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Editorial

“Look and see which way the wind blows before you commit yourself.”
(The Bat & the Weasels, *Aesop's Fables*)

After successfully publishing four volumes under the name of *JJCLIL (The Journal of the Japan CLIL Pedagogy Association)*, we are now entering a new chapter of our journal as *Asian Journal of Content and Language Integrated Learning (Asian CLIL)*. The journal aims to attract authors and readers within and beyond the borders of Japan. The renewal of our journal coincides with the recent publication of three key readings in the field, i.e., Dalton-Puffer et al. (2022), Ikeda et al. (2021), and Wu and Lin (2022), which discuss the characteristics and models of CLIL from distinctive perspectives.

Elucidating the stages of the development of CLIL research in the three decades, Dalton-Puffer et al. (2022) conceptualised two distinguishable, and yet overlapped, characters of CLIL: *CLIL=Context of Learning (CLIL=CON)* and *CLIL=Integrated Approach (CLIL=APPR)*. The former emphasises CLIL as “a context for learning a foreign language” (p.186), and one such example is Ikeda’s (2021, p.27) contextualisation of CLIL in Japan, utilising the term *Soft CLIL*. Visualising the position of Soft CLIL in the Japanese context in relation to other content-based approaches, i.e., CBI, immersion and EMI, Ikeda illustrates the quadrants with *language teaching/learning* (explicit or implicit) and *educational value claims* (heavy or light) within his axes, characterising the Japanese Soft CLIL approach as explicit language teaching/learning with heavy educational value claim. The educational values here refer to “theoretical, pedagogical, educational and social-economical” benefits (ibid., p.28).

CLIL=APPR highlights another facet of CLIL as “a distinct approach straddling and integrating both language and content learning and teaching” (Dalton-Puffer et al., 2022, p.187). The CLIL Matrix developed by the European Centre of Modern Languages (ECML, 2004-2007) is an early example of CLIL=APPR. More recently in the context of CLIL in Hong Kong, where content teachers incorporate language teaching elements into their subject classes, Wu and Lin (2022) proposed the *Integrative Model for CLIL*. In their model, teachers design a syllabus with thematic patterns and semantic relations (Lemke, 1990) in a particular subject area, involving appropriate CDFs (cognitive discourse functions, Dalton-Puffer, 2013) and genre features (Martin, 1997) in learning tasks (p.256).

The discussion continues in the first volume of *Asian CLIL*. The featured article by Barry Kavanagh and Satsuki Kojima reviews theories and approaches in second language acquisition in relation to CLIL, illuminating advantages of the Soft CLIL approach for language specialists in Japanese higher education. We hope this introductory paper on soft CLIL within Japan can help inspire a discussion on CLIL from differing perspectives within both the Japanese and Asian context and we encourage submissions of this nature in further volumes.

Starting with the featured article, this volume comprises five articles: a practical report and three research articles. The practical report written by Miho Fukagawa assesses the impact

of CLIL in an advanced Japanese course on AI and society, discovering improvements in language skills and topic learning. Enhanced vocabulary accuracy and the ability to articulate thoughts and opinions played a key role in better understanding the subject matter. CLIL not only fostered linguistic growth but also deepened learners' knowledge of AI's societal implications. This approach proved effective in promoting a comprehensive learning experience.

The first research article written by Nate Olson delineates critical incidents in team-teaching CLIL lessons at a junior high school in Japan, drawing on the diffusion of innovations theory. With the profound data obtained through the longitude classroom observation (e.g., extracts from interviews with teachers, transcripts of student-teacher interactions, and students' notes), this study captures the ripples of educational innovations spread among the teachers and students. The second article written by Shiho Kobayashi and Yukiko Ito conducted a study on cheerleading CLIL classes by a content teacher and a language teacher. The findings of the study showed that a content teacher herself learned English communication skills and specific teaching tips through CLIL classes. The teacher also realised the potential benefits of CLIL. The third article, from Satsuki Kojima, explores how CLIL can contribute to language classes at universities where the students are not language majors. With data from questionnaires and TOEIC tests, it finds that both motivation and general cognitive development are fostered by the CLIL approach.

With the spirit of our initial journal, *JJCLIL*, which has provided a space for CLIL practitioners and researchers to share and discuss their practice and studies in Japan, *Asian CLIL* broadens the horizon, addressing opportunities and challenges CLIL brings about in individual local contexts in various regions in Asia and beyond, deepening the discussion and encouraging collaboration among CLIL teachers and researchers across borders to provide the quality of education for all.

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Soft CLIL: The Predominant Approach for Language Specialists at Japanese Universities

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Abstract

CLIL within the Japanese education context is still relatively young and a shared definition and understanding of the goals and outcome of the approach is often blurred, especially when juxtaposed with teaching pedagogies that aim to teach content in the medium of a foreign language. The soft and hard CLIL dichotomy can further confuse matters. Although both language and content learning are the main objectives within CLIL, the soft approach emphasizes language learning and is usually taught by language specialists, whilst a hard CLIL direction is more content driven and conducted by subject teachers. These often-cloudy pedagogical boundaries and definitions can add to the many misconceptions within Japan about what CLIL is, how it is practiced within the classroom, and how it relates to the teaching of English as a foreign language (EFL). This paper aims to act as an introduction to the theoretical foundations and practice of CLIL including its benefits and characteristics that make it different from more traditional approaches such as Communicative Language Teaching. This overview also attempts to offer some reasons why soft CLIL is adopted within English language education curricula within Japan, and not within the framework of teaching subjects like some of its European counterparts.

Keywords: Soft and hard CLIL, pedagogy, teacher practice, EFL, CLIL in Japan

1. Introduction

CLIL refers to situations where subjects are taught through a foreign language with dual-focused aims: the learning of content, and the simultaneous learning of a foreign language (Marsh, 1994). CLIL was first launched in Europe in the 1990s by a team of experts, including educational administrators, researchers, and practitioners (Marsh, 2002). CLIL was well received as it catered to the need in Europe to enhance second language education and bilingualism, and subsequently, the European Commission and the Council of Europe funded many initiatives in support of CLIL and its growth (Cenoz et al., 2013). Marsh (2002, p. 11) even called CLIL “a pragmatic European solution to a European need.” CLIL has now spread throughout the world with English being the foreign language used to teach content, and because of this CLIL is sometimes referred to as CEIL or Content and English Integrated Learning. CLIL is no longer the product of Europe and has caused ripples in the education system beyond European countries (Tsuchiya & Pérez Murillo, 2019).

Over the past decade in Japan, CLIL has been one of the most innovative approaches within foreign language teaching (Ikeda, 2021). However, a shared definition and understanding of the goals and outcome of the approach are often blurred, especially when juxtaposed with teaching pedagogies that aim to teach content in the medium of a foreign language. The soft and hard CLIL dichotomy can further confuse matters. Although both language and content learning are the main objectives

within CLIL, the soft approach emphasizes language learning and is usually taught by language specialists, whilst a hard CLIL direction is more content driven and conducted by subject teachers. The former has become the predominant option for language education within the Japanese context while the latter dominates the educational landscape within European educational institutions, especially in countries like Spain (Ikeda, 2021).

This paper aims to act as an introduction to the theoretical foundations and practice of CLIL including its benefits and the characteristics that make it different from more traditional approaches such as Communicative Language Teaching. This overview then attempts to offer some reasons why soft CLIL is predominantly adopted within English language education curricula, especially at the university level, within Japan, and not within the framework of teaching subjects like some of its European counterparts.

2. The Uniqueness and Benefits of CLIL

CLIL is often confused with similar content-based teaching approaches such as Content-based Instruction (CBI). CBI originated in America in the 1980s and the focus of CBI is on language acquisition rather than content, and students are evaluated on language outcomes. CBI is also predominately employed by language teachers in language classes (Brown & Bradford, 2017). The teachers will normally be native speakers of the target languages (Dalton-Puffer et al., 2010). This contrasts with CLIL where many teachers are often non-native teachers who teach both content and language in equal measure (Dalton-Puffer, 2007).

The underbelly of the CLIL framework, notably the emphasis on the 4 Cs (content, communication, cognition, and culture) makes it unique and helps differentiate it from other similar approaches which are often bundled under the same umbrella. Content can refer to a course subject such as math and science, or to taught themes or topics such as world poverty or genetically modified food. Communication contains two areas of learning. The first is *language learning* which describes the acquisition of grammar, vocabulary, and pronunciation along with the 4 skills of speaking, reading writing, and listening. The second area is *language using* which can include skills such as note-taking, report writing, and how to proceed with pair or group work (Ikeda, 2015). Culture consists of collaborative learning (pair work, group work, discussion, and debate), and developing intercultural awareness and global citizenship. Cognition refers to the learning and thinking processes and requires engagement in associated cognitive processing. For effective CLIL to take place, there needs to be a symbiosis between these 4 Cs (Coyle et al., 2010, p. 41).

According to Lorenzo and Moore (2010) and Dalton-Puffer (2008), a fully articulated CLIL theory has not yet been developed. This can result in an interpretation of CLIL that differs according to the person you talk to or the person in charge (Ikeda, 2012). The expansion of CLIL across the globe has meant that in different geographical contexts with different educational and cultural requirements “a CLIL program can actually mean different things in different parts of the world” (Llinares, 2015). CLIL has been described as an elusive phenomenon (Hüttner & Smit, 2022), a chameleon (Arnold, 2010), and Cenoz et al. (2013, p. 4) suggest that “the possible forms that CLIL can take are so inclusive that it is difficult to think of any teaching or learning activity in which an L2/foreign language would be used that could not be considered CLIL.”

Ioannou-Georgiou (2012, p. 479) states that “the rapid and widespread adoption of CLIL as a practical solution has resulted in a range of models being developed to fit specific contexts.”

This flexibility within CLIL means that CLIL can be molded into the context it is designed for. Sasajima (2020) states that there is no specific and clear methodology or technique for CLIL, and CLIL does not essentially make it a goal to seek a specific methodology. Thus, this uniqueness and flexibility is perhaps one of its selling points, and Codó (2022) suggests that CLIL promoters have deliberately shied away from drawing up boundaries or prescriptions of what constitutes CLIL. In the words of Coyle (2008, p. 101) “there is neither one CLIL approach nor one theory.” Over the past twenty years empirical studies have shown that students of all levels from elementary to graduate school have benefited from CLIL (Ito, 2018; Uemura et al., 2019; Yamano, 2013).

According to Dale and Tanner (2015, p. 11), “CLIL has great educational potential,” and has resulted in a lot of mainstream education in the EU adopting CLIL. As shown below Dale and Tanner (2015, pp. 11–13) provide a comprehensive list of the benefits of CLIL. CLIL learners:

- are motivated,
- develop cognitively and their brains,
- develop communication skills,
- make new personal meanings in another language,
- language progress more,
- receive a lot of input and work effectively with that input,
- interact meaningfully,
- learn to speak and write,
- develop intercultural awareness,
- learn about the ‘culture’ of a subject,
- are prepared for studying in another language,
- learn in different ways.

At the elementary school level, there have been several studies from Japanese practitioners of CLIL that have also mentioned the benefits of CLIL (Ito, 2018; Yamano, 2013). They are listed below:

- students find learning English necessary and worthwhile through authentic materials,
- students feel the class is understandable because of PPT, charts, and graphs,
- a fear of making mistakes decreases because students focus more on content,
- students feel the class is fun because intellectual curiosity is stimulated,
- since the subject-specific languages are used repeatedly, students get used to the structure.

The benefit that CLIL has is not just for CLIL learners (students), but CLIL teachers or practitioners can also feel the benefits of implementing CLIL (Dale & Tanner, 2015; Kashiwagi & Ito, 2020; Kashiwagi & Tomecsek, 2015). Kashiwagi and Tomecsek (2015, p. 84) mention that “teachers engage the students closely and will have different cultures after class. Teachers also learn diverse aspects of teaching multiple subjects, not only English. Moreover, teachers elicit students’ thoughts and allow them to share their ideas.” Non-native CLIL teachers can improve their English skills and make their English fluent since they have more opportunities to use English while teaching and instructing content subjects (Dale & Tanner, 2015). Teachers can

also develop class materials for global issues such as world environment and peace. Dale and Tanner (2015, p. 14) remark that CLIL “encourages whole school development and innovation.” CLIL may also generate an impact on school curriculum reform or renewal.

3. Creating a CLIL class

To implement and create an effective CLIL class, there are some elements we need to take into consideration, which are the elements of the 4Cs framework (which has already been touched upon in section 2). The 4Cs (content, communication, cognition, and culture) should be organically and intentionally integrated into the CLIL classroom and language teaching materials (Ikeda, 2015; 2021). Language, cognition, and culture have to relate to the content topic. In other words, all activities such as pair work, group work, grammar, reading, writing, and listening must relate to content whilst being cognitively challenging.

The ‘C’ for cognition refers to encouraging students to think by themselves and to ask questions, in short, to develop their critical thinking skills. This relates to Bloom’s Taxonomy (1956) as Lower Order Thinking Skills (LOTS) and Higher Order Thinking Skills (HOTS). According to the theory students practicing LOTS learn to remember, understand and apply the new knowledge they have acquired by explaining it. Students are also encouraged to develop and practice what Bloom (1956) calls Higher Order Thinking Skills (HOTS) which consist of analyzing, evaluating and creating which are more cognitively challenging than LOTS and are emphasized in a CLIL class. In an extension of this, the cognitive discourse functions (CDF) construct as proposed by Dalton-Puffer (2013), which includes classifying, defining, describing, evaluating, explaining, exploring and reporting, refers to how cognitive processes involved in learning academic content are realized in recurring linguistic patterns in the classroom. Morton (2020) suggests that these CDFs provide a deeper integration of content, literacy, and language and help avoid the artificial partition of content and language.

The emphasis on cognitive skills and HOTS within CLIL has a strong relationship with Cummins’ dichotomy (1984) of BICS (Basic Interpersonal Communication Skills) and CALP (Cognitive Academic Language Proficiency). BICS are basic language skills used in informal communication, the language of the playground, whilst CALP is the language required for academic achievement and is the language used within the classroom. This language usage requires the use of HOTS such as applying, analyzing, and creating. CLIL is defined as an approach to help students make the transition from BICS to CALP through the 4Cs framework (Coyle et al., 2010).

A key to successful learning, in a typical CLIL class, means the materials you use in the classroom must be authentic, such as using newspaper articles, magazines, websites, TV shows, interviews, graphs, charts, and statistical data. Since authentic materials are rich in content both linguistically and culturally, higher learning outcomes and accomplishments can be expected (Ikeda, 2015). Classes should also promote a situation where students are encouraged to do discussion-based activities/tasks and presentations with an emphasis on HOTS and CDF. Translanguaging (Coyle et al., 2010), the flexible use of different languages used together, can often take place in the CLIL classroom. Therefore, students talking in their native language when they are thinking about their answers to questions during activities is natural and should be accepted (Kashiwagi & Ito, 2020). The systematic use of both the first language and the targeted language are both involved in the learning process within the classroom (Coyle et al., 2010). Scaffolding a class where students are given language support is also an important component of a typical CLIL class whether it is

language or content-driven (Coyle et al., 2010; Ikeda, 2015; Sasajima, 2020). Using visual aids such as videos, graphs and charts, and the teacher asking related questions and explaining vocabulary that students want to produce during the conversation help support students effectively.

Intercultural understanding is fundamental to CLIL, and it is important that CLIL classes include the concepts of global citizenship, intercultural awareness, and global issues. In an English class in Japan, intercultural understanding through learning different languages or countries' cultures from their classmates may be difficult since the native language of most of the people in the class is Japanese, and they basically share the same culture. However, in such an environment, leading students to respect the opinions of other students and their cultures and to develop such learning attitudes without making any inferior-to-superior relationships becomes essential in CLIL class (Sasajima, 2020).

From a language teaching point of view, CLIL is derived in parts from other communicative methodologies such as CLT (Communicative Language Teaching), as both foster communication skills (Sasajima, 2020). Many people also confuse these two approaches as examples of CLT teaching can be found in CLIL (Mehisto et al., 2008) and therefore, there is an inevitable overlap between the two methodologies. Based on CLIL's 4Cs, some differences between CLIL and CLT can be observed. In the CLIL classroom content remains a focus and during communicative activities, the negotiation of meaning regarding the topic is more focused on, rather than pronunciation, vocabulary, and grammar (Dalton-Puffer, 2007; Izumi, 2015; Sasajima, 2011; Sasajima, 2020). They are of course important, so pronunciation, vocabulary, and grammar are learned through content by applying them to activities done in the classroom. In CLT, on the other hand, repetition or drill is used to accurately produce language. Although not as apparent in other teaching methodologies, in CLIL, making grammatical mistakes is accepted, and they are thought to be one of the learning processes (Sasajima, 2020). Through listening to the teacher's feedback and other students' comments, a student can realize their mistakes. Students can then focus on the teacher's meaningful input and induce the meaning from the context.

Cognitive development as discussed earlier is one of the differences that make CLIL stand out from similar approaches. CLIL requires students to use HOTS such as evaluating, analyzing, and creating (Coyle et al., 2010; Dale & Tanner, 2015; Ikeda, 2015; Kashiwagi & Ito, 2020; Sasajima, 2020). Through the application of HOTS, students can create something with their own ideas using English whilst being challenged cognitively. Here students can develop their cognitive academic language proficiency (CALP). Coyle et al. (2010) emphasize the importance of cognitive engagement that facilitates effective learning. Activities such as group work, collaboration, problem-solving, and questioning help students learn the process of "constructing knowledge which is built on their interaction with the world" (p. 29).

Students, therefore, need to engage in critical thinking to answer abstract questions. In the class, students can learn skills such as making a hypothesis or how to analyze results. There are not as many opportunities to use BICS in CLIL class whereas a typical CLT class focuses more on BICS. One example would be writing about your weekend in a BICS-focused class whereas a CLIL class might focus on giving your opinion on the content being taught. Along with BICS-focused activities, lower-order thinking skills (LOTS) such as remembering, understanding, and applying tasks are the main focus of CLT (Sasajima, 2020). Teacher questions in CLIL (Kashiwagi & Ito, 2020, p. 21) can symbolize the difference between CLIL and CLT as illustrated

in the table below.

Table 1. CLIL and Non-CLIL Questions (Kashiwagi & Ito, 2020, p. 21).

<u>CLIL</u>	<u>Non-CLIL</u>
What do you think?	What's this?
How did you know it?	What color is it?
Tell me why?	Who is this?
Explain your idea	Do you know it?

Using the above type of questions, students create expressions by themselves, and they try to use them during output activities, rather than just answering a simple answer.

