriculum:

“We came up with a project that incorporated different subjects, and obviously EFL was the driver for the communication, the presentation and their research. And then ICT was used as the tool to deliver a product which was science-related. EFL and Science teachers delivered

their own content, but the marking rubric of the presentation at the end of the project actually considered all of the aspects of the subjects in the cross-curricular form.” (Sarah, ICT)

However, it was expressed that the teachers “needed to coordinate better for more engaging activities” (William, ICT). Agreeing with this opinion, Sarah, the program coordinator, mentioned that there had been little space for the project in the curriculum as well as time for the EFL and Science teachers to work together; therefore, the school should “build into the curriculum the cross-curricula aspect”.

Research question 4

Workload

Firstly, all eight teachers expressed their concern that they were often assigned with excessive workload and didn't have enough time to get together:

“All the teachers in the school are extremely busy and very focused on teaching the curriculum. There is not enough time for collaboration at the moment.” (William, ICT)

“When the teachers are overworked, they have too little free time to be able to talk to each other about a specific child's need.” (Jack, GP)

Extracts below further illustrate their work pressure with teaching and administration tasks:

“The reality of the school is that you don't have time. You have to cover a lot of topics during the year and don't have time to do cross-curriculum” (William, ICT)

“If the school gives teachers enough time to do their own stuff, then they'll have the time to do collaboration. But if they spend every minute doing another task or another duty and the rest of their time is spent grading or planning, it's gonna reduce collaboration.” (Jack, GP)

“Between grading and hall duties and all things, it's just hard to get together. There's so much to do during a day.” (Emily, EFL)

Given little availability in the teachers' working time, it became impossible for them to do cross-curricular coordinated work in a rigorous and sustainable manner.

Schedule and timing

Secondly, most of the teachers' (5/8) responses refer to schedule arrangement as another hindering factor of cross-curricular collaboration. There was no time allowance in the schedule specifically for partnership work and the teachers experienced timetable clashes with others with whom they wanted to work:

“They are teaching when I'm off and I'm teaching when they are off, so when do I get the time to collaborate? Emails only work to a small degree. There has to be time within the working hour for collaboration. It has to be built-in within the schedule.” (Lucas, Science)

“If you’re designing the schedule, you should make time for the teachers to do it, instead of saying you have to get together and do it.” (Brian, EFL)

Teachers’ motivation

Finally, the lack of incentives can pose barriers in building an effective collaborative relationship between teachers. It was clarified that there was little intrinsic or extrinsic motivation to collaborate and some teachers “just do not want to do it” (William, ICT). Similarly, Lucas (Science) also shared his unsuccessful collaboration experience where his partners “either don’t have time during the school working hour or are simply not motivated”. Jack and Sarah regarded teachers’ personality as one of the reasons for the lack of motivation:

“There’s always a teacher who has a style and a set way of doing things and has everything planned in the way they want to do it. So, personality. You’re never gonna find an entire perfect unit of everybody sharing and working together all the time.” (Jack, GP)

“[The difficulty is] teachers themselves, when they are very set in their ways; teachers that are very secure in their own knowledge, possibly.” (Sarah, ICT)

Apart from the personality factor, the school’s implementation of professional support can also exert a powerful influence on the teachers’ level of motivation, as explained by Lucas and William:

“You have to make it [training] interesting to teachers, no teachers want to sit in a meeting and be told how to collaborate. It has to be flexible.” (Lucas, Science)

“It’s important to create a structure for the school and also a culture behind it. It’s not just saying you have to do this, but why we are doing this, why we want to do it and what the benefits are to you and to the students” (William, ICT)

To them, the key to a successful model of partnership is not about equipping teachers with knowledge; rather, it is to establish a strong support structure and allow for flexibility in execution. Indeed, the school needs to form a culture where teachers are aware of the rationale behind cross-curricular collaboration, provided with proper tools and offered continual whole-school support. Otherwise, “at the end of the day, we have all these good ideas of collaboration, but they are not applicable in reality” (William, ICT).

DISCUSSION

When discussing L2-content integration in their teaching, both groups of teachers in this study appeared to merely concentrate on the introduction of technical vocabulary, rather than facilitating a range of different discourse aspects. Subject terminology, admittedly, requires extensive attention since it is usually a network of abstractions that may be difficult for students

to learn (Sarah, ICT). However, the literature has revealed that in CLIL bilingual contexts, the interface of content schemata and L2 occurs at three major linguistic levels: genres, functions and lexico-grammar (Nikula et al., 2016). Likewise, Lin (2017) states that academic language encompasses multiple layers, ranging from “genre schematic structuring”, to “language functions”, to “lexico-grammatical resources” (p. 78). Therefore, the idea of integrating language skills simultaneously across the curriculum can be very limited if only one element of academic language, vocabulary, is taken into consideration in teachers’ collaboration. Overall, the findings of the first research question align with a common theme identified in previous studies, that is, language and content specialists hold epistemological beliefs limited with their own pedagogical fields and have not been able to modify them to accommodate CLIL perspectives (Tan, 2011; Lo, 2014). In other words, while CLIL education necessitates a dual-focused teaching role, the teachers still constructed separate pedagogical foci as either language or content teachers; and their idea of L2-content integration was mostly restricted to vocabulary teaching. This limitation in their beliefs can cause significant hindrances in their practice (Lo, 2020), such as the feelings of uncertainty or reluctance towards cross-curricular collaboration.