4. The Arrival of CLIL in Japan

Nearly ten years ago Ikeda (2013) wrote that “if CLIL in Europe is a toddler, CLIL in Japan is a new-born baby” (p. 1). In the ten years since, however, CLIL has been actively promoted as an approach for developing English skills, and NEIR (2018) cites CLIL as being a teaching methodology that can help it accomplish its objectives for English language education at the secondary level. These aims are to nurture globally-minded university graduates who excel in English communication, media literacy and critical thinking skills and have an understanding of differing cultures (MEXT, 2020). The first CLIL classes at Japanese universities represented in the literature include health science classes in CLIL at Saitama Medical University (Sasajima, 2011) and courses conducted at Sophia University (Watanabe et al., 2011). All English teacher applicants at Sofia University must give a mock CLIL lesson in their interview, and the English curriculum follows the CLIL methodology. In fact, Sophia University has been the forerunner of CLIL development in Japan and offered some of the first tertiary-level courses in Japan. The university TESOL master’s program also includes a module on CLIL.

There now exists a group of scholars and educators within Japan who are promoting a discussion of CLIL as a successful language teaching approach that can cater to all areas and levels of education in Japan. The J-CLIL (Japan CLIL Pedagogy Association) academic association embodies this effort, and the aim of the association is to make teachers of all levels more aware of what CLIL is and how it is practiced in the classroom. Thus, it serves to both foster professional teacher development and provides a platform for the dissemination of knowledge on CLIL. As well as the headquarter in Tokyo, J-CLIL has many chapters throughout Japan that are helping to cultivate good CLIL teaching practice. J-CLIL has a journal, a newsletter, a global step academy, organized overseas seminars, and a wonderful and informative website. It has epitomized the growth of CLIL in Japan since its arrival just over 10 years ago.

5. The Soft and Hard Dichotomy

Within CLIL, a dichotomy has developed that has divided CLIL into a strong or hard version and a weak or soft version. These terms were first introduced over 10 years ago (Ball, 2009; Bentley, 2010). This is not new to CLIL as Communicative Language Teaching (CLT), which preceded CLIL, also had a weak and strong interpretation (Howatt, 1984). The soft CLIL approach teaches content and language with an emphasis on language skills and is done by language specialists. Soft CLIL content is usually thematic as in a course on the SDGs or media literacy carried out by a language teacher (Kavanagh, 2021a; 2021b). Here the focus on content is secondary to

language but is still an integral part of the course. With hard CLIL the shift focuses on content. A geography class taught by a Japanese content teacher through the medium of English would be an example of hard CLIL.

Birdsell (2020) argues that soft or weak CLIL metaphorically has negative connotations. Marsh (2021) suggests that soft CLIL came from the ELT (English Language Teaching) industry as a way of making money. Many CLIL-labeled textbooks can be found to have a strenuous link to CLIL and the term 'CLIL' itself can be used as a 'buzzword' to sell more textbooks (Birdsell, 2020). In this sense, some textbook publishers have merely rebranded what they have always been selling as soft CLIL. Marsh (2021) argues that regardless of the terminology used soft and hard CLIL are essentially the same, and both renditions or interpretations use the same activities and theoretical principles. However, both should have a dual focus, as not focusing on content contradicts the aim of CLIL being 'dual-focused' (Birdsell, 2020).

Ikeda (2021) suggests that a soft approach to CLIL is spreading around many educational institutions at differing levels of education. Europe even has documented cases of soft CLIL implementation (García, 2015). Ikeda states that soft CLIL is best suited to countries where English is taught within an English as a Foreign Language (EFL) setting whereby learners lack the opportunity to use English outside the classroom. This reflects the situation in Japan, and Ikeda (2021) elaborates on this by stating that CLIL in Japan is mainly intended for language proficiency development integrated with some content learning. Many countries in Europe also teach English within an EFL context but the CLIL model taught is generally a hard version where students are taught subjects in English. This is a result of the generally higher English proficiencies of European students and the fact that students can engage in English as a Lingua Franca outside the classroom (Ikeda, 2021).

Within the Japanese teaching context, there is a growing body of research on CLIL, and Ikeda (2021) reports that most of these articles and the 'Kakenhi' (JSPS Grants-in-Aid for Scientific Research) funded projects are about soft CLIL and reported mainly in Japanese. CLIL-specific textbooks such as CLIL SDGs (Sasajima et al., 2021) are also beginning to flood the Japanese education market as CLIL becomes more recognized as a new and innovative way to teach content-based English. Since its conception five years ago J-CLIL Tohoku has had over 80 presentations at chapter conferences along with special webinars and symposiums. Most of these talks and presentations have been conducted by language specialists from elementary to university levels. Talks about soft-based CLIL at the university level, however, have tended to dominate.

A J-CLIL Survey (Sasajima & Kuramoto et al., 2022) completed by 180 J-CLIL members (156 Japanese, 24 L1 native speakers) was conducted in 2021. The survey found that more than 50% of responders were Japanese teachers of English at universities and that 75% of the 24 L1 native speakers were also employed at Japanese universities as English teachers. Nearly 80% of survey responses were from language specialists with the remainder from content teachers. The language teachers stated that they teach content related to the student's specialized field or global issues including current affairs and cultural content. These results show that soft CLIL, at least within the J-CLIL community, is the dominant model that most teachers apply to their classes. Echoing earlier sections of this paper, Ikeda (2021, p. 20) suggests that "many researchers and practitioners believe that there is not a prescriptive model to be strictly followed, but a general guideline to be

flexibly applied in order to cultivate the benefits of this innovative language teaching approach.”

6. Why is Soft CLIL predominantly taught at Japanese universities? Is Hard CLIL Feasible?

CLIL is adopted within English language education curricula, and not within the framework of teaching subjects. The instructors are basically language teachers and not content specialists like in European countries (Ohmori, 2014, p. 47). As previously mentioned, soft CLIL remains the predominant choice for language specialists at Japanese universities. One of the prominent reasons for this is a result of the lack of student proficiency in English (Ikeda, 2021). McNeill (2022) writes that according to the Swiss education company ‘Education First’, Japan ranks 78 in English proficiency out of 112 countries and in Asia falls below Taiwan, China, Vietnam, and South Korea. In addition, McNeil (2022) claims that TOEFL test scores in Japan are relatively low.

One of the reasons for the small percentage of content teachers doing CLIL is a lack of L2 confidence, an absence of CLIL understanding and a shortage of materials and textbooks for specific hard CLIL content. If CLIL was to be implemented at the university level that followed the hard CLIL European model, there may not be enough human resources of trained teachers with the linguistic and methodological training to cope with these courses. Within the English as a Medium of Instruction (EMI) literature, some teachers have felt that their second language skills are not good enough to teach content (Helm & Guarda, 2015) or they do not view themselves as language educators (Airey, 2012; Dearden, 2015). There is also the belief that the language proficiency of the teacher should be enough to teach subjects in another language (Bradford, 2018).

Ball et al. (2015) state that successful hard CLIL needs to have students with an initially good proficiency level. Students need to learn content and language simultaneously and if both are too unfamiliar, this may lead to a cognitive overload that becomes too much of a burden for the student. The subject teacher must also have sufficient ability in the second language to be able to teach their content through it. Teacher understanding of CLIL is also a requirement if you are to utilize a CLIL framework within your classes. To overcome these difficulties, content and language specialists need to collaborate to combine their expertise and know-how to create courses for specialist education. This collaboration can lead to the content teacher becoming more language aware and the language teacher becoming more knowledgeable about the content and the language needed to understand and teach the content (Lin, 2016). There are many CLIL courses taught by language specialists via a soft approach but there is a need for more research and collaboration between language and content specialists at the university level. Within the Japanese context, there have been pilot studies of courses taught at the national institute of technology between content and language specialists, and this research has found that CLIL benefits the learning of technical lexis and increases student motivation (Iijima, 2017).

Kavanagh (2022) conducted an initial needs analysis with the engineering faculty in charge of undergraduate and graduate classes to ‘test the water’ of what the engineering faculty think of a potential CLIL course. The survey was completed by 30 professors, the vast majority of which had never heard of CLIL. This was not surprising. Sixty-four percent of respondents stated that they had taught their specialist content in English but confidence levels amongst the professors in teaching their content in English produced mixed results. Forty percent were on the fence about their ability. Twenty-four percent were quite confident while 30% were not confident. These

results reflect the findings in the literature that suggest that the key to successful CLIL-based specialist education is dependent on the collaboration of both the content and language teachers (Ichimura, 2021).

Kavanagh (2022) also found that although most of the engineering faculty agreed that there is a need for specialized English education for 3 and 4 year undergraduate students, they expressed a degree of caution. These included the assertion that basic academic English including conversational skills need to be addressed first before embarking on English for specialist education and that CLIL might be best reserved for post-graduate students. Some respondents also voiced concerns by stating that even though English language education is important, the priority must be on students' understanding of the content. These findings echo some of the current literature (Karabassova, 2018; Lo, 2019) that suggests that the lack of focus on linguistic objectives in such courses is based on the notion that content teachers believe they should only give priority to content. One respondent suggested that it takes considerable effort to understand the content even in Japanese so attempting it in English may be detrimental to the learning of content that students need to acquire. This comment reflects the fundamental goal of CLIL which aims to advance both language and content without either being harmed in the process. Coyle (2002, p. 27) for example speaks of "safeguarding" content. Kavanagh's (2022) findings can give us an insight into how content specialists view specialist language education at university level in Japan.

Implementing a hard model of CLIL should be treated with caution and the focus should initially aim to establish the soft CLIL approach. Leontjev and deBoer (2002) are also not advocates of a radical modification in Japan from a soft to hard CLIL approach but suggest that even if a CLIL course is language driven teachers can still incorporate lesson material that elicits content goals that can expand our understanding of student performance. Further research is also needed through an examination of how content and language specialists can formulate a CLIL partnership.

7. Conclusion

This paper has given an overview of the theoretical foundation and practice of CLIL, discussing its benefits and the characteristics that separate it from similar methodologies. Even though there is no specific model to be strictly followed, CLIL has a general guideline that could be flexibly applied in the classroom (Ikeda, 2021). CLIL has great potential in Japanese English education and is not only beneficial for both learners and teachers but also for schools that implement the approach. CLIL will prompt students' discovery and higher cognitive engagement (Sasajima, 2011) and motivate them to study English (Coyle et al., 2010). As mentioned by Dale and Tanner (2015), it is not just students but also teachers who will improve their language and teaching skills by using and thinking in English to create a CLIL class. Universities also have the potential to reform their curriculum so that content teachers and language teachers can work together to manage CLIL classes.

As part of the soft and hard CLIL dichotomy, the soft CLIL approach is discussed as being the most prominent manifestation of CLIL within Japan and is mainly conducted by language specialists, especially at the university level. Several reasons have been stated for this, such as the lack of proficiency in the target language of Japanese English teachers and the students themselves. There are also currently not enough teachers with the linguistic and methodological training to implement a hard CLIL approach. Morton (2019) argues that waiting until a soft-CLIL approach is firmly established should take precedence over trying to

implement a hard CLIL approach if it is poorly or haphazardly implemented without consideration for the lack of adequately trained teachers.

Regardless of whether it is soft or hard CLIL, the implementation of CLIL stems from a perceived lack of success in the more traditional approaches to teaching foreign languages (Ikeda, 2021). Although CLIL is becoming more widely practiced in Japan, more CLIL teacher education programs juxtaposed with professional development seminars and workshops as reflected in the work of the Japanese CLIL association (J-CLIL), are key for the effective implementation of CLIL. Within this paper we have discussed how CLIL can be molded into the context it has been created for and that CLIL is a very flexible approach that does not prescribe to any theory or model. Taking advantage of this flexibility means that CLIL can be interpreted based on the needs of the educational institution and its students, a form of contextualized CLIL regardless of whether it is considered soft or hard CLIL.

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Effectiveness of Content and Language Integrated Learning (CLIL) in an Advanced Japanese Language Course: Adopting the Topic of Artificial Intelligence

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Abstract

This study examined the educational practice of incorporating the content and language integrated learning (CLIL) approach in an advanced Japanese language course for international students at a Japanese university. It aimed to determine whether or not such practices could enhance cogitation and improve language ability. We selected artificial intelligence (AI) and society as a topic for six lessons that lasted 90 min per session. The lessons require reading articles and watching documentary videos about AI followed by pair/group work, discussion, and writing task. To examine learning effects, the study recruited 21 students and analyzed the results of quizzes, individual reports, and questionnaires. Furthermore, discourse during the discussions was examined. Analysis of the results of vocabulary quizzes conducted before and after lessons suggested an increase in the accuracy of vocabulary related to the topic. Based on observations during the lessons and the analysis of reports, the learners expressed their thoughts and opinions using the learned vocabulary, which led to an enhanced understanding and learning about the topic. The results suggested that CLIL could promote learning in terms of content and language.

Keywords: CLIL, Japanese language learning, AI, Advanced-level, University students

1. Introduction

Overseas, the field of Japanese language education is being implemented in 142 countries and regions worldwide, which is a record high; in addition, the number of institutions, number of teachers, and number of learners of the Japanese language have recently increased (Japan Foundation, 2020). In addition, a change is observed in the levels of the Japanese language proficiency of learners in the Japanese as a foreign language environment due to the revolution in information and communication technology. Students from various countries can obtain a lot of information not only about the Japanese language but also about Japanese culture and society prior to coming to Japan. In addition, some students can gain a wide range of experience by conversing with Japanese native speakers.

These learners come to Japanese universities as international exchange students or enter universities as degree-seeking students. They have previously acquired relatively high levels of proficiency in the Japanese language. However, their expectation is to learn content or experience learning methods that they cannot learn in their home countries. In the field of Japanese language teaching, the communicative approach is adopted and some materials are developed based on content-based language teaching. But traditional methods, such as the Presentation – Practice – Production Approach are still common in the actual educational field. As such, they require a paradigm shift to provide language education that would fit the expectations of these students.

Conversely, university education in the 21st century is changing. For example, it was required to deviate from excessive emphasis on incorporating intelligence into creativity and critical

thinking. This tendency also applies to the contents of language education in universities, because international students will study in academic settings, understand lectures, take part in collaborative learning with Japanese students, and write reports. In addition, they must do these learning activities in the Japanese language.

Against this background, the current study intends to determine an educational approach that can improve the Japanese language ability of learners, including language skills that are necessary for the academic environment and new and meaningful content that learners can gain by studying in Japan. Furthermore, the study aims to propose an approach that promotes the realization of the self-growth of students by studying in Japan.

Toward this end, we use the content and language integrated learning (CLIL) approach, which can be applied to our Japanese language course. Coyle et al. (2010) define CLIL as “a dual-focused educational approach in which an additional language is used for the learning and teaching of both content and language” (p. 1). Learners obtain language input, such as vocabulary and grammar, in a meaningful context by applying focus-on-form. In CLIL, emphasis is placed on output using the target language. Sufficient opportunities are provided, for example, by introducing pair/group work and presentation. CLIL promotes collaborative learning and negotiation of meaning, which improves the language ability of learners.

2. CLIL in Japanese language learning in higher education

In Japanese language education, CLIL is recently gaining scholarly attention. However, studies and reports in this field are scarce. This study provides an overview that focuses on the intermediate and advanced levels of learners in universities. The current study focuses on language ability and the influence exerted by the application of CLIL to confirm the value of this application to language teaching.

Sato and Okuno (2017) applied CLIL in a language program with the theme of PEACE and compared student essays by evaluating students' work before and after the program. It was reported that the score from every viewpoint increased. Murata (2017) reported that learners used the vocabulary, which has higher difficulty levels in essays written at the end of the course. Fukagawa, et al. (2019) reported on the incorporation of CLIL in an advanced Japanese language course for international students at a Japanese university, focusing on the topic of the regional historical heritage site Tatsumi Canal. This unit aimed to improve learners' Japanese language skills while teaching about Edo-era history and scientific technology. The authors reported the significance of collaboration between topic research specialists and language teachers during curriculum and material development for CLIL-based lessons.

3. Objective

The study aims to apply CLIL in a Japanese language course which deals with themes about Japanese society and culture, and to observe what the students learned, especially focusing on the aspects of language by analyzing the results of quizzes, reports, and performance in class.

4. Method

4.1 Target learners and learning objectives

The target of the study was Japanese language learners at the advanced level. The study recruited 21 students in a Japanese university from October to February 2019 who were enrolled in Japanese language programs. They were placed at the advanced level according to the results of their placement tests. Their nationality and mother tongue were varied (10 Chinese, 1 Taiwanese, 1 Indonesian, 2 Thai, 4 Vietnamese, 1 Polish, 1 Russian, and 1

Brazilian), including learners from Kanji-using and non-Kanji-using languages. Their majors were also varied (e.g., humanities and social sciences, science, and medicine). The average age of the respondents was in the early twenties.

The objective of the language program is to improve the Japanese language ability of the learners and help them fit into the university and life in Japan. At the advanced level, learners aim to be able to understand lectures and seminars and to conduct research in the Japanese language. In addition, learners can also gain the knowledge necessary to deepen their understanding about Japanese culture and society through Japanese language learning. For that reason, the topics of the course materials were chosen from various fields such as sociology, culture, history, science, and environment, which deal with Japanese and global problems.

4.2 Overview of the course unit instruction

The course spans 16 weeks with three lessons (one lesson lasts 90 mins) per week. The course consists of seven units (topics), such as gender in Japanese society; energy issues and nuclear power plants in Japan; and local historical heritage. All course materials are designed to consider the elements of CLIL and developed by Japanese language teachers who are in charge of the advanced level of the Japanese language program of the university. This study focuses on one of the units, that is, artificial intelligence (AI) and human society. AI is one of the transformative technologies that will reshape our society during this century. We can debate several concerns regarding the present and future of human civilization on this topic because it contains several ideas and facts that students still do not fully understand. We anticipated that students would be engaged in the subject and be capable of learning and thinking in relation to their everyday lives. Due to the fact that CLIL attempts to teach both content and language, we opted to tackle this subject. The objective of the course is to deepen the understanding of the learners about AI and its coexistence with humans. The unit comprised six lessons, which were 90 minutes each. Therefore, this experiment could be called a “Soft-CLIL.” Table 1 presents the outline of the AI unit.

Table 1. Outline of the AI unit

Lesson	Contents of each lesson	
1	Introduction	Objectives: Rousing learners' interest about AI Materials: “Development of AI” (Article from magazine 『Newton』 2018.1, p.26,27) Pretest of vocabulary
2	Watching audiovisual materials	Objectives: Knowing how much AI influenced actual human life and society Materials: Documentary movie from TV program NHK Special “Artificial Intelligence Angel or Devil 2017.”
3	Reading material	Objectives: Reading articles about AI and understanding the opinion of the specialist
4		Materials: one part of the “Big data and AI” (Written by Nishigaki Toru, Chuko Shinsho, 2016)
5		
6	Discussion	Objectives: Sharing one's opinion about AI Discussion topic: Will AI substitute for any profession?
	Writing report	Objectives: Explaining logically one's opinion and thoughts Topic of the report: AI and the ability of humans Posttest of vocabulary (conducted in the next lesson)

After designing the learning activities, we provided various types of input, such as movies, pictures, and reading materials (articles from magazines and books). Moreover, we established interaction between the teacher and learners and also between the learners as soon as possible. The reason is that the collaborative activities for every lesson are intended to promote learner–

learner interaction and deepen their learning.