In relation to the second research question, the findings implied tension between the expectation and reality of implementing cross-curricular collaboration. While the core curricula of the Cambridge Lower Secondary Program were designed with L2-content integration and provided clear guidance in teaching content through English, the school’s implementation indicated insufficient attention to this issue. Additionally, the school appeared to underscore teachers’ individual proactiveness in lesson planning as well as their own initiative in collaborating with others, instead of offering them systematic support and guidance. The absence of whole-school professional support and curriculum mapping seems to affect negatively the successful implementation of the CLIL program. Specifically, language teachers and content subject teachers did not have many opportunities to develop their cross-curricular pedagogies and fully execute the integrated curriculum.

The findings of the third research question show that by frequently initiating dialogue and interaction with one another, the teachers could understand, adjust and adapt to their co-workers’ needs to a certain extent. However, research points out that when there is a lack of collaborative mechanisms from the school, the coordination of work tends to remain at the surface level, despite teachers’ engagement in discussion and sharing (Yuan & Zhang, 2016). For instance, during group meetings and their daily conversations, the teachers shared information about their classes and teaching plans but with little explicit effort to negotiate their pedagogical responsibilities and lesson foci. Overall, the teachers’ collaboration in this study illustrates the *accommodation* level when evaluated on three characteristics: attitude, effort

and achievement (Davison, 2006). In particular, the teachers' positive attitude and effort in cooperating with one another were evident. They initiated interaction and sharing with a high degree of respect for one another. There were almost no conflicts in teaching responsibilities. However, the teachers mainly worked individually and less flexibly than should be the case in a CLIL context. Concerning their collaboration achievement, some language and content teachers could work effectively in reinforcing common linguistic skills and promoted integrated learning through cross-curricular projects. However, this collaboration was neither systematic across the whole curriculum nor demonstrated consistently by all the teachers.

Regarding the last research question, time constraint, due to work pressure and overlapping schedules, is an organisational challenge that the teachers have little control over. Hence, this requires support from the school's authority and administrative management to be overcome. Similarly, the issue of insufficient motivation can be resolved with effective professional development, which can bring about changes in the knowledge and perceptions of teachers. Previous studies have shown that CLIL programs were implemented mainly for "pragmatic value" (Lo, 2020, p. 90), while their underpinning rationales were not thoroughly discussed, causing teachers confusion and scepticism towards cross-curricular collaboration (Pawan & Ortloff, 2011).

CONCLUSION

By analysing data from teacher interviews and curricular documents, this study has provided some insights into the implementation of cross-curricular collaboration within a CLIL context. Firstly, although several teachers support the idea of a dual-focused role of language and content teaching, their perception of pedagogic roles was limited to their discipline areas. Secondly, there seemed to be insufficient internal training and limited attention paid to language and content integration in daily teaching. These issues can be tackled by developing an effective professional support structure that compliments interdisciplinary collaboration (Lo, 2020).

Davison (2006) underlines that the ultimate goal of professional support is to have teachers practice beyond the level of “pseudo-compliance”, to more autonomous ways of collaboration, such as “convergence” or “creative co-construction”. To that effect, firstly, we suggest that training workshops about CLIL-related theories and practical strategies should be provided to help raise the teachers’ awareness of integrated teaching and rectify their misconceptions of cross-curricular collaboration. Secondly, schools can form collaborative groups to practice curricular mapping systematically and develop concrete examples of cross-curricular activities to be used in class. This can help teachers engage in more thorough discussion and give them the flexibility needed in a CLIL context. Additionally, given better inclusive role perception on the part of the teachers, their partnership can promote the development of more efficient pedagogies, material design and assessment methods at a whole-school level. More importantly, professional development should not be the responsibility of individual teachers but of the management system of the school. For a sustainable teacher development scheme, school leaders should enact more tailor-made training schemes that suit their school context, teachers’ different stages of career, and their personal aspirations and experience (Lo, 2017).

Furthermore, the current challenges perceived by the participants in this study were also associated with certain contextual (schedule, workload, professional support) and intrapersonal factors (motivation, personality, understanding of CLIL education). The literature suggests the use of extra human resources to ease teachers’ workload so that they can invest more time and effort in collaboration (Lo, 2020). Besides, arranging common meeting times, reducing teachers’ paperwork, and building an integrated scheme of tasks assigned to teachers can be considered (Yuan & Zhang, 2016). Moreover, schools implementing CLIL are advised to foster a collaborative culture, by developing both internal support resources and implementing external guidance suitable for the school context.

Overall, ensuring the effectiveness of a CLIL program in a particular context is not an easy endeavour. Such a process necessitates a holistic approach of implementation that considers

L2-content integration with reference to both broad theories and contextual realities. Cross-curricular collaboration, therefore, should be prioritised for a thorough embedment of language support in content lessons and vice versa. Otherwise, less rigorous implementation of CLIL can undermine students' potential of linguistic and cognitive development and possibly compromise the integrity of the whole teaching process in schools.

For Peer Review

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