4.3 Breakdown of learning activity in the unit for AI and CLIL

Prior to designing the contents of the materials, we made a chart of the elements, which were derived from the 4Cs Framework (content, communication, cognition, and community) based on Ikeda, et al. (2011, pp. 25–27), and the learning activities and tasks in this unit. We verified whether or not the learning activities or tasks would fit one of these elements (Table 2). When we observed an imbalance between the activities and tasks, we recreated them. Referring to this matrix, we incorporated varied and multi-layered activities and tasks as much as possible.

Table 2. Correspondence of learning activities and tasks to elements of CLIL

4Cs Framework	Lesson	1		2	3,4,5	6		
	Section	1	2	1,2,3	1,2,3	1	2	
	Objectives	Advance Organizer		Knowing AI penetrate society	Understanding the opinion of the specialist.	Sharing one's opinion about AI	Explaining logically one's opinion and thoughts	
Contents		Rousing learners' interest about AI	Confirming the formula of AI	Watching several cases applying AI in society	Reading articles about AI	Which occupation will be substituted to AI?	AI and the ability of humans	
Communication	Language of learning	✓	✓	✓	✓	✓	✓	
	Language for learning		✓ (e.g. How to state a formula)	✓ (e.g. How to report the facts, how to mention the opinion)	✓ e.g. (How to read the article)	✓ (e.g. How to interact the opinion)	✓ (e.g. How to describe and summarize thoughts)	
	Language through the learning	✓	✓	✓	✓	✓	✓	
Cognition	LOTS	Remembering	✓	✓	✓	✓	✓	
		Understanding		✓	✓	✓		
		Applying					✓	✓
	HOTS	Analyzing			✓	✓	✓	✓
		Evaluating					✓	✓
		Creating						✓
Community	Individual study	✓	✓	✓	✓	✓	✓	
	Pair-work		✓		✓			
	Group-work			✓		✓		
	Lesson at the same time	✓	✓	✓	✓	✓		

Note. ✓ indicates that section covers the element.

4.4 Analysis

The study analyzed the language and content aspects of the course. For the language aspect,

the study examined the usage of the vocabulary of the learners. The output was produced through reports and utterances during discussions in classes. Analysis was also conducted on the knowledge and understanding of vocabulary through quizzes. The study also examined the understanding of vocabulary. The learners wrote down their answers on a vocabulary worksheet, which consisted of the selection of the correct vocabulary to form complete sentences. Furthermore, the study analyzed output by observing the use of vocabulary during the discussion and reports, which were submitted as assignments. The theme of the discussion was “Will AI substitute for any profession?” The learners were divided into small groups of three or four to discuss this possibility on one of the professions. After the small group discussion, the learners reported the outcome of their discussion as a group and as a class. The study recorded utterances during these discussions using an IC recorder, which were transcribed¹. After the discussion, the learners wrote reports about the development of AI and the ability of humans based on the discussion.

5. Results

5.1 Analysis of language of learning

5.1.1 Analysis of vocabulary input

To examine whether or not learners increased their vocabulary ability, we conducted vocabulary tests before and after the lessons. Words that belong to the advanced level in a vocabulary index called J-readability² and were included in the selected materials. These words were then narrowed down to 11 words, which were recognized as essential/useful vocabulary in academic settings. The pretest was conducted before the first lesson. The learners were tasked to select the appropriate words in the sentences by selecting from the 11 words listed in Table 3 and Figure 1. The post-test was conducted after the last lesson of the unit. The format and difficulty level of the test were the same as that of the pre-test. But the sentences which were used in the question items were different from the pre-test³. As a result, students who did not understand the meaning and usage of the target vocabulary could not respond.

Figure 1 presents the results. After assessing the results, the rate of correct responses on the post-test was higher than that of the pretest per word. To analyze the difference between pre- and post-tests, the McNemar chi-square test was performed to compare the rates of correct responses of each vocabulary word. As a result of the test, the two words which were wa-go (words originating from the Japanese language), whose rate of accurate responses was low at the pretest, increased at the post-test and showed significant differences (「丸投げ」 $p = .000$, $p < .01$, 「受け持つ」 $p = .006$, $p < .01$). As for the other words which are Kan-go words (words originating from the Chinese language), significant differences were not found. The L1 of the students may be relevant in this. Ten students may have learned the meaning of the "Kan-go" words prior to taking the pretest because their first language was Chinese. Based on these findings, the study deduces that during this unit, the students learned and comprehended the meaning of several new vocabulary words.

¹ After obtaining informed consent, the teacher administered a recording.

² J-readability (Japanese Text Readability Measurement System) <http://jreadability.net/>

³ The examples of the pre-test and post-test items (target word 「丸投げする」; throw over) is as follows:

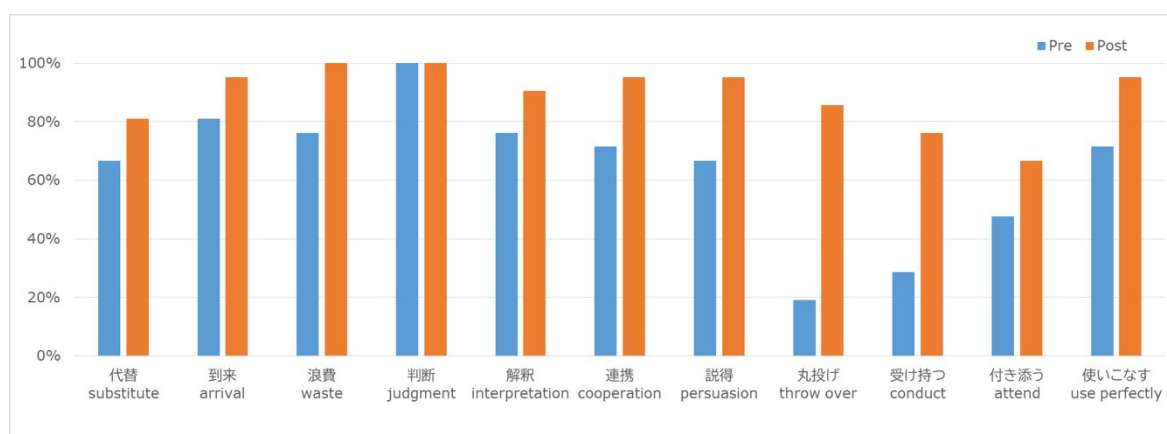
(Pre-test) 父は若い頃、家事も育児も母に___ていたそうだ。

(Post-test) あの課長は自分では何もせずどんな仕事も部下に___。

Table 3. Number of accurate responses to the vocabulary pre-test and post-test

	代替 substitute	到来 arrival	浪費 waste	判断 judgment	解釈 interpretation	連携 cooperation	説得 persuasion	丸投げ throw over	受け持つ conduct	付き添う attend	使いこなす use perfectly
Pre	14	17	16	21	16	15	14	4	6	10	15
Post	17	20	21	21	19	20	20	18	16	14	20

Figure 1. Rate of correct responses on the vocabulary pre-test and post-test



5.1.2 Analysis of vocabulary output

To confirm if the learners could appropriately use the vocabulary they learned, we analyzed their utterances and sentences. In the discussion activity, a few learners used the words and expressions they learned in this unit such as “okikawaru” (置き換わる; meaning substitute).

Extract 1⁴.

S1: ⁵作業員は、そうですね。置き換わる可能性が高いと思いますね。

[S1: *I think there is a high possibility that the construction workers will be replaced (by AI).*]⁶

S2: そっか、私は置き換わる可能性が低いだと思うんですけど。

[S2: *Is it so? I think the percentage of the possibility of replacement will be low.*]

S1: ふーん、それはなぜですか。

[S1: *Hmm... Why do you think so?*]

(source: part of the group discussion in lesson 6)

In terms of writing output, the learners also used the words and expressions they learned in this unit. Even the learners who exhibited low levels of understanding in the pretest could accurately use the appropriate words in their reports. In the Japanese language, verbs must be conjugated to their appropriate form, which is associated with the structure of sentences and

⁴ The following excerpts from various students that were used in this paper are listed below.

⁵ The examples of learner utterance and sentence will be transcript as it is even if there are grammatical error in it.

⁶ The sentences in [] are translations by the author of the original utterances in Japanese.

used with appropriate elements. In actual communication, these operations are slightly difficult for learners. Extract 2 demonstrates that the learners correctly use the word “代替する” (substitute) and “受け持つ” (conduct) which they couldn’t answer correctly in the pre-test.

Extract 2.

しかし、人工知能技術の進歩が注目されるべき新たな問題をもたらす。それは人間が、将来、すべての職種でAIに代替されるという可能性である。確かに、AIが受け持つ仕事が増えると思われるが、人間にしかできない仕事もあるので、いくら人工知能技術が発達しても、人間の能力がいらなくなるとは少し極端な考え方なのではないだろうか。

[However, advances in artificial intelligence technology bring new problems that deserve attention. That is the possibility that humans will be replaced by AI in all occupations in the future. Certainly, there will be an increase in the number of jobs that AI will conduct, but there are also jobs that only humans can do, so it may be a little extreme to think that no matter how advanced artificial intelligence technology becomes, human abilities will no longer be needed.]

(source: part of the individual report in lesson 6)

Based on these findings, the study infers that the learners could not only acquire new vocabulary but also utilize it in actual language communication.

5.1.3 Analysis of language learning through interaction in class

Teachers conducted the lessons with various feedback types such as prompts (e.g. clarification requests), recast throughout the unit.

In the discussion activity, the learners collaborated with group members to summarize their discussion to be reported in front of the class. During this activity, the negotiation of meaning (form) between learners was observed. In Extract 3, for example, a scene in which student 2 (S2) asks other students about the usage of the particle and verb and in which student 1 (S1) and 3 (S3) explained the correct usage to student 2. Similar to this scene, scaffolding occurred between learners through actual interaction in the learning activity. In other words, the learners learned language through learning in this unit.

Extract 3

S1: あ、ロボットなら、ま、はじめてのお客さんがどんな飲み物がいいか
おすすりめできない。

[S1: If the bartenders are robots, they can't recommend the appropriate drinks to first time customers.]

S2: ロボットは注文受けるばかりっていうか…

[S2: Robot can just receive the order and ...]

S3: うん。

[S3: Yeah...]

S2: お客様にふさわしいお酒を

[S2: The alcohol which would be liked by customers...]

S1: 提供できます

[S1: They can provide it]

S2: あー、提供できる。「を」。

[S2: Ahh, can provide with “o”?]

S2: 「を」, 「を」提供できる
 [S2: “o”? “o”? can provide...]
 S3: 提供する,
 [S3: Provide]
 S2: 「お酒が」, 「お酒を」?
 [S2: “osake ga”? or “osake o”?]
 S1: お酒「を」, か「が」か, どちらでもいいです。
 [S1: Both “osake ga”? and “osake o” are O.K.]
 S3: 「お酒が提供できる」
 [S3: “Osake ga teekyoo dekiru”]

(source: part of the group discussion in lesson 6)

Student 2 was unsure which particle should be used in the structure. In general, the particle “が” will be used with not only 提供できる but also “を” as the potential form of the verb to be used in this structure. As such, students 1 and 3 explained that both could be used. Through this interaction, Student 2 learned enhanced their own knowledge about the grammatical usage.

5.2 Analysis of language for learning

Apart from the acquisition of vocabulary and grammar, which constitutes *language of leaning*, what did this learning activity bring to learners? We will look into other aspects of the outcomes of the learners through this unit.

Through the discussion and writing tasks, the learners presented their thoughts and opinions about the topic, which addresses a social problem, and expressed their idea in Japanese, which is the target language. Such skills are essential for academic settings. In the writing task, learners received feedback from the instructor about the use of expressions from the aspect of academic writing. In other words, the students learned the language during learning through this unit.

5.3 Analysis of language through learning

This unit was designed for learners to deepen their understanding and cognition, and then express their thoughts with their target language organically. In the beginning of the unit, there are tasks in which learners get new knowledge about AI and vocabulary related to AI by learning through a documentary video and reading materials. Learners can practice them in the interaction and task activities in class. Finally, they output their thoughts and opinions in group/class discussion and individual reports about the topic of current issues with confidence. As an illustration, extract 4 is a section of an individual report that was assigned following the lesson 6 discussion. In this report, the student reflected on their in-class conversation and continued to consider the subject matter even though they were unable to come to a conclusion.

Extract 4

金曜日の授業に、ある職種はAIやロボットに置き換える可能性が高いかどうかについて、クラスで盛り上がった議論を行われた。うちのグループは「建設作業員は置き換える可能性が高いのか」という話題に激しく弁論したが、最後までに何の結論もできなかった。授業の後、私がその原因をよく考えた結果は、AIやロボットの知能程度の高さは一体どのように変わっていくのか、今の私たちは誰も知らないわけだ。

[In the Friday lesson, we had a lively discussion in class on the topic: Will AI or robots substitute or replace certain professions? My group debated about whether the

profession of the construction worker would be replaced by AI but we couldn't reach any conclusion about it. After the lesson, I thought carefully about our discussion and why we couldn't reach a conclusion. I believe it is because we were unsure about how much AI intelligence and robots would change in the future.]

(source: part of the individual report in lesson 6)

After mentioning the above, the student tried to discuss this topic referring to the website to enforce and support the thoughts in the report.

As this extract demonstrates, we could observe that students learn the Japanese language through different types of input and interactions through class activities.

5.4 Analysis of learning contents

The objective of content-based instruction (CBI) is to give language instruction through content. Alternatively, CLIL aims to realize language and content learning. Thus, we examined whether or not the learners acquired new learning about AI. The majority of the learners know about AI as general knowledge. Nevertheless, they confirmed that they learned something new about AI, such as the influence of AI on social life, through reading materials and documentaries. Moreover, they began to consider a future in which this technology is used. In addition, we analyzed the comments of the learners who undertook this unit in other semesters and found that they gained new perspectives and deepened their understanding through the unit (Extract 5).

Extract 5

個人的に人工知能にあまり詳しくないですから、映像に見たことが全部凄かったと思います。実際に、そういうAIがあること私にとって想像につかなくったことでした。もちろん、すばらしくて、AIのおかげで人の日常生活に良くなるとは思います、同時に少し不安になります。本当に人工知能が全部決めてもいいかなと思いました。たぶん人がAIに頼りすぎると、自分で判断するのができなくなるかもしれません。[中略]ですから、映像を見る後は技術に頼りすぎないと気を付けなければならないということを考えました。

[I don't know about AI very much and I thought it was awesome what I watched in the documentary video. I'd never imagined it. Of course, it is wonderful and it can improve our daily life. But at the same time, I feel some anxiety. I doubt that it would be all right if the AI decided all things. If we rely on AI too much, we will lose the ability to decide by ourselves. (...) Then, after watching the film, I realized we should not rely too heavily on technology.]

(source: comment of a student in 2020 spring semester course)

Based on these results, the learners also learned about future problems in the real world. The results showed that the application of CLIL achieved one of the objectives of the language course.

5.5 Feedback from learners

To understand the manner in which the learners considered learning through CLIL, we conducted a questionnaire survey at the end of the term. The results indicated that the difficulty of the contents of these materials reached an average of 2.75 points (items were rated using a five-point Likert-type scale; 5 = extremely difficult, 4 = difficult, 3 = moderate, 2 = easy, 1 =

extremely easy). The average for the unit was 2.73 points, which implied that the unit was at the appropriate level for the learners. Interest in the topic reached an average of 3.7 points, which is higher than the average for the unit as a whole (3.48 points). In terms of usefulness (whether or not the learners perceived that the knowledge gained from the unit was useful) it was 3.95 points, which was higher than the average of the unit (3.80 points). In the end, in terms of satisfaction with this unit, the majority of the learners (n = 23) selected “very good” (n = 10), “good” (n = 11), and “neutral” (n = 2). Based on these findings, the learners expressed satisfaction with the learning gained from this unit, including the method and contents.

6. Discussion

6.1 What did students learn through this unit?

The study examined any learning outcome in the language course that adopted CLIL. The ratio of correct answers increased according to the results of the quizzes, whereas the study observed the appropriate usage of vocabulary in the utterances and reports of the learners. Therefore, the study infers that this learning contributed to the improvement of the proficiency of the learners in the Japanese language. However, the study was unable to establish whether or not the results were derived due to the adoption of CLIL. To examine this aspect, a comparison must be made between results derived using other language teaching approaches, such as CBI and TBLT (task-based language teaching), or other structural approaches to reveal the characteristics of CLIL. In addition, analyzing the interaction in the classroom is important for confirming the educational effect of the adoption of CLIL. In lessons that adopt CLIL, teachers adopt focus-on-form to promote the language skills of learners. In further research, we plan to analyze the interaction between teachers and students, such as feedback and scaffolding by teachers.

6.2 How should the lesson and materials for the CLIL course in language learning be constructed?

The Japanese language teachers in charge of the course constructed the materials and lessons, carefully selected the topics of the contents, and designed various learning activities so that students could learn content and language through the lessons adopted with the CLIL in mind. By referring to the chart (Table 2), teachers could overview the structure of learning activities referring to their objectives, which made it easy to verify the materials and class activities in order to improve them.

Regarding the constructing of the lessons and materials, a few difficulties remain. In this report, the unit, which presents AI as a content, is slightly difficult for language teachers who are not specialists in this academic field. The objective of the lessons is to enable learners to learn the contents at the same level as general education; however, responding to learners asking for further details and other special topics may be difficult. Moreover, the materials which deal with current issues and developing technology need to be regularly updated to have their contents according to the real society, so that learners don't feel they are outdated. Thus, corroboration among subject teachers (researchers or specialists in this field) would be necessary for certain cases. The collaboration between language teachers and specialists is not so easy for language teaching institutes. However, if the institute is one with researchers of various fields, such as a university, it could be possible to find a way of collaboration.

This report outlined a practical study on language teaching, which adopted CLIL in Japanese language learning in the context of a second language. The study confirmed the effectiveness of CLIL in an advanced Japanese language course and pointed out a few issues that could be realized in conducting the language course. In this manner, the study hopes the developed materials and teaching methods resolved these difficulties and problems.

Acknowledgments

I would like to express my deepest appreciation to the instructors in charge of this course who collaborated to design and develop the course materials together.

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Innovation Theory for Team-Taught Soft CLIL: A Case Study of Junior High School Adoption and Implementation

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Abstract

Despite its value as a framework, surprisingly little research has been conducted on the promotion of CLIL in light of Rogers' (2003) diffusion of innovations theory. The theory can be usefully applied to the natural process of adoption, implementation, and evaluation of educational innovations. This study uses a diffusion-of-innovations model to investigate two junior high school teachers' experiences team teaching Soft CLIL for the first time. Over a seven-month period, a Japanese teacher of English (JTE) and an English-speaking assistant language teacher (ALT) collaborated to facilitate a large-scale, learner-centered survey project for their third-year students. After providing background on their teaching context, I describe the innovation-decision process of participants from their first knowledge of team-taught Soft CLIL to confirmation of their continued use of the innovation. A collaborative action research approach in combination with LOCIT (Coyle et al., 2010) during regular reflection meetings appeared to be effective for raising awareness and developing a shared meaning of Soft CLIL. In particular, reflecting on classroom footage which highlighted critical incidents or "learning moments" as they occurred during implementation allowed for experiential learning and professional development for the teachers. Pre- and post-project teacher questionnaires and interviews revealed that both teachers had positive experiences with implementation and recognized the innovation to be motivating for themselves and their students, resulting in its continued adoption. The study may offer hints for how the situation of team teaching can be used by CLIL promoters and potential adopters as a viable community of practice to further localize and diffuse Soft CLIL as an educational innovation in Japan.

Keywords: diffusion of innovations, Soft CLIL, team teaching, community of practice, project-based learning

1. Introduction

As Content and Language Integrated Learning (CLIL) continues to spread beyond its European roots, it has seen growing interest in Japan as an educational innovation. Some scholars have claimed CLIL to be a pedagogical approach capable of changing the Japanese educational landscape (Ikeda, 2021; Sasajima, 2019; Tsuchiya & Pérez Murillo, 2019). Still, educational change must happen one teacher at a time. Michael Fullan, a pioneer in the field of educational innovation, describes change as being complex and multidimensional, "even at the simplest level of an innovation in a classroom" (Fullan, 2015, p. 30). He notes that, in recent years, "the *pressure* for reform has increased, but not yet the reality" (p. 6, emphasis in original). For the purposes of this paper, an innovation refers to change that is thought to be beneficial in accomplishing a specific goal (Markee, 1993). Only minor change will occur if, for example, a teacher uses a new textbook without any adjustment to their teaching methods. For real change to occur, changes in actual practice are essential. According to Fullan (2015), it is only in the last few decades that educators have come to realize that "the proof is in the 'putting'" (p. 13). In this paper, I will attempt to use Rogers' (2003) diffusion of innovations theory to explain how a pair of team teachers came to know CLIL, put it into practice through a process of trial and error, and evaluate it as an innovation capable of changing their teaching practice.

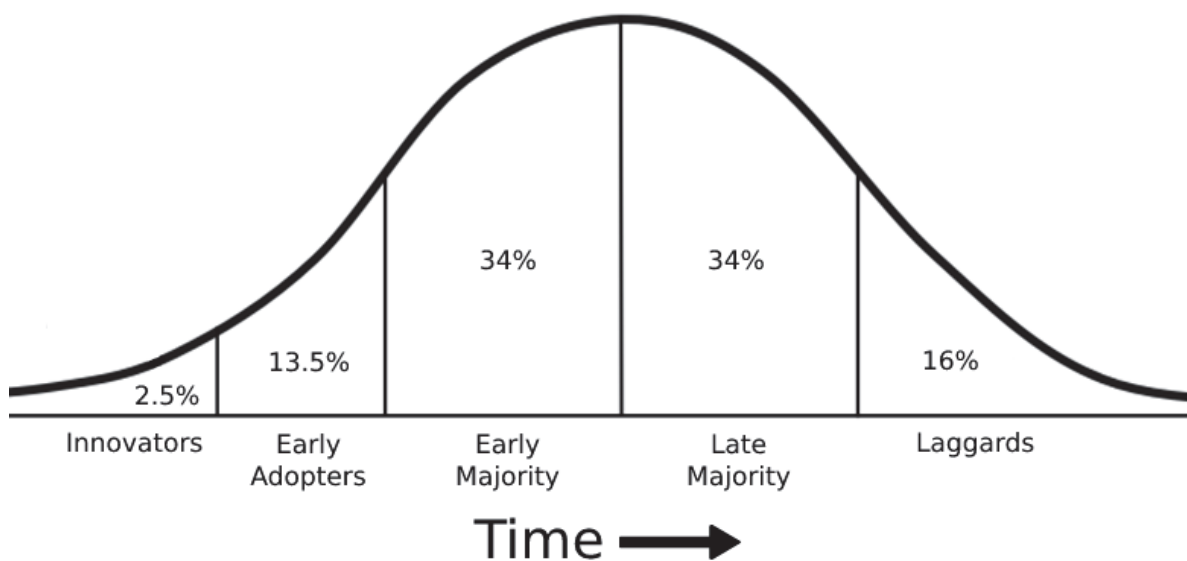
2. Literature review

2.1 Diffusion of innovations theory

It has been observed that the area of implementation—putting ideas into practice—is typically a low-visibility activity and involves highly complex social processes (Fullan, 2015; Markee, 1993). In broad terms, innovations spread through a population in two ways. First, *dissemination* involves “the strategies and activities by which it is intended that an innovation be passed on” (Kelly, 1980, p. 67). *Diffusion*, on the other hand, refers to the spread of an innovation through a social system over time (Rogers, 2003). It includes both orderly and random activity, as individuals and groups are parts of massive, organized-yet-messy social systems that contain a multitude of subjective worlds (Fullan, 2015). As Hyland and Wong (2013) explain, diffusion denotes “the process through which an innovation is communicated and made real ... how those at the sharp end learn about innovations and attempt to understand them and put them into practice, however expertly or clumsily. [This] is where innovation becomes change and we can see the fruits of novelty” (p. 2). Thus, while dissemination is intentional, diffusion refers to “what actually happens; to the interaction between dissemination and the complex of influences in the social context in which it occurs” (Kelly, 1980, p. 67).

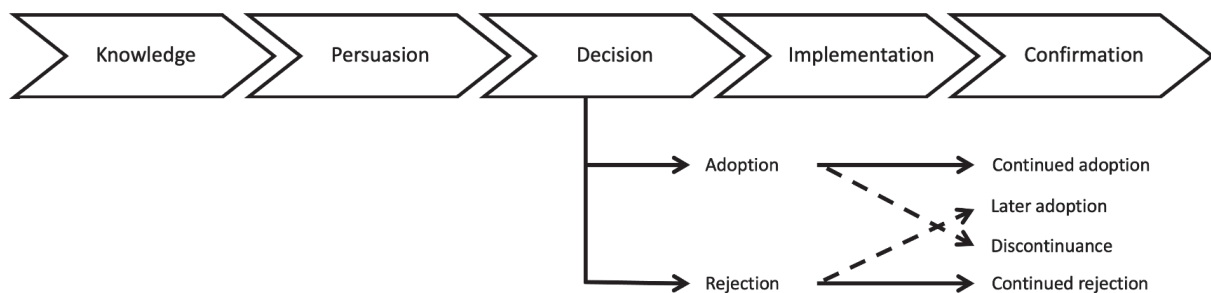
In his seminal work *Diffusion of Innovations*, Everett Rogers provides a theoretical framework that describes how, why, and at what rate innovations spread among individuals and social systems (1962, 2003). Researchers across diverse fields (e.g., agriculture, communications, medicine, marketing) have used Rogers’ framework and found his models to be an accurate representation of the processes and features behind the spread of innovations (see, e.g., Peres, 2010 for an overview). Rogers (2003) maps out the process of how innovations spread, showing that, in most cases, only an initial few are open to the new idea and adopt its use. As word about the innovation spreads, more and more people become open to it which leads to a critical mass. Over time, the innovation becomes diffused amongst the population until a saturation point is reached. Rogers identifies five adopter categories for this process and estimates their distribution along a bell-shaped curve (see Figure 1) as follows: innovators (2.5%), early adopters (13.5%), early majority (34%), late majority (34%), and laggards (16%).

Figure 1. Generalized model of diffusion of innovations over time (adapted from Rogers, 2003)



Rogers (2003) defines the *innovation-decision process* as “the process through which an individual (or other decision-making unit) passes from first knowledge of an innovation, to forming an attitude toward the innovation, to a decision to adopt or reject, to implementation of the new idea, and to confirmation of this decision” (p. 475). He overviews the process in each of its five stages (see Figure 2). The first stage in the innovation-decision process is awareness or Knowledge. At this stage, a potential adopter wants to know what the innovation is and how it functions (Rogers, 2003). The next stages are Persuasion, where the potential adopter forms a favorable or unfavorable attitude towards the innovation, and Decision, where the adopter decides whether or not to try it. The Implementation stage then involves deliberate and planned action as the new idea is put into practice. Finally, at the Confirmation stage, the adopter “seeks reinforcement for the innovation-decision already made and may reverse this decision if exposed to conflicting messages about the innovation” (p. 189). Discontinuance or the decision to reject the innovation after previously adopting it may occur if the adopter is dissatisfied with the results or a better idea supersedes it. In total, the time elapsing between Knowledge and Confirmation may be a period of days, months, or years (Rogers, 2003).

Figure 2. The innovation-decision process (adapted from Rogers, 2003)



2.2 Team-taught Soft CLIL

In the context of Japan, team teaching commonly takes the form of classes conducted at secondary schools by a local, non-native English-speaking Japanese teacher of English (JTE) and a foreign, native-English-speaking assistant language teacher (ALT). The general situation of team teaching has been shown to develop teachers’ teaching skills (Buckley, 2000; Goetz, 2000; Richards & Schmidt, 2010) and have a positive impact on teachers’ ongoing professional development (Bailey, Curtis, & Nunan, 2001; Eisen, 2000; Murata, 2002). Furthermore, previous studies have indicated its potential for CLIL implementation (Hibler, 2010; Ikeda, 2013; Lyster, 2018; Sasajima, 2013, 2019). While there have been reports of subject-focused Hard CLIL implementation in recent years (e.g., Takasago, 2021; Tsuda, 2019), Hard CLIL may be too ambitious for many Japanese subject teachers to teach through the target language due to a lack of language proficiency or systematically employed language-teaching assistants (Izumi, 2021). At present, language-focused Soft CLIL remains the “defacto norm in Japan” (Ikeda, 2019, p. 29); and as a bottom-up approach, it has been left to teachers to find their own ways to adopt and implement it (Ikeda et al., 2021; Morton, 2019).

Olson (2021) explored how Soft CLIL can be realized in a team-teaching situation, and how team teachers collaborated in the process of developing and implementing Soft CLIL lessons. The findings suggested that following a collaborative action-based CLIL teacher development model along with CLIL lesson templates (based on, Ikeda, 2016; Izumi, 2011; Sasajima, 2013) may be a viable protocol for team teachers interested in Soft CLIL. It is still unclear, however, whether teachers generally consider collaboration for CLIL to be too demanding on their time and energy to be worth its purported benefits. More reporting on adoption, implementation,

and evaluation is needed to clarify the overall feasibility and potential of team-taught Soft CLIL in Japan. As such, the present study attempted to answer the following research question. How do a JTE and an ALT navigate the innovation-decision process for adopting, implementing, and evaluating Soft CLIL as an educational innovation for their team-taught lessons at a Japanese junior high school?

3. Methodology

3.1 Data collection and procedures

Data were collected as part of a larger study on collaborations for implementing Soft CLIL in secondary schools. The primary sources for the present study were teacher interviews and classroom footage. Interviews were, in principle, conducted during weekly teacher reflection and planning meetings. The meetings were held via Zoom, video recorded, and ranged in length approximately 30–120 minutes. They were also, in principle, conducted in English, though the JTE also used Japanese. Data from the meetings were transcribed, translated (checked by a Japanese native speaker), and coded using Taguette software (Rampkin et al., 2021) to triangulate findings and facilitate their interpretation.

Teacher meetings were also integral to the collaborative action research approach used for this study (Burns, 2005). The researcher’s stance throughout these meetings was open and interactive; discussions were jointly created so that teachers were free to ask questions to not only the researcher, but also each other. Teachers were thus invited to be “co-researchers,” and told that, for the Implementation stage, the aim would be to learn together and work together at implementing “good” CLIL practices in the classroom.

This was facilitated through the use of a *lesson observation critical incident technique* (LOCIT) adapted from Coyle et al. (2010). According to Coyle and colleagues, LOCIT provides “a framework for professional collaboration, confidence-building and theory development from a ‘bottom-up’ or practical perspective” (p. 69). Using LOCIT, teachers review critical classroom incidents as a catalyst for reflection and in-depth, focused discussions on different aspects of CLIL practice. The LOCIT procedures are outlined as follows: 1) participants video-record a lesson, 2) they review the recording to identify critical incidents or “learning moments” in the lesson, 3) they edit together clips which total no longer than 10–15 minutes in length, 4) they share and discuss the edited version with other participants.

Due to time constraints and not wishing to overburden teachers, critical incidents in the lesson footage were preemptively identified by the researcher for discussion. This also allowed the researcher to fulfill the role of a “change agent” (Rogers, 2003) or promoter who encourages Soft CLIL practices for their teaching context. During the meetings, teachers were, however, free to identify critical incidents themselves, which occasionally prompted further review of the classroom footage. The selected clips focused primarily on salient moments of intended CLIL implementation. The “learning conversations” (Coyle et al., 2010) that emerged from collaboratively reviewing the footage formed the basis of an organic and evolving theory of practice for their team. LOCIT, in this way, provided a forum for articulating what works and does not work and why, helping to triangulate practice-based evidence of successful and unsuccessful CLIL, and facilitating further feedback to guide future planning.

3.2 Participants

Matsu Junior High School (hereafter “Matsu JHS”) is a small public school in rural Hokkaidō. During the time of the study, Matsu JHS had 12 first-year, 7 second-year, and 14 third-year students, and 12 teachers including the JTE (“Morita”) and the ALT (“Benjamin”). Morita was

a 46-year-old woman who had been teaching English at the junior high school level for 23 years. Having never studied or lived abroad, she communicated well in English, but sometimes switched to Japanese when trying to express complex ideas. Benjamin was a 26-year-old man from the United States who had been teaching as an ALT at Matsu JHS for four years. Benjamin self-reported being at a beginner level in Japanese. He fit the description of an “early adopter” (Rogers, 2003) and was oriented toward professional development before learning about the innovation. At the outset of the study, Morita and Benjamin had been team teaching together for three years and reported a high level of trust but a low level of precision (often due to lack of time for co-planning), resulting in amicable but informal collaboration (Hargreaves & O’Connor, 2018) for their team-taught lessons. Informed consent was obtained from the participants before their involvement in the study. To maintain anonymity, pseudonyms are used in place of real names and locations.

A class of third-year students (N = 14), ages 14–15, was selected for the study because of their relatively high proficiency with English (the highest at Matsu JHS), and the teachers’ belief that a Soft CLIL approach would be more beneficial for higher-proficiency students. The teachers reported that their English ability averaged around A1 level on the CEFR scale, with a few students at the A2 level. Morita and Benjamin conducted 50-minute English lessons with these students approximately twice per week, with one day dedicated to their regular lessons using a standardized textbook, and the other day dedicated to Soft CLIL.

4. Findings and discussion

4.1 Knowledge

According to Rogers (2003), during the Knowledge stage, potential adopters want to know more about the innovation and its features. Benjamin initially learned about team-taught Soft CLIL through a newsletter article written by the researcher for *ALT Training Online* (ALTTO), a website dedicated to providing ALTs with skills training and professional development resources. From the perspective of innovation theory, ALTTO offered a platform for a change agent to broadcast information about the innovation and explain the principles behind team-taught Soft CLIL in articles and training videos integrated into their Moodle-based learning modules. ALTTO generously promoted the present study as an opportunity to adopt and implement team-taught Soft CLIL in a community of practice. After reading the promotion, Benjamin sent the following in an email to the researcher expressing his interest in participating.

We [Morita and I] are ready to get started whenever you are! I personally also watched through your video lectures on CLIL and completed the lesson from ALTTO about CLIL. They were very helpful! We do have some questions and a few concerns, too...

Given the situation of team teaching, the degree to which each potential adopter was interested in the innovation was not equal at the beginning of the Knowledge stage. Through email exchanges, questions were answered and resources were shared to ease the concerns—mostly those of Morita—about the feasibility and trialability of the innovation (Rogers, 2003). Although there was no direct contact between the researcher and Morita at this stage, Benjamin’s high level of enthusiasm essentially transformed him into a second change agent, allowing for a more seamless transition to the Persuasion and Decision stages. According to Morita’s later report, video examples of other team-taught CLIL projects and short articles in Japanese were the most helpful for learning about the features of the innovation.

4.2 Persuasion and Decision

Using increasingly interpersonal and direct channels of communication (switching from email

exchanges to face-to-face Zoom meetings), the flow of information accelerated. For the Persuasion stage, conducting Zoom meetings was found to be crucial in alleviating the teachers' concerns, which included students' English abilities, CLIL's fit with the standard coursework, and whether implementing a new approach would be manageable given the teachers' busy schedules and other school responsibilities. After two meetings, including an initial interview with both teachers and an orientation meeting which outlined the scope and requirements of joining the study, the teachers agreed to move forward with a team-taught Soft CLIL approach.

The teachers proposed a 7-week project and negotiated their roles and responsibilities. Following guidelines from Olson (2021), Benjamin stated his willingness to be the planner and leader but was diplomatic in wanting Morita to share in these responsibilities whenever possible. Morita made it clear from the beginning that other school responsibilities would make it difficult for her to commit time. She agreed to the roles of classroom manager and feedback provider but said she may not be able to provide feedback or reflections for every lesson.

During their initial planning meetings, Morita and Benjamin discussed and decided on a potential content topic. At first, they considered a project in which students would choose a country in their groups and research and present on SDGs. Benjamin also proposed an idea for film studies with the end goal of each group planning, filming, and editing together their own short movie in English. Ultimately, however, the teachers decided that the best candidate was Morita's idea for a preference survey project. The teachers expressed their desire to integrate cross-curricular learning in line with the most recent changes to the Course of Study for English (cf. MEXT, 2017, p. 88). In short, Morita wanted to draw on statistical terms that the third-years had learned in math class and practice them in English, and do so in a way that encouraged learner autonomy and project-based learning.

4.3 Implementation

What began as a 7-week project eventually turned into more than 7 months of classes. Initial challenges for the Implementation stage included scheduling setbacks due to COVID-19, the teachers having less time for collaborative planning than they had imagined, and the time and energy required for teacher-made "authentic" materials.

After their first team-taught Soft CLIL lesson, the teachers were asked what they thought was different about the innovation compared to their regular lessons. They reported that they were surprised because it was "so normal," and that the biggest difference was in the preparation, as Benjamin explained:

[Morita] usually tells me what she wants to practice with the kids, so I'll usually break out the same worksheet I used last year, maybe 15–20 minutes on average for prep time, but the CLIL class took hours. ... Overall, I am really happy with how [the first CLIL class] went! Was not perfect, but nothing ever is. The kids seemed to take to it, which gives me even more confidence for the coming aspects: making their own surveys, analyzing the results, and making their own presentations.

In the next class, Benjamin showed students how to create a survey using Google Forms. He gave a short tutorial on what questions can be asked in a survey, showing examples of demographic and content-related questions. After this, the teachers introduced new vocabulary using PowerPoint slides and had students repeat each vocabulary word and write the Japanese translation in their notebooks. This was notable as the first critical incident in their attempt to implement the innovation.

4.3.1 Critical incident #1 – Content vocabulary

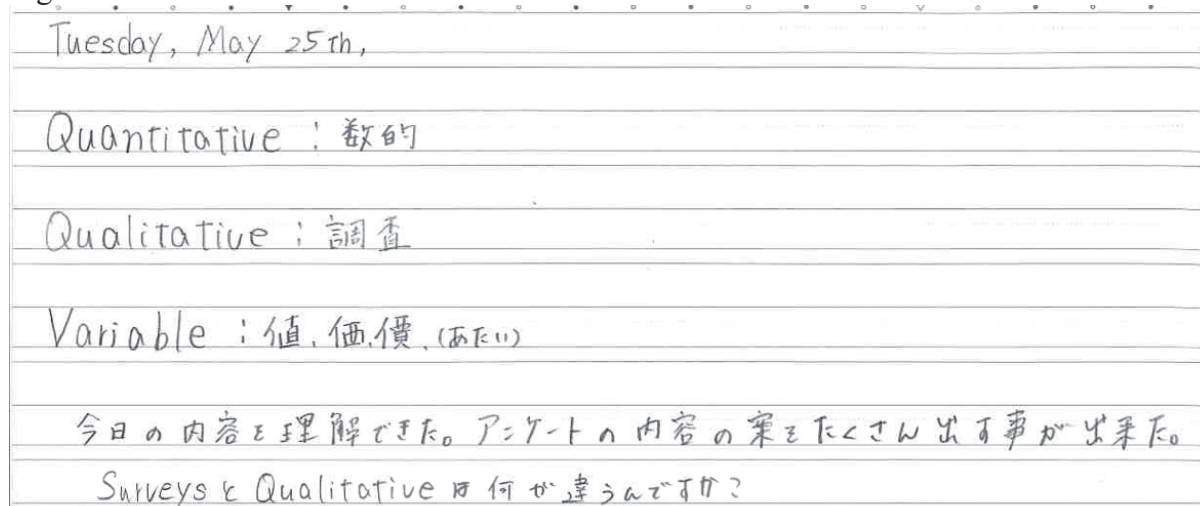
The excerpt below illustrates the critical incident that occurred in the instruction of the new vocabulary. The ALT presents the word for “quantitative” in Japanese as *sūteki* or *kazuteki*, which is actually closer to the English word “numerical.” The slide should have read 量的/定量的 (*ryōteki/teiryōteki*, the correct equivalent of “quantitative” in the sense of “quantitative data”). This unfamiliar translation caused Morita in turn 9 to think that perhaps it is difficult even in Japanese (as it happened, Morita did not know the correct English translation). Benjamin’s comment in turn 10 is then ironic as it is difficult for the wrong reason (i.e., mistranslation). Morita tried to save the situation in turn 12 by asserting that students know it from math class, but in the face of students’ silence is forced to abandon her assertion with a follow-up comment about how they will learn it in high school.

- 01 ALT: Okay, so first new word is quantitative. So please repeat after me. Quantitative.
02 Ss: Quantitative.
03 ALT: Quantitative.
04 Ss: Quantitative.
05 ALT: *Dō iu imi?* [What does it mean?]
06 Ss: *Sūteki, kazuteki.* [Numerical.]
07 ALT: So do you know this word?
08 Ss: (...)
09 JTE: I think even in Japanese we don’t know this word.
10 ALT: *Muzukashī?* [It’s difficult?] Well, that’s okay!
11 Ss: (laugh)
12 JTE: *Ah, but, sūgaku tte sūteki toka mō narrateru. Sūteki na yūi toka iu ... naratta no?* [In math, you already learned *sūteki*. “Numerical advantage” and such... you learned it, right?]
13 Ss: (...)
14 JTE: (laughs) Maybe [in] high school.

Note: Ss means students; (...) indicates no response

In fact, this was only the first in a series of mistranslated vocabulary. The next vocabulary item students repeated and wrote in their notebooks was “qualitative,” translated as *chōsa* (meaning “survey”). This was followed by “variable,” translated as *atai* (meaning “value”) (see Figure 3 for an example of a student’s notebook and the resulting confusion).

Figure 3. Student notebook from Lesson 2

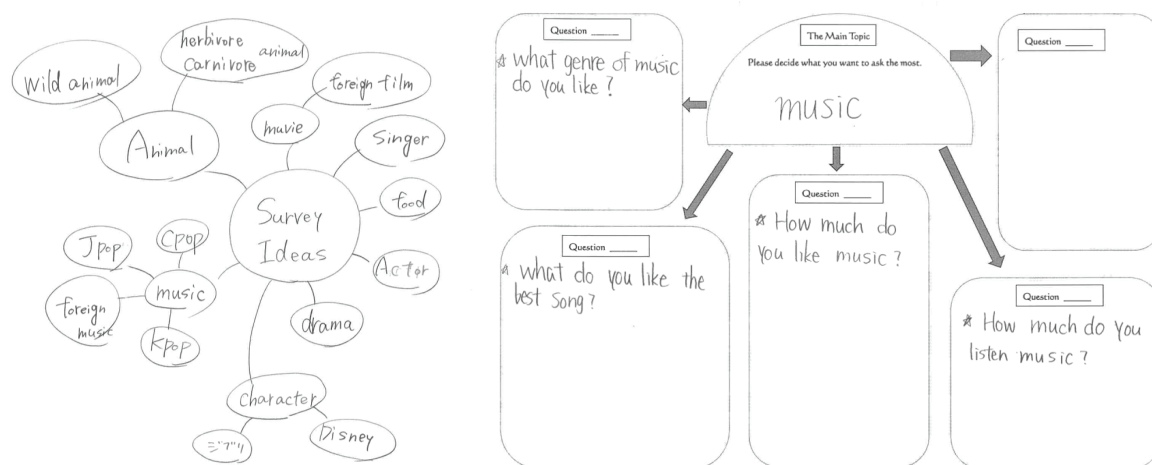


Morita failed to correct these items for the same reason as the first, apparently being unfamiliar with the terms in English. Benjamin, in his reflections on the lesson, mentioned that he regretted not having enough time to check the slides before class, elaborating: “I tried to research on my own but I couldn’t seem to find one correct [translation], so I was going to ask [Morita] but ran out of time.” Morita filled out a feedback sheet for this lesson using a provided template, but she may not have had the time or ability to adequately check the translations.

This incident highlights the potential for quality control issues with teacher-made authentic materials, especially if the ALT and JTE do not have high proficiency with the content subject in Japanese and English, respectively.

In subsequent classes, students were divided into five groups and asked to work with their group members to create a mind map, decide on a theme, and write survey questions of their choice (see Figure 4). Students then entered their questions into Google Forms and distributed the surveys locally to other teachers and family members. Benjamin also used his network of ALT colleagues to distribute the surveys on social media. Each survey received approximately 250 responses, for a total of 1252 responses, a surprisingly large number in just a few days.

Figure 4. Example student mind map and question worksheet



When the students were shown the results, they were surprised and looked puzzled at the data collected. Benjamin explained to the students that the data was confusing because many of the

survey questions were open-ended (e.g., to the question “What country are you from?” some respondents answered “USA” while others answered “United States”). The next step would be to organize and then categorize the raw data. Unexpectedly for both the teachers and students, however, this task required several additional classes as well as time outside of class.

4.3.2 Critical incident #2 – Drowning in data

Morita commented that students were beginning to feel troubled because of the expanding scale of the project. The music group, for example, had the question “Who is your favorite singer?”, which would require students to first look up the names of the 289 responses they did not know, and then decide how they wanted to categorize and code the data for presentation. Growing concerns were also evident from the classroom footage. Seeing the number of responses his group would have to categorize, one male student exclaimed: “*Yabba, kore! Hi ga kureru!* [Oh, no! It’ll be dark out by the time we’re done!]” Morita tried to comfort such students, but Benjamin believed that this kind of anxiety-provoking work was essential for learner autonomy. During the reflection meeting, he conceded:

From a teacher perspective, it’s a hard mental state to be in. Giving the students the chance to do with this raw data what they want, it’s a big “holy cow!” moment, but giving them the chance to do it the way they want as opposed to me specifically assigning “you guys should use these categories,” you know? There’s a grey area where too much unknown is bad... I can imagine some problems will come up, but I won’t [show them or] solve them unless it’s necessary. Yeah, I loved it, I thought it was beautiful chaos, watching them figure it out for themselves.

Although unfamiliar territory for both teachers, Benjamin was, in this way, comfortable with what he called the “beautiful chaos” of the situation. He rationalized that if students could do it on their own, they would feel a sense of satisfaction and accomplishment in their learning. However, perhaps because there was no guarantee that students would be able to do it on their own, Morita seemed to prefer the predictable and controlled activities in the textbook.

After several “work day” classes, in an effort to increase oral output from the students, the teachers asked each group to present their plans for completing the data categorization over the summer break. This was apparently a last-minute addition, and the teachers were unable to scaffold for the task. As a result, students had difficulty expressing what they wanted to say in English, as shown below. Morita follows up with a female student in the group, telling her she needs to decide on a plan for her group by the end of class. The female student then becomes overwhelmed, takes off her glasses, and starts to cry. Morita tries to comfort her by saying: “*Daijyobu! Isshōkenmei yatteiru no wakatteiru kara ne!* [Don’t worry! I know you’re trying really hard!]” Meanwhile, Benjamin is helping another student, unaware of the drama unfolding across the room.

- 01 JTE: How many categories do you have?
- 02 S1: *Jyū...* [Ten...]
- 03 JTE: Ten?
- 04 S1: ...Twelve
- 05 JTE: Twelve? Okay, twelve categories.
- 06 ALT: Group Five, did you assign all questions?
- 07 Ss: (...)

08 JTE: *Zembu wakete yakuwari buntan kimeta?* [Did you divide everything up and decide on roles?]

09 Ss: (...)

Note: S1 is an identified student; (...) indicates silence

This incident exemplified how Benjamin, as the planner and leader, tended to focus on the overall operation of the project, whereas Morita, as the classroom manager, tended to focus on the emotional realities of students. Reflecting on the incident, Morita commented:

I wanted to give them confidence, especially since it was the last class of the semester. ... In the CLIL class, I wanted to emphasize that it was okay to make mistakes, so I wanted the students to express themselves using whatever English they knew, but they were not ready for that.

After the summer break, Benjamin showed the students how to put their data into tables using Google Sheets. His intention was “show, don’t tell, and set them up for success,” reflecting, “We tried to keep the lesson as open as possible: quick, clear explainer of their goal for the day, setting them loose, and troubleshooting as problems came up.” However, anticipating the problems that the teachers would encounter proved to be difficult. For Morita, technical questions from students were challenging because she was less familiar with the software than Benjamin. At the same time, Benjamin’s lack of Japanese ability seemed to put him at a disadvantage in understanding some questions students had about using Google Sheets.

The teachers were, in this way, found to have a complementary yet co-dependent team-teaching dynamic. While this underscores the importance of each teacher’s role in covering for the other, an obvious drawback is that, without both teachers present, there is a risk that the lessons will be ineffective or unsuccessful. This dynamic was also problematic when there was insufficient time for collaborative planning. As they became busier with other classes and school responsibilities, the teachers found themselves unable to communicate before lessons, which resulted in talking at cross purposes in class, contradicting each other’s instructions, and not being on the same page with regards to directing the project work.

4.3.3 Critical incident #3 – Sankanbi

Over the next few classes, the teachers spent time scaffolding speech and presentation skills with exercises from the textbook. One of those classes was a *sankanbi* where visiting teachers from other schools came to view the lesson. At the end of the class, a teacher who had come to observe asks Morita what “CLIL” stands for (see Figure 5). The classroom video shows Morita struggling to remember and then asking Benjamin to explain. However, Benjamin cannot recall either. He eventually has to google “CLIL” to show the teacher its meaning.

Figure 5. Visiting teacher (white) asks Morita (grey) the meaning of “CLIL”



It is worth noting that, at this point, despite having taught CLIL for sixteen 50-minute class periods and discussed CLIL during seventeen 85-minute (on average) teacher meetings, the teachers were unable to immediately define its basic acronym. While the teachers’ knowledge of CLIL may therefore be called into question, it is evident from their classroom practices that they were, in fact, implementing a CLIL approach. This finding seems to indicate that developing a shared meaning of CLIL does not necessarily depend on teachers having declarative knowledge of its concepts. Rather, successful implementation depends on a shared understanding of its procedures and practices, echoing Fullan’s (2015) quip that “the proof is in the ‘putting’” (p. 13).

In the last few lessons, the students spent time creating their presentation aids and recording and re-recording their presentations until they were able to perform without any major mistakes. In terms of diffusion of innovations theory, *synergism* (Henrichsen, 1989) seems to have been established between students and teachers, as Morita commented:

Some students were able to work on their strengths, such as video operation, presentation procedures, and advice on English presentations, and felt a sense of fulfillment in performing their roles. While I worked with students individually, the ALT walked around to each group and supported them.

Henrichsen (1989) points out that, “together, a variety of forces can achieve an effect which, working individually, they would not be capable of” (p. 94). A productive and collaborative classroom dynamic—with students working in groups and each teacher supporting them in their own way—continued throughout the end of the project work. Putting project-based learning into practice, in other words, seemed to enhance synergism, as the class operating as a whole appeared greater than the sum of its individual parts.

For the final class, the teachers had the students watch each group’s video, write down points they found interesting, areas for improvement, and questions to ask during a question-and-answer session that followed each group’s video. In the end, the videos were shorter than expected (averaging just 2 minutes and 1 second among the five groups), and Morita was somewhat disappointed by the students’ inability to “understand the gist or answer even simple questions” during the question-and-answer sessions. Reflecting on the students’ progress, however, Benjamin commented:

I was really happy with the results! The videos were not perfect. However, I certainly had one of those “take a step back” moments last night. The high level and small number of mistakes in their videos was really something. That was some difficult stuff they tackled, and almost none of it was spoon fed to them. Listening to those videos, that writing sounds like the kind of thing someone wrote for them and told them to say. But no. It was their own, and I am very proud of them.

Although their initial plans for a 7-week stint turned into a 7-month journey, including several detours in the project work, the teachers had successfully navigated the Implementation stage of the innovation-decision process. The final step was Confirmation.

4.4 Confirmation

According to Rogers (2003), the Confirmation stage consists of reflection on and reinforcement (or abandonment) of the decision to adopt the innovation. To account for potential changes in evaluation over time, data were collected from participants both immediately after completing Implementation and once again in the follow-up interviews approximately three months later.

In her immediate reflections, Morita noted the importance of flexibility in class scheduling. As the head of the timetable at Matsu JHS, Morita was able to ensure the class periods necessary for students to become deeply involved in the project and HOTS activities, which often took more time than the teachers initially anticipated. If the timetable could not have been easily changed, Morita admitted, the project likely would not have been feasible.

In terms of workload, Morita’s responsibilities as the feedback provider and classroom manager were relatively light compared to Benjamin’s as the planner and leader for the majority of the lessons. Morita recognized that it would be “very difficult for ALTs to do [these responsibilities] without a lot of heart and time.” Benjamin, for his part, reflected on his experience of the innovation as “the definition of a passion project,” elaborating:

As the ALT, this was easily the most satisfying work I have done since beginning this job. The level of engagement from the kids coupled with having real ownership from of the project was wonderful [and] I thoroughly enjoyed making the project and seeing the kids engage. It was also a wonderful learning experience: both as a teacher and just good life experience... I have found that, in teaching, if the kids are not motivated, it does not matter what your lesson plan is; it will likely fall flat. But, with motivated kids, even the most mundane lesson plan can really bloom. With motivated kids and a solidly crafted lesson plan (both of which CLIL supplies?), that is when you can get some really magical teaching moments.

Although he did not regret the time and energy he dedicated to the project, and “would be willing to do it again out of a sense of personal satisfaction,” Benjamin had a hard time imagining his ALT colleagues implementing a similar project. At the same time, he was critical of the status quo of ALTs simply being used as “human tape recorders” or “game machines” (see, e.g., Borg, 2020). To remedy this, he recommended that JTEs be given more training on how to work effectively with their ALTs. Morita also seemed to recognize that ALTs are underutilized and hinted at their value for CLIL:

If you start out as an ALT right after graduating from college and just want students to have fun in English, or if you are just called in for one-shot school visits, the focus will of course be on games. However, I learned through this project that the more ALTs

themselves are aware of the learning process, the more they can motivate and inspire students to learn. Having ALTs that understand that process, we JTEs will also be able to value the learning process. I'm very glad that [Benjamin] understood scaffolding and made a detailed plan for us.

Morita's reflections here suggest that ALTs who learn CLIL and expose its methods to their JTEs may, in turn, cause JTEs to value their ALTs for more than just reading scripts or playing games in English. Her comments also corroborate Gorsuch's (2002) findings that JTEs may experience personal and professional growth as a result of team teaching a new method with ALTs. Indeed, Morita reflected on participating in the study as a kind of training program:

The good points of this training were the opportunity to learn about CLIL itself, but also the importance of the process of creating a class together with an ALT, the fact that you cannot proceed in team teaching without a clear goal, and the learning that you can realize because of the difference in values and culture between the two of you... I have always gotten along well with [Benjamin] and enjoyed teaching, but through this training I was able to enjoy myself even more in creating my own classes.

These observations chime with claims about the benefits of the team-teaching situation (Goetz, 2000; Worrall et al., 1970) and the importance of being aligned to a common goal (Cushman, 2013) for successful collaborative teaching partnerships.

Given their overall positive experiences, it is perhaps unsurprising that the teachers chose to not only continue adopting the innovation immediately (by conducting a shorter iteration of the survey project with their second-year students) but also to implement additional CLIL projects with their third-year students in the near future.

5. Conclusion

This study was an attempt to use Rogers' (2003) diffusion of innovations theory to explain how team teachers at a Japanese junior high school came to know Soft CLIL, put it into practice through a trial-and-error process, and evaluate it as an innovation worthy of continued adoption. The findings showed that the ALT's strong desire to increase his knowledge of Soft CLIL helped facilitate its potential adoption. Utilizing increasingly interpersonal communication channels then helped the less enthusiastic adopter, the JTE, to understand the innovation and persuade her to trial it for their team-taught lessons. For implementation, a collaborative action research approach in combination with LOCIT (Coyle et al., 2010) during regular reflection meetings with the researcher appeared to be effective for raising awareness and developing a shared meaning of Soft CLIL. Interestingly, this shared meaning appeared to be mostly procedural and somewhat orthogonal to the teachers' declarative knowledge of CLIL principles. In effect, putting the innovation into practice, even if sometimes inadequately, and reflecting on successes and failures within a community of practice, seemed to have led to realistic and co-constructive professional development for the teachers.

Ultimately, the teachers had positive evaluations of the innovation, finding it to be motivating for themselves and their students, which resulted in its continued adoption at their school. The ALT found the innovation to be more interesting and fulfilling than his regular teaching situation and believed that, although it took additional time and energy, it was worth it for the sense of job satisfaction for himself and for instilling a sense of ownership and achievement in learning for the students. The JTE found the innovation to be practical, enable deep learning, and lead to increased motivation for students. She believed that, although it required flexibility

with the regular curriculum and more time for coordinating with the ALT, it was worth it for the benefits it provided to students as well as the improvements over her own lesson planning. Finally, the students appeared to enjoy the project work, especially for its cooperative learning aspects, and despite finding it challenging, wanted to continue taking CLIL classes.

Recently, Soft CLIL has been heralded as a third revolution in English language teaching and the innovation in language education required for achieving the aims of globalism (Ikeda, 2019; Tsuchiya & Pérez Murillo, 2019). As Fullan and Promfret (1977) point out, however, “the whole area of implementation [has been] viewed as a ‘black box’ where innovations entering one side somehow produce the consequences emanating from the other” (p. 337). This study has attempted to shine a light into the “black box” of educational innovation by tracking the innovation-decision process of participants and providing some “color commentary” (Warford, 2017, p. 24) with regards to how Soft CLIL is adopted and implemented in practice.

With the rising popularity of CLIL in Asia, it is thus hoped that this study may offer hints for how Soft CLIL can be diffused through the existing system of team teaching between native and non-native language teachers. More research is still needed, however, to refine collaborative planning tools and establish effective guidelines for team teachers interested in Soft CLIL. Furthermore, although CLIL has been criticized for its high-achiever selection bias for students (e.g., Bruton, 2011), it is surprising that the literature has yet to address its high-achiever selection bias for teachers. The teacher who initiated CLIL adoption and implementation in the study (Benjamin) may be criticized for his “buying in” to the innovation and therefore being overly invested in making it work for his teaching situation. Additional qualitative studies that focus on how teaching partners (like Morita in the present study), who may initially be in the position of “going along with” the innovation, react and change as a result of implementation, will provide greater insights into the ripple effects of the innovation and its potential to spread positive changes to the status quo of team teaching.

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Changing Attitudes of a University Physical Education Teacher Through Teaching CLIL Classes: An Interview with a Cheerleading Teacher

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Abstract

In this study, cheerleading Content and Language Integrated Learning (CLIL) classes in English were conducted at a university in the Kansai area of Japan as part of a collaborative curriculum taught by a content teacher with the support of a language teacher. The physical education teacher, who specializes in cheerleading but not English, continued to teach the classes for three years, from 2019 to 2021. The participants were 16 second-year students from the Department of Early Childhood Education, and the CLIL program was conducted six times in total. After the six sessions, a semi-structured interview was conducted with the teacher. The audio data obtained from the interview was then transcribed and coded to be compiled into a figure, applying a thematic analysis. Qualitative analysis was also conducted to elucidate the teacher's mentality when teaching in English. The main finding from the study is that the teacher learned conversation skills, the importance of English communication, and specific teaching tips through the cheerleading CLIL lessons. While embodying the principles of CLIL in the lesson, whereby both content and language are taught, the teacher challenged herself and was open to all possible educational effects. In addition, the results show that the teacher was aware of the depth and breadth of inter-curricular collaborative learning and was attracted to the potential benefits of CLIL.

Keywords: CLIL, Cheerleading, Physical Education Teacher, Content Teachers' Attitudes, Collaborative Curriculum

1. Introduction

In recent years, various educational programs have been developed in elementary and junior high schools. The Course of Study (MEXT, 2017), states that for children and students to thrive in the 21st century and beyond, it is necessary not only to adapt to a changing society in this era of rapid change, but also to pioneer a new future. Matsuo (2017, p. 922) also indicated that children and students need to use their own sensibilities to actively learn what kind of society and life would be better for the challenges they face. They also need to collaborate with diverse people to create new values.

Moreover, amid the demand for high-quality early childhood education, the goals of education and childcare in the childcare field has evolved significantly. Importance is placed on deepening the understanding of each child and supporting the child's development and learning continuum. This is done in order to nurture the foundation of "zest for life" in terms of feelings, motivation, and attitude. It is also important to work with the continuum of life and development for children (Muto, 2017, pp.28-29).

The Course of Study states that it is important to develop the ability to communicate with others and to respond flexibly to different situations. To achieve this, it is necessary to learn subjects comprehensively while linking them with other subjects, rather than learning each separately. This is why CLIL has been attracting attention in recent years. CLIL is a dual-focused pedagogy in which an additional language (other than the native language) is used to learn and teach content and language simultaneously (Coyle et al., 2010, p. 1). CLIL uses a framework of “content,” “communication,” “cognition,” and “culture/community” (4Cs), which is stated to be effective for learners (Coyle et al., 2010, pp. 48-85).

In addition, in junior high school health and physical education courses, martial arts and dance became compulsory in 2012. The dance component consists of “creative dance”, “folk dance,” and “modern rhythmic dance”. Emphasis is placed on enriching communication with peers through expression by capturing images and interaction through dance. These dances are the movements that allow students to experience the pleasure of dancing with their peers with emotion and expressing themselves (MEXT, 2008). Therefore, this study will examine the effectiveness of a cheerleading CLIL class conducted by a physical education teacher at a college.

Regarding cheerleading instruction, Shiojima, et al. (2002) tells as below. Improvement in the physical fitness components of flexibility and muscle strength is a physical effect that can be expected through cheerleading activities. In cheerleading learning, positive emotions such as “enjoyment” increase as the learning progresses. Not only that, negative emotions such as “embarrassment” and “distress” have been shown to decrease. This indicates that cheerleading activities result in considerable positive mental effects. Cheerleading is a suitable activity to be included in CLIL not only because the name of the technique is English, but also because it improves physical fitness, conveys the joy of exercise, and is an enjoyable form of expression. Thus, the present study addresses the following research questions (RQs):

1. Can a content teacher who does not specialize in English succeed in CLIL teaching?
2. To ensure a successful class, how should the teacher proceed?

The measurement of the effectiveness of this instruction will be organized in the form of interviews, and the discussion will concern how content teachers who do not specialize in English should proceed with CLIL classes.

The classes continued for three years, from 2019 to 2021. The content teacher who taught the classes was supported by a language teacher. Based on interviews with the content teacher about her experiences and findings, how content teachers should create CLIL classes was examined in light of previous research.

2. Previous Research

2.1 Teachers' Expectations and Anxiety about CLIL

Although there are few studies on the way CLIL teachers create their classes, such studies are now gradually increasing in Japan. One such study was conducted by Ito and Nakata (2019) on the challenges and concerns of teachers working with CLIL. In particular, elementary school teachers and non-English teachers working with CLIL are worried about having to plan and conduct all the lessons themselves. They can teach the content well, but they lack the confidence to assemble the content and English as CLIL. To solve this, it is better if several teachers work together instead of one person doing it all. This will remove a great deal of anxiety.

In addition, teachers outside of the English Department become anxious because they lack confidence in their own English skills. To overcome this, it is important to rehearse many times during the class preparation stage to make sure they have a good grasp of English before teaching. Then they will be able to teach with confidence. As many CLIL classes are conducted in collaboration with other subjects, teachers need to meet regularly to discuss the content of their classes and their students. In other words, building good communication with colleagues is the first step to a good CLIL class (Ito & Nakata, 2019). However, even with the best preparation, many classes will go in different directions from what is expected. It is also necessary to accept such situations as learning opportunities and to develop the ability to make flexible judgments according to the situation.

2.2 Research for the Cheerleading Study

“CHEER” in cheerleading means to cheer up, to give courage, to encourage others, and to be in good spirits. “LEADER” means something like a conductor. A leader in cheerleading does not refer to one person on a team, but each cheerleader is a leader. When cheering at sports events, the spectators are the cheerers and the cheerleaders conduct the spectators. Cheerleaders are people who cheer and encourage the athletes and people around them. That is the characteristic of cheerleading (Nakamura, 2005, p.13). Cheerleading has become established as a competitive sport in Japan and is characterized by its style of cheering for other athletes.

Previous research on cheerleading includes literature reviewing the history and summarizing the process of circle activities at one university (Sakamoto et al., 2020), and physical movements such as jumping movements and injuries (Yamamoto & Sakuma, 2009). In cheerleading, voice and movement are not one-way transmissions from the performer to the viewer. The aim is to create a two-way communication in which the audience responds by cheering and clapping along with the performer as a result of their feelings being conveyed to the audience. Furthermore, in university education, it is important for students to communicate using words as well as physical exercise to develop social skills and collaborate with other subjects (Nara, 1996).

In terms of CLIL, research on students’ needs in college physical education has shown that students are expected to develop practical lessons for their post-graduation careers, along with improving their language skills. It has been suggested that physical education classes not only contribute to students’ health education and health promotion practices but are also highly useful as a primary function of motivation in English language learning (Tsuneyuki & Hasegawa, 2018). Including these elements, the practice of cheerleading instruction with CLIL as a creative way of teaching physical expression classes is expected to have educational benefits.

2.3 Cheerleading CLIL Lesson

The teacher conducted a class at a junior college in the Kansai region from 2019 to 2021 to give beginners an introduction to cheerleading. Kobayashi (2020) and Ito (2021) reported the contents of the first year's classes. The group was comprised of 16 second year students (19 and 20 years old) who took the class. Six classes in 2019 were conducted. The teacher also continued the CLIL classes the following year, six online classes were conducted in 2020 because of the influence of COVID-19. In 2021, the first three classes were held online, and the second three classes were held in person. With the cooperation of the students, the class was a success.

Also, she used visual aids so that the students could understand the content from the video. With the teacher's efforts to devise good ways of teaching, the students' responses became much better, and the teacher' instruction became smoother. The teacher felt that the lesson was successful because of the changes she had made.

3. Current Study

3.1 The Purpose of the Study

This study has been set up to verify the two research questions in the introduction. Through the CLIL cheerleading lesson, class content and changes in the attitude of the teacher were examined. An interview with the teacher was conducted and the results were analyzed qualitatively.

3.2 The Teacher's Background

This study is an interview of a physical education teacher who teaches a physical expression class at a college. The teacher originally specialized in basketball but switched to cheerleading at university and started a cheerleading club. As a founding member, she led the club for four years. Although she was a beginner in cheerleading, she practiced hard and participated in an important championship. In her senior year, she studied abroad for three weeks and cheered with the cheerleading team at the University of Western Ontario, Canada, which was a partner school of her university. After entering the workforce, she completed four years of experience as a cheerleader for a corporate American football team. She has also cheered at an important match that decides the number one American football team in Japan. In addition, she has coaching experience and has taken the exam to become a judge. Later, she became a physical education teacher at a college, where she continued to teach a variety of physical activities while incorporating elements of cheerleading. Then she learned about CLIL. As for English, her proficiency was low and she lacked self-confidence. For this teacher, CLIL instruction was a big challenge.

Figure 1. A Picture of the cheerleading CLIL lesson in 2021



3.3 Interview

This study reviewed a cheerleading CLIL class conducted by a college physical education teacher for three years. The teacher was interviewed to learn how her awareness of English and her feelings about teaching English changed after teaching the cheerleading classes. A 60minute semi-structured interview was conducted with the teacher regarding her perspectives on teaching English. The prepared questions were as follows.

- (1) What made you decide to try CLIL?
- (2) Was teaching in English difficult for you?

- (3) Were the students receptive to your English and what did they learn?
- (4) What do you think is the significance of doing “cheerleading” in English?
- (5) What kind of English skills do you feel are necessary for teaching in English?
- (6) What do you think of cheerleading in CLIL?
- (7) This is your third-year teaching cheerleading in CLIL. How do you feel your teaching has changed?

3.4 Procedures

The audio data obtained from the interview was transcribed into the script. Then, it was converted to text, divided into units of analysis by semantic clusters, and coded (Nakashima, 2020; Sato et al., 2020). Coding was conducted with reference to the analytical method of open coding (Urano et al., 2018). Coding was done by reviewing the code names multiple times and then collecting codes with similar semantic content and categorizing them. In doing so, the data was reexamined many times. To increase the reliability and validity of the analysis, the data was recoded after a time interval from the initial coding, and triangulation was conducted with two researchers checking the data. The responses were then organized and illustrated by applying thematic analysis. The reason for using this method was to obtain an objective reading of the sentences and phrases from multiple perspectives, which tends to be subjective in analyzing interviews. Then, a qualitative analysis was conducted based on the illustrated data to elucidate the mentality of the teacher when teaching in English. From the results obtained from this analysis, clues for improving future CLIL classes by content teachers were found. Also, directions for future class development were explored.

4. Outline of the Lesson

In the cheerleading CLIL classes that were conducted, recreation was used at the beginning to promote communication between faculty and students and among students. The topics and contents of each class are shown in Table 1 below. Students were able to learn all the basic cheerleading movements, arm motions (arm movements), calls (shouts), partner stunts (gymnastics-like techniques), and cheerleading dance moves. Students were able to experience the fascination of this discipline by matching the timing of their movements, creating a performance with their peers, and experiencing the process leading up to a performance presentation.

Table 1. Lesson Topic and Content

No	Lesson topic	Content
1	Basic Movements – Let’s try to move like a cheerleader.	Listen to the explanation about cheerleading. Students will conduct stretching, body tightening, and basic movements (arm motions, kicks, jumps, and calls).
2	Call (sideline) – Let’s shout out the movements.	Can try to call and dance by combining the basic cheerleading movements. Can hold pompoms.
3	Partner Stunts – Let’s try to do partner stunts.	Can understand the roles of partner stunts (top, base, and spot) and can try them out. Understand the importance of synchronizing the timing.

4	Cheer Dance – All members dance with pom-poms.	Can practice cheer dance with elements of cheerleading. To be able to dance with a smile, to synchronize the timing, and to memorize positions.
5	Complete the performance – Know the importance of synchronizing the timing.	Practice performance with motions, stunts, and dances. Memorize the movements that complete a song .
6	Acting to create a sense of unity – Complete a performance with all members.	Complete a song and move through a simulation. Can perform formation moves smoothly. Stands can also be performed and completed.
7	Performance presentation. – Let’s perform with full energy, courage, and smiles.	To be able to feel a sense of unity and accomplishment. Be able to express the cheerleading performance completed in practice 6.

Figure 2. Example of Teacher Talk

Have you ever seen cheerleading? To cheer means to encourage people, and all the cheerleaders lead the crowd together in cheering for their team. The charm of cheerleading is that you can connect with the audience by supporting sports like American football or baseball.

Cheerleading was born in the United States, so all movement expressions are in English. “Heel Stretch!”, “T-motion!”, “Straddle jump!” We also use equipment such as pompoms.

Now, let’s think about original movements using 8 beats in groups.

The two go hand-in-hand, as English is originally used in many of the terms used in cheerleading. In class, English is used mainly for Teacher Talk (Figure 2) and expressions about movement. It is important to be careful when using English in the teaching of physical education, and it is essential to thoroughly teach expressions related to safety in the first hours of class to avoid injury in dangerous situations. The 4Cs of CLIL in this class are shown in Table 2. The significance and history of cheerleading were introduced, and the two were connected through English expressions of movement. One of the charms of cheerleading is that students cooperate with their peers, exchange opinions, and breathe together to create one performance.

Table 2. 4Cs of the Lesson

Content	Learn the significance and history of cheerleading and experience it firsthand.
Communication	Listen to and understand English expressions of cheerleading movements, and naturally connect the movements with English.
Cognition	To create a beautiful performance by joining hands with peers.

Culture/Community	Cooperate with their peers and exchange opinions. Learn about cheerleading as an American sport.
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5. Result

This section summarizes the results of the interview with the teacher. Table 3 shows a sampling of the interview data. The audio data were converted to text and coded.

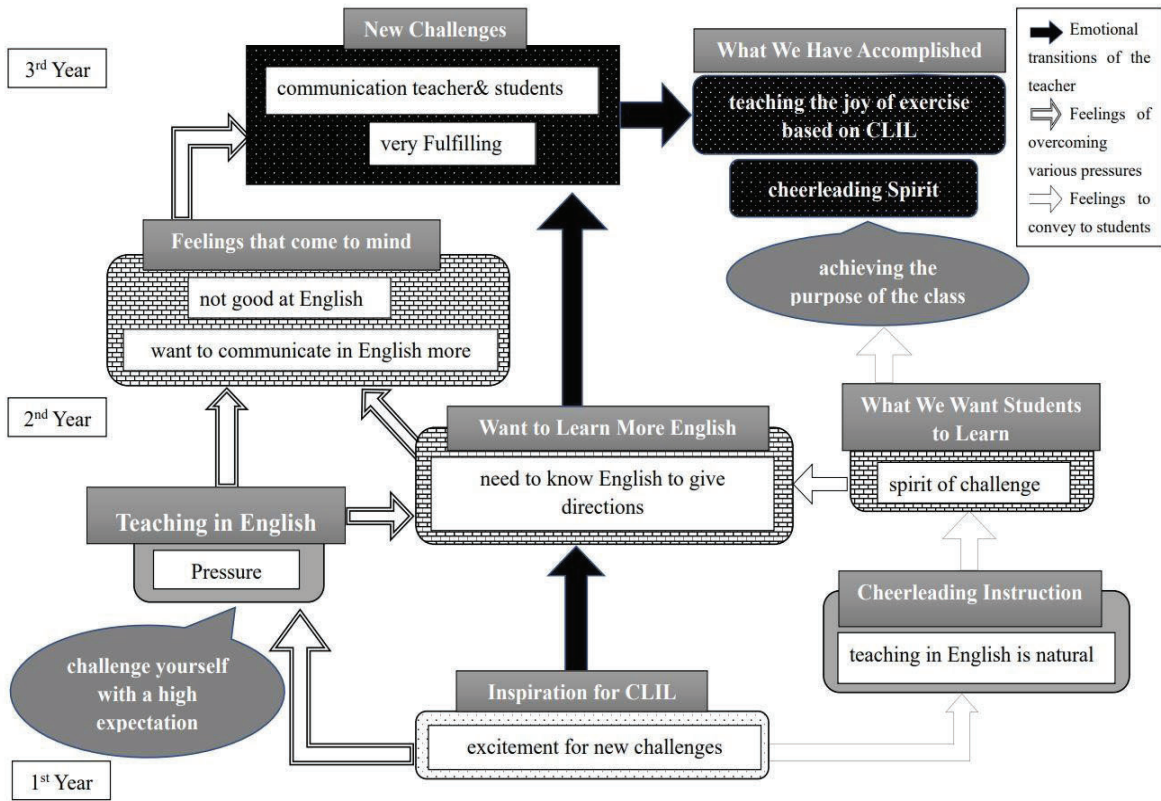
Table 3. A Sampling From Interview Data

	Code
I: What do you feel is the reason for cheerleading?	
T: Cheerleading was born in the U.S., so all the expressions of the movements are in English.	Originated in America
I felt that cheerleading is originally English, but we Japanese only use Japanese language to understand and perform it.	Teaching in English is natural
I: What did the students learn from you?	
T: In both sports and languages, by giving it a try without being afraid of being bad at it, you can have fun and experience a world you didn't know. Maybe it is the importance of challenging yourself in everything.	Spirit of challenge
I: Were there any difficulties?	
T: I felt a lot of pressure to communicate in English, which I cannot speak with confidence, even though I can communicate in Japanese without difficulty.	Pressure
I usually like to talk with people, but it gave me an opportunity to think about people in various positions, wondering how people who lack confidence in speaking might be feeling.	Being close to people who have difficulty talking

Note: I: Interviewer, T: Teacher

Figure3 below is an organized and illustrated diagram of the interview data. Codes with similar semantic content were collected and categorized, and relationships between categories were diagrammed. Time flows from the bottom of the figure to the top.

Figure 3. Illustration of the Teacher’s Interview Data



In the first year, the teacher took on the challenge of CLIL with a positive attitude, confidence in the experience, and confidence as a teacher with a strong cheerleading background. However, the teacher felt pressure to teach in English and had great anxiety about whether the students were understanding because it was difficult to teach the details of cheerleading in English. While cheerleading with CLIL, the teacher began to feel the significance of teaching in English because all cheerleading moves are in English. The teacher had considered herself a good communicator, but she suddenly became reluctant when it came to speaking in English. Due to this, she came to understand how people feel when they do not have confidence in public speaking.

The second year involved online classes only, and there were no significant changes. The students were cooperative, and the teacher wanted the students to be challenged, to overcome their weaknesses, and to work on their English and cheerleading skills. Eventually, she found herself wanting to learn more English. Looking back on the class, she realized that she had been unconsciously translating English cheerleading terms into Japanese and using them. Therefore, for the third year of classes, she worked on specific class improvements, such as memorizing the talk perfectly, aiming for smooth Teacher Talk (Figure 1). Until then, she had difficulty remembering them, and even when she finally learned them, she could not speak with confidence. However, through repeated practice and word-for-word memorization, the anxiety of the Teacher Talk decreased. Then the feeling that she wanted to communicate in English with people more came to her mind.

As a result, the third year of teaching was a great success. The success of the Teacher Talk greatly increased the students’ motivation for the class. In the questionnaire, the students said

“the CLIL method of teaching allowed them to enjoy English” and “it was fun to understand English and to work together”. The students also commented that they would be able to utilize CLIL instructional practices in their childcare. Their reason for this was that English-based education is increasing and being able to learn English while dancing will lead to fun learning.

Furthermore, communication between the teacher and students and among students became smoother. The teacher began to feel the real pleasure and fulfillment of her teaching job from her experience in this class. In other words, it can be said that the teacher achieved the purpose of the class, “to teach the joy of exercise on the basis of CLIL”. The teacher felt like she would like to work harder.

At the beginning of , she was apprehensive and fearful about teaching in English every week. However, the advice she received from the language teachers and the practice of Teacher Talk became a major turning point. The teacher was also creative in the teaching method and found enjoyment in having more time to communicate with others rather than just teaching content. For the teacher, the fact that she was able to continue the program for three years gave her great confidence. This showed that there was a significant change in the mindset and awareness of the teacher.

6. Discussion

The research questions for this study were as follows:

1. Can a content teacher who does not specialize in English succeed in CLIL teaching?
2. To ensure a successful class, how should the teacher proceed?

This teacher wanted to expand the range of languages to students in a class that conveys the joy of cheerleading, so she took on the challenge of CLIL. At first, the teacher focused on speaking the language well. However, after three years of learning the language of instruction with the help of an English teacher, the teacher was able to focus on communicating cheerleading as usual. As a result, while communicating with students, they were able to convey the joy of cheerleading through English. It is suggested that the significance of participating in these CLIL classes for students is not only cheerleading, but also the experience of being exposed to languages other than their mother tongue.

7. Conclusion

The purpose of this study is stated below. Through the cheerleading CLIL class, class content and changes in the attitude of the teacher were examined and analyzed. The results revealed the following. The teacher’s concerns about teaching in English and her changing attitudes over the three years were examined. The results of the analysis revealed the following.

- (1) The physical education teacher learned the importance of English communication, conversation skills, and specific teaching tips through the cheerleading CLIL lessons.
- (2) The teacher practiced the Teacher Talk repeatedly before teaching, which changed her attitude toward English. This gave her confidence in her ability to teach in English.
- (3) While embodying the CLIL principles of teaching both content and language in the lessons, the teacher challenged herself and looked at all the educational benefits.
- (4) The teacher recognized the depth and breadth of subject-connected learning and was attracted to the potential benefits of CLIL.

Although the teacher tried CLIL for the first time, she struggled severely with English. This was because she was worried about whether the detailed instruction was being conveyed to the

students. However, she realized once again that all cheerleading terms are in English, and she began to feel the significance of teaching in English. Then she memorized the Teacher Talk word-for-word and repeatedly practiced the English used in class. The success of the class gave her a sense of accomplishment and a desire to do more.

From the above, it is clear that a content teacher who does not specialize in English is able to succeed teaching CLIL. The participant teacher challenged herself to learn cheerleading instructions in English and was able to focus on instructing cheerleading as usual. The teacher would like to continue teaching cheerleading in English while also developing her own English skills. She would also like to try teaching other sports events with CLIL. As a limitation of this study, it is difficult to apply and generalize this research to other content teachers because the interview focused on one teacher and delved into only her transformation. However, it can be said that even teachers who are not good at English can conduct smooth CLIL classes by practicing repetition of English used in Teacher Talk and classes and by implementing introduction methods that involve learners. To effectively promote CLIL in the future, neither content teachers alone nor language teachers alone are sufficient. It is essential for both to work together to create better classes.

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The Potential of CLIL for General Education Courses at Japanese Universities

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Abstract

Content and Language Integrated Learning (CLIL) is widely supported in Japan, but it is still not fully understood, and many teachers believe it is challenging to apply CLIL methodology to elementary English learners or general education university classes. Some still doubt the validity of the CLIL approach, but the reality is that CLIL is used successfully. This study revisits the basic idea of CLIL methodology and explores the potential of using the CLIL approach, with a focus on non-English major English university classes. 44 Education major sophomores took part in this study and answered closed-ended and open-ended questions, at the end of the semester after implementing 13 CLIL classes, to try to understand student attitudes toward the CLIL-based English classes. Open-ended questions were also implemented, before and after the semester, as a means to compare students' observations of CLIL classes and other EFL classes; in addition, pre-and-post-TOEIC reading or listening tests were conducted to assess skill development during the semester. Responses from the closed-ended questions suggested that a CLIL approach could be effective for English language learning in general education university English courses in Japan; and that CLIL activities should be applied in general university English courses in order to help students focus more on content meaning and to increase their motivation in learning English.

Keywords: CLIL, general education classroom, university, positive attitude, listening and reading skills, negotiate meaning

1. Introduction

Content and Language Integrated Learning (CLIL) was first adopted as national policy in some parts of Europe in the 1990s to promote mobility and interaction between citizens all across the European Union (EU). The European Commission experimentally started CLIL as a project to advance the Common European Framework of Reference for Languages (CEFR) (Sasajima, 2020). The success of the practice reports acted as a stimulus for CLIL to spread all over Europe in the 2000s (Sasajima, 2020), and now CLIL is being widely used and developed in many other countries, including Japan. However, CLIL is not well understood in Japan, with some practitioners being skeptical about its efficacy (Sasajima, 2020). English teachers in Japan, who are mostly Japanese, seem to feel uncomfortable applying these new ways of teaching English since teachers generally tend to stick to the way they learned at school when they were students (Sasajima, 2015), which is in most cases not CLIL. Moreover, it has been posited that it would be a major challenge to apply CLIL methodology with course activities for elementary-level English learners or in general education classes in Japan because students who study English through CLIL are thought to possess high motivation and have good English skills already; accordingly, it was thought that a comparison of CLIL and non-CLIL classes would not produce valuable results (Ikeda, 2015).

However, numerous studies on the effect of CLIL methodology have found that this is not the case. For example, Yamano (2013b) suggested that a CLIL program would improve elementary school EFL education in Japan, Lasagabaster and Sierra (2009) found that CLIL fostered positive attitudes and English learning motivation in Spanish secondary students, and Uemura

et al. (2019) concluded that using CLIL could motivate post-graduate mechanical engineering students to learn English as it would foster a positive attitude toward learning English.

In this study, I targeted non-English major undergraduate students taking an English class as a general education course. It is generally believed that Japanese university students' English skills decrease over time compared with when they were studying for the college entrance exams (Horiuchi, 2002) because they do not have any more motivation to study English in many cases. As a result, motivating students to keep learning English is of increasing significance for university English education in Japan, and exploring the potential of CLIL in university non-English major English classes can provide valuable insights. Moreover, it is important in terms of second language acquisition theory: motivation is one of the only factors that teachers could control in the classroom for language learners. A teacher cannot change learners' age, language aptitudes, or other characteristics (Ozeki, 2013). Can CLIL-designed courses improve motivation? This study experimentally explored the potential and the effectiveness of CLIL in university general education English courses.

This study is organized as follows. Section 2 provides a comparison between the methodology of CLIL and prominent second language acquisition theories. Section 3 considers previous studies and links them to the research questions of this study. Section 4 describes the study method and class activities. Section 5 shows the results of this study and section 6 provides a discussion of its findings and conclusion.

2. CLIL and its Theoretical Background

Though the methodology of CLIL has been widely applied across the world, it is said that a fully articulated CLIL theory has not yet been developed (Dalton-Puffer, 2008, Lorenzo & Moore, 2010). However, according to Sasajima (2020, p.7), "CLIL is not a new teaching method at any price, but it is quite a simple education. In other words, it is a type of integrated learning combined with diverse ideas like a patchwork quilt." As Dalton-Puffer notes, CLIL is "both an old and a new methodology" (Dalton-Puffer, 2007) that is being applied in a new way. Accordingly, there is a possibility that English teachers have already been implementing some parts of CLIL in their classrooms.

From here onwards, to understand more about CLIL, the first part introduces the core CLIL pedagogical principles. Then, prominent second language acquisition (SLA) theories are overviewed to compare them with the CLIL principles. The core CLIL principle is to integrate content and language with cognition and intercultural awareness (Coyle et al., 2013). The content principle focuses on the acquisition of new knowledge, understanding, or skills and can be thematic (that may include issue-led research such as world poverty), cross-curricular, or as a single project (Coyle et al., 2013). Because learners are learning content knowledge through another language (usually English), they are often more motivated to learn the language (Sasajima, 2020). Generally, language learning involves learning grammar; vocabulary; pronunciation; and the four skills of speaking, listening, reading, and writing. However, CLIL emphasizes interpersonal communication, such as group work, pair work, discussion, and language use rather than the learning of language skills (Ikeda, 2012), with the language needed to be learned through learning content (Coyle et al., 2013).

Cognition is related to learning and thinking processes, with cognitive engagement being one of the important CLIL factors. Bloom's taxonomy (1956), which was later revised by Anderson and Krathwohl (2001), is generally referred to within the CLIL cognition framework as it

emphasizes higher-order thought processes, such as analyzing, evaluating, and creating, rather than lower-order thought processes, such as remembering, understanding, and applying. According to Coyle et al. (2013, p.30), a “connecting of thinking processes to knowledge construction resonates with conceptualizing content learning in the CLIL setting.” However, the idea of Bloom’s taxonomy is just classifying the learning quality, and it is used in the CLIL activities as one of the things to keep in mind for a higher-order thinking and learning (Sasajima, 2020).

CLIL can be used as a tool to study culture. There can be a culture focused on developing intercultural awareness and global citizenship through understanding diverse cultures and the differences between people and cultures. The above-introduced content, communication, cognition, and culture are referred to as CLIL’s 4Cs framework (Coyle et al., 2013), which all need to be organically and intentionally integrated into CLIL classes to achieve high-quality education (Ikeda, 2015). The CLIL 4Cs framework is considered to be CLIL’s pedagogical principles, and CLIL classes are organized following the 4Cs framework.

The practice of CLIL is connected to the three main SLA theories: the input hypothesis (Krashen, 1985), the interaction hypothesis (Long, 1996), and the output hypothesis (Swain, 1995). Each of these is an independent concept, but all of these are encompassed in the SLA cognitive approach (Baba et al., 2018). These hypotheses have been combined with the *interaction approach* (Gass et al., 2020) and the *input, interaction, and output model* (Block, 2003). However, these three hypotheses to assess whether they are congruent with CLIL methodology and the 4Cs framework are examined.

First, the relationship between Krashen’s input hypothesis and CLIL. “CLIL offers a natural situation for language development. This natural use of language can boost a youngster’s motivation and hunger toward learning languages” (Marsh, 2000, p.3). Under instruction influenced by CLIL methodology, learners can learn languages effortlessly in a similar way to learning their first language. This assumption follows Krashen’s (1985) input hypothesis, which assumes that a person’s language acquisition device is an innate mental structure (Chomsky, 1965). Krashen believed that the first language acquisition and SLA processes were the same and that a considerable quantity of comprehensible input activated this innate structure; that is, the second language (L2) can be obtained through comprehensible input that is slightly ahead of the learner’s current grammatical knowledge, with the learner’s current level being i and the next level being $i + 1$. As the input should not be too easy or too complicated, the input the learner should be exposed to is the comprehensible input at $i + 1$.

In the CLIL classroom, the teacher’s instructions and the learners’ in-class activities (listening, reading, discussion, group work, pair work, and solo presentation) are held using the target language at a comprehensive level. To do so, teachers use teacher talk to make their speech more understandable to learners as a kind of scaffolding. The learner’s first language is allowed to be used when necessary; that is, there will be times when the class will contain bilingual elements. As the learners are exposed to many examples of understandable target language inputs, learning in a CLIL environment could be said to satisfy the conditions in Krashen’s input hypothesis.

Long (1996)’s interaction hypothesis evolved from an extension of Krashen’s input hypothesis. Long (1996) suggested that rather than practicing specific features such as one-way reading or input from listening (Gass et al., 2020), conversational interactions, such as negotiated meaning or interactive conversational input, were the foundation for L2 language development, which

was called the interaction hypothesis. *Negotiation of meaning*, and especially negotiation work such as checking the meaning of vocabulary, repeating, or retelling, was seen as essential for SLA. Such negotiation would also adjust the learners' input to i (input) + 1 (comprehensible) level.

In CLIL, communication is fundamental to many learning activities. The characteristic CLIL activities relevant to communication concern the negotiation of meanings regarding the content. CLIL focuses on the content rather than the use of appropriate English pronunciation, vocabulary, or grammar, and the negotiation of meaning takes place through discussion, pair work, or group work. In this way, the interaction hypothesis appears to be very much part of the CLIL methodology.

Based on research concerning Canadian immersion programs, Swain (2005) suggested that although input was essential, it was not enough for acquisition to occur because output was also indispensable in developing skills in a second language. Swain (2005) proposed that language output stimulated learners to move from semantic processing to the syntactic use of language. By receiving corrective feedback from the teacher, the learners realize their incorrect uses of grammatical features and then reformulate the utterances or writing in a more target-like way (Gass et al., 2020); that is, the output makes learners focus more on their syntactic use of the language and forces them to use the correct target language pronunciation based on the observed differences between their output and the L1 speakers' output. Learners can also perceive that their L2 knowledge is not enough to produce the target language. In the CLIL classroom, learners have many opportunities to produce language through speaking, writing, pair work, discussion, group work, report writing, and solo presentations, all of which are focused on output.

This brief discussion, therefore, shows that CLIL embraces three prominent SLA theories. The effectiveness of CLIL can be potentially explained by the utilization of the different theories at the same time, as Sasajima (2020) concluded, "CLIL is like a patchwork quilt in which various theories are incorporated." Therefore, integrating and applying these various theories flexibly using meaningful and authentic content can assist in the successful implementing of CLIL.

In the next chapter, I would like to introduce previous studies and the research questions of this study.

3. Previous Studies and Research Questions

This section reviews previous studies. The first part introduces some studies that reveal the effectiveness of positive attitudes in English classes, and the second part presents some studies that examine the significance of improving English writing and speaking skills.

Three studies that found that CLIL fostered a positive attitude toward English learning are overviewed here. Yamano (2013b) explored the potential of CLIL in a Japanese primary school and compared the CLIL class of 35 students with a conventional EFL class of 36 students. The lessons were recorded and transcribed, and student questionnaires with close- and open-ended questions were conducted. It was concluded that the CLIL program accelerated vocabulary learning, fostered a more positive attitude, raised intercultural awareness, and motivated the students to communicate in English. Yamano (2013b) suggested that the CLIL format attracted students' interest because they were engaged in meaningful learning through cognitively demanding situations. Lasagabaster and Sierra (2009) studied 287 secondary education

students from four different Basque schools, divided the classes into third- and fourth-year secondary students, and then divided these two groups into CLIL-focused and EFL classes (non-CLIL classes), after which the students completed a questionnaire on their attitudes toward the classes (English, Basque, and Spanish class). It was found that the CLIL class generated significantly more positive attitudes toward English learning than the EFL class, with the CLIL groups also showing positive attitudes toward other language learning (Basque and Spanish). It was concluded that the CLIL class offered students greater exposure to more meaningful and understandable contexts in which to use English and enhanced cognitive development by processing richer communicative inputs in more authentic situations.

Uemura et al. (2019) conducted a post-graduate engineering student survey in Japan after five CLIL courses had been conducted, the content (topic) had already been taught in Japanese when the students were in their third year. The questionnaire consisted of self-evaluation and open-ended free descriptions. It was found that the students had more positive attitudes toward learning English, which motivated them to continue to study English. It was concluded that the meaningful combination of engineering subjects and English learning had created the conditions for the students' motivation to increase and to therefore talk about the content in English.

CLIL is seen as attractive by many teachers because it improves overall language skills, with writing competence attracting somewhat more attention than other skills (Gené-Gil et al., 2015, Dalton-Puffer, 2011, Whittaker et al., 2011). The following reviews some studies that suggest CLIL improves speaking and writing skills.

Ruiz de Zarobe (2010) compared secondary education and pre-university level non-CLIL (conventional EFL class) and CLIL classes, in which the participants were learning English as a third language. The students were asked to produce a written task and a letter to a host family in England, with the students' writing being evaluated using five ESL Composition Profile scales (Jacobs et al., 1981): content, organization, vocabulary, language use, and mechanics. It was found that the overall scores from the two CLIL classes surpassed those in the non-CLIL classes, with the content and vocabulary being found to be significantly different. However, the differences were not statistically significant for the other scales. Ruiz de Zarobe (2010) concluded that significant exposure to the target language was vital, and the longer the hours of exposure, the faster the students learned. Ruiz de Zarobe (2008) also conducted a longitudinal study on student speech production data from the same secondary 3, secondary 4, and pre-university students and found that there were statistical differences between the non-CLIL and CLIL classes in every category of the speech production test (pronunciation, vocabulary, grammar, fluency, and content), concluding that the amount of exposure to English was linked to the language outcomes.

Jexnenflicker and Dalton-Puffer (2010) conducted a case study in an upper-secondary engineering college in Austria to compare a CLIL and an EFL-only (non-CLIL) class, with the CLIL class students being given additional CLIL classes as well as conventional EFL classes. After attending the classes, the students took a writing test, which was subsequently analyzed using a rating scale. It was found that the CLIL students only surpassed the EFL-only students in general language ability and writing skills but not in organization and structure.

Gené-Gil et al. (2015) conducted a study on Spanish/Catalan bilingual secondary education students that compared an experimental CLIL group of 30 students and a non-CLIL group of 15 students. The CLIL group had additional CLIL classes in science or social science in English

for 3 hours a week on top of the 3 hours of EFL classes, and the non-CLIL group only had 3 hours of EFL classes. However, neither the CLIL nor non-CLIL students received personalized feedback on their writing. The students were asked to write timed essays in English over a longitudinal span of 3 years. It was found that the CLIL group showed greater overall improvements in their writing compared with the non-CLIL group over the 3 years, especially over the first 2 years, and were more accurate and fluent than their counterparts.

Previous studies have indicated that CLIL could be suitable for all grades from primary school to post-graduate education and that CLIL courses tended to generate positive attitudes toward learning English. All these studies have indicated that meaningful learning (through CLIL) and greater exposure to communicative input and output could lead to greater cognitive development, which in turn could foster learners' motivation, and that taking a CLIL course can lead to greater improvements in speaking and writing skills than in more traditional EFL classes.

This study focused on Japanese university students as there have been a few studies examining student impressions of university CLIL courses, especially targeting non-English major students in Japan. Further, although there has been a focus on speaking and writing skill improvements in Japan, there have been very few studies examining the benefits of CLIL on listening and reading skills at the tertiary level. Therefore, this study also specifically focused on whether CLIL could improve listening and reading skills over a semester based on the following research questions:

Research question 1: Do CLIL classes motivate students to learn English?

Research question 2: Do CLIL classes have positive effects on reading and listening skills?

Research question 3: Why is CLIL effective?

4. Methods

4.1. Participants

Fifty-two sophomore university students majoring in Education at a university in Northern Japan from 2019 to 2020 participated in this study, all of whom took this course as one of their required English courses. All had also taken the required English courses as first-year students and were also taking other English classes while taking the CLIL class.

The students were divided into two groups based on numerical order, with 4-8 out of the 52 students being subsequently excluded because they did not answer the pre- or post-questionnaire, or did not take the pre- or post-test. There were no other exclusion criteria. Therefore, 44 sophomores were involved in the questionnaire survey and 48 students were involved in the TOEIC test. As the students' majors were Education, most were planning to be elementary or junior high school teachers after graduation; therefore, English was not a critical subject for them.

4.2. CLIL Classroom Activities

In this study, twelve out of fifteen classes were CLIL classes, with the other three classes being a class orientation, the pre-test, and the post-test. The textbook, "*CLIL human biology*" (Sasajima et al., 2019), was used because the text was designed to skillfully integrate the content, language, and the 4Cs of CLIL: communication, content, culture, and cognition. As some textbooks do not adequately deal with content, cognition, and culture, those textbooks

may not be suitable as CLIL textbooks. The other reason that textbook was chosen was that the human biology content was suitable for a general education university course. Human biology is a matter that relates to all of us.

The conventional EFL approach differs from the CLIL approach in several ways. To understand more about what is taking place in a CLIL class, some CLIL approaches are overviewed here. Rather than just conversation practice activities, there is a greater focus on the “*negotiation of meaning*,” where students are asked to deeply think, discuss, and give presentations on the content topics. In conventional EFL classes, vocabulary, grammar, pronunciation, and speaking skills or techniques are targeted to understand English during communication. Resultantly, cognitive engagement is higher in the CLIL class. Moreover, the textbook includes activities that require students to use higher-order thinking skills, such as analyzing, evaluating, and creating, rather than lower-order thinking skills, such as remembering, understanding, and applying. Integrating both higher-order thinking and lower-order thinking is a vital aspect of the CLIL setting. Coyle et al. (2013, p.29) claimed that higher-order thinking skills increased student achievement levels because the “learners had to be intellectually challenged to transform information and ideas, to solve problems, to gain understanding and to discover new meaning.” Besides, there are many output and interaction activities such as pair work, group work, and presentations or discussions.

The teacher teaches the lessons mainly in English, and the students are required to speak in English in groups or pair work many times. During the conversations, the teacher either 1) presents a more natural situation for the teacher and student exchanges, or 2) the students exchange their ideas in English, at which time the teacher provides a platform for students to present their current understanding in English and to use English when talking about content. The teacher allows students to use their native language, which therefore affords the use of both English and Japanese in the classroom; however, natural language activities are prioritized as needs of the group as a collective. In addition, students may also freely choose content-related topics that they are interested in or think they want to know more about for their presentation topics. This allows students to learn English independently and engenders the need for students to speak more and think deeply regarding the topics. Furthermore, CLIL culture (inter-culture) accepts diversity, cultivates flexibility and understanding of others, and aims to build intercultural awareness (Sasajima, 2020). CLIL is designed so that the students can learn to understand and accept each other’s opinions in a comfortable environment. Of course, teachers play a big role in creating such a comfortable atmosphere in the classroom, asking students to wait until their classmates finish talking about what they want to say during the communicative activities. If a teacher creates such an environment, for these reasons, students may try to speak English more without hesitation in front of others and not be afraid of making mistakes in the classroom.

This class that the author taught used several CLIL-based class activities. They included knowledge-checking quizzes (pair work), listening (fill-in-the-blank activities), shadowing (speaking activities), discussions, reading (understanding the content), and presentations using *CLIL Human Biology* (Sasajima et al., 2019). The knowledge-checking quizzes required students to answer quizzes related to the unit topic, the pair work involved talking about one of the issues raised in the unit topic, and the listening task was usually focused on true-or-false questions and fill-in-the-blank activities associated with the unit topics, with pair work shadowing taking place after the listening task. The discussions were related to the listening activity, with more discussion questions being open-ended questions, such as “what do you think .../If you ...”, “what may happen/Have you ever had”, which allowed the students to

check their understanding of the listening activity, and also to think deeply about what they had learned from the listening tasks and to air their thoughts.

The reading activities required students to read about the topic and answer questions to check their understanding using worksheets. Grammar translation was not encouraged, as the students were asked to focus on the content and negotiate the meaning of the content topics. There were two reading passages (approximately 300–500 words) in each unit, and both Japanese and English were used to explain the content and check the worksheet answers, which were mainly focused on fact-checking. When there were complicated grammar structures, the teacher explained them in Japanese.

After learning two unit topics in class, the students prepared and gave 5~10-min group presentations in English using PowerPoint slides the following week on an aspect of one of the two topics that had been dealt with. Students were instructed on developing effective slides, and the 3- to 4-student presentation groups were configured based on common student content interests. When preparing the presentation, students were allowed to use Japanese to discuss their presentation topics and presentation roles. Most presentation slides were prepared outside of class because of a lack of class time. The presentation titles were put on a whiteboard so that everyone knew which group would present which topic. The students gave four group presentations over the semester. After the presentation, the teacher gave some comments and asked questions in English about the topic, which the students answered in English as much as they could. Other students were also encouraged to ask questions in English, which made the cognitive load somewhat heavier. The presentations were evaluated by the teacher and the rest of the students, and the scores were added as a part of the final evaluation.

4.3. Data Collection and Analysis

The data were collected from student questionnaires that had both close- and open-ended questions. At the end of the semester, close-ended question student questionnaires were administrated to see how they felt about the CLIL class after they took the course. At the beginning and end of the semester, open-ended question questionnaires and TOEIC tests were conducted, with one group taking the TOEIC reading test, and the other taking the TOEIC listening test.

The closed questions were answered using a 4-point Likert scale (yes, yes to some extent, no to some extent, and no) and were designed to determine the class’s perceived difficulties, the understanding of the class (content and grammar), the level of satisfaction, the attitude toward the class, the intercultural awareness, the interest in other countries and their culture, and their degree of independent-mindedness. There were 11 question items, as shown in Table 1. The selected questions were modified versions of the question items in Yamano (2013a, b). Since Yamano’s research was targeted at primary school students, the author revised the items to correspond with university students and added 3 more questions (question 6, 7 and 9) to determine participants’ stance on the class.

Table 1. Question Items

Question #	Question item
Question 1	The class was fun.
Question 2	You could understand English (grammar and vocabulary) in the class.

Question 3	You could understand the content (topic) of the class.
Question 4	The course was challenging (difficult).
Question 5	The class was worthwhile.
Question 6	You joined the communication activity with a positive stance.
Question 7	You deeply thought about the topic in class.
Question 8	You cooperated with other classmates.
Question 9	You joined the class with an independent-minded stance.
Question 10	You want to know more about other countries or cultures.
Question 11	You want to communicate with people in the world.

The open-ended questions were designed to get the student's impressions of CLIL and other EFL classes they had taken at the university when they were first-year students. In the pre-questionnaires, students were asked to write about what they had done and learned in the other EFL classes that they had taken when they were freshmen, and in the post-questionnaire, students were asked to write about what they had done and learned in the CLIL classes. The collected data were analyzed using the quantitative text analysis technique in the KH Coder software (Higuchi, 2020). The data were analyzed with a focus on the language learning in each class. Then, the students' reviews of the first-year class and the CLIL class (this study) were compared to assess and find the reason for the effectiveness of the CLIL pedagogy for general education English courses at the university.

Both before and after the semester, the TOEIC reading test was implemented in one of the classes (n=25), and the TOEIC listening test was implemented in the other class (n=23) to assess which skill improved over the semester. The students who did not take one of the tests were excluded. The score of the test was used as a part of the evaluation of this class but other factors such as presentation evaluation and participation in the class activities were also used to evaluate them from multiple aspects. A paired-samples t-test was conducted to compare the test scores before and after the semester.

5. Results

5.1. Results from Student Questionnaires

5.1.1. Closed Question

As for the closed questions, all the students' choices for the questions (yes, yes to some extent, no to some extent, and no) were calculated, and the percentage of the students' favorable choices (yes and yes to some extent) were calculated as shown in Table 2.

As a result, it was revealed that more than ninety percent of the students chose favorable choices for the closed question except Question 4, which asked whether the class was difficult or not. Significantly, all the students who answered the questionnaire made favorable choices regarding Question 1 (the class was fun), Question 3 (you understand the content of the course), and Question 5 (the class was worthwhile). The high percentage of the students' favorable choices indicates that they had a positive attitude toward the course and were satisfied with

both the content and the class.

Moreover, the results of Question 6, 7, 8, and 9 show that in the class, most students tried hard to communicate in English with a positive stance, deeply thought about the topic, cooperated with other students, and joined the course with an independent-minded perspective in this study. Furthermore, the results of Question 10 and Question 11 suggest that students had a high intercultural awareness. However, as for these questions, there is a possibility that students had a high intercultural awareness from the beginning, and the results were not due to the instruction of the CLIL course. Further study would be needed for this part. Finally, about seventy percent of the students thought the class was difficult.

Table 2. The Numbers of the Answers for the Closed Questions

No.	Question Items	The number of each response			
		a	b	c	d
1	The class was fun.	33	11	0	0
2	You could understand English (grammar / vocabulary) in the class.	17	26	1	0
3	You could understand the content (topic) of the class.	28	16	0	0
4	The course was challenging (difficult).	6	24	13	1
5	The class was worthwhile.	34	10	0	0
6	You joined the communication activity with a positive stance.	25	16	3	0
7	You deeply thought about the topic in the class.	22	18	4	0
8	You cooperated with other classmates.	33	10	1	0
9	You joined the class with an independent-minded stance.	26	17	1	0
10	You want to know more about other countries or cultures.	31	11	1	1
11	You want to communicate with people in the world.	30	12	1	1

Notes: a=yes, b=yes to some extent, c=no to some extent, d=no n=44

5.1.2. Results from Open-ended Question

The student questionnaire with open-ended questions was answered by 44 students for the pre-questionnaire (non-CLIL class) and 44 students for the post-questionnaire (CLIL class). KH Coder text analysis was used to analyze the students' answers to the open-ended questions to further explore what they felt that they had done and learned in the class and to compare the two courses. The pre-and post-item open-ended questions were as follows:

Pre-item: What have you done and learned in your EFL classes so far at university?

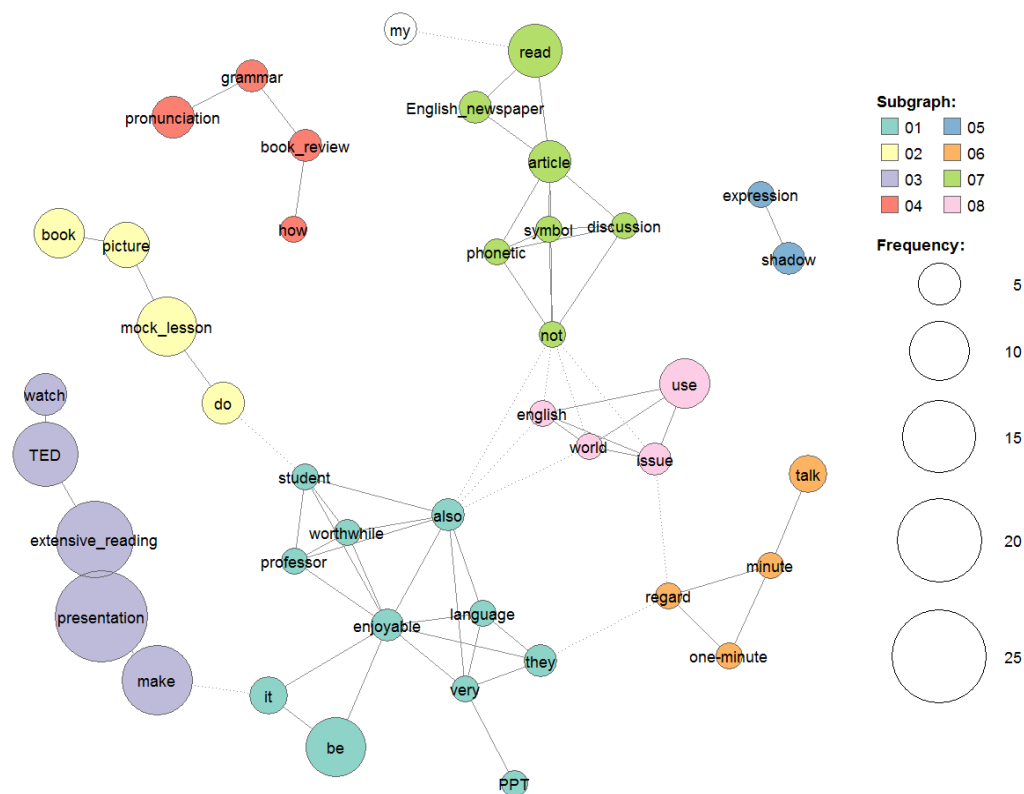
Post-item: What did you do and learn from this CLIL class?

Using KH Coder text analysis, the most frequent words and the connections between those

frequent words and other words (how are they used) are analyzed, and a co-occurrence network is described. The total word count for the non-CLIL class was 492 (291 words in use) and the total word count for the CLIL class was 899 (508 words in use); that is, the students wrote two times more about the CLIL class than about the non-CLIL class. The text analysis for open-ended question item 1 (What did you do and learn in your EFL classes so far at university?) revealed that the students had done several different activities, as shown in Figure 2. The high frequencies for words such as “presentation,” “extensive reading,” “TED,” and “mock lesson” suggested that they had made presentations after watching TED talks; had also done extensive reading and mock lessons using picture books, studied grammar, pronunciation, and newspaper articles; and wrote book reviews. The correlations between “mock lesson,” “presentation,” “one-minute talk,” “world issue,” “English newspaper articles,” “phonetic symbols,” and “enjoyable” seemed to indicate that the students enjoyed all these activities and they thought all were worthwhile.

On the whole, the students wrote only about what they had done using nouns and noun phrases, such as “presentation” or “extensive reading,” rather than writing sentences about what they had learned in class. This may have been the reason that the total word count for the non-CLIL class comments was lower than for the CLIL class. No students commented on the knowledge they had acquired from the non-CLIL classes as they wrote more about what they had done rather than what they had learned or acquired.

Figure 1. Open-ended question for the non-CLIL class



On the contrary, for open-ended question item 2 (What did you do and learn in this CLIL class?), the students wrote in detail about what they had done in the class, as shown in Figure 3. For example, students mentioned the specific content topics they had learned, such as “brain,” “music,” “food,” “sleep,” “allergy,” “health,” “human body,” and “various topics,” which seemed to suggest that topic knowledge had remained in their minds. The high frequency

6. Discussion

In this section, I would like to describe the points that led to the answer to each research question. Here are the answers to the research questions.

6.1. Research question 1: Do CLIL classes motivate students to learn English?

From the result of the closed question questionnaires in Figure 1, it was revealed that all the students chose a favorable choice (yes or yes to some extent), especially regarding enjoyment of class and satisfaction gained from the class. Moreover, as regards the question on independent mindset and attitudes toward class activities, the percentages were also high in the CLIL class. These results indicated that the students had favorable impressions or attitudes toward the CLIL class; that is, the students enjoyed the CLIL class, and even though they found the CLIL class more challenging, they actively joined the class with a more independent mindset. These results show that CLIL class students are engaging, and also CLIL classes motivated students to learn English with an independent-minded stance and positively joined the class.

To sum up, the study results showed that, overall, the students had a favorable impression of the CLIL class, which was consistent with the findings in Yamano (2013a, 2013b). Consequently, it can be said, from the results of the closed questions questionnaires in this study, that applying CLIL to non-English major university students' general education English courses can motivate students to learn English. As was mentioned in section 1, since university students' motivation to learn English gradually decreases once they enter university, applying CLIL in a university general English course has much importance and potential. However, in this study, a comparative study between the class that implemented a CLIL methodology and a non-CLIL methodology was not conducted. Such comparative study of CLIL class and non-CLIL (traditional EFL class or traditional English class) classes should be conducted to obtain further evidence regarding the effectiveness of CLIL methodologies. I would like to leave it to future research by myself or other researchers.

6.2. Research question 2: Do CLIL classes have positive effects on reading and listening skills?

The statistical analysis of the t-test revealed that the difference between the pre-test and the post-test was not significant. Although some studies have found that CLIL develops writing and speaking skills (Dulton-Puffer, 2011), the results of this study implied that it was difficult for the CLIL class to improve reading and listening skills in only one semester in general education university classes. From the results, we could conclude that learners' output skills such as speaking and writing skills would improve through CLIL, but improving learners' input skills such as reading and listening would be difficult, even though students had a lot of opportunities to read and listen to English in the classroom.

However, as was mentioned earlier, according to Gené-Gil et al. (2015), the longitudinal study of implementing CLIL courses proved the potency of CLIL for improving student's writing skills. Therefore, if the course continues for more than one year, and students have more opportunities and exposure to and use English through CLIL methodology, the results could be different from this study. Another possible explanation for this might also have been that the TOEIC tests (reading and listening) were too difficult and not suitable for the students' level in this study to measure their reading and listening progress. The participants in this study were broadly lower-intermediate. Their average score of reading tests was 35 out of 100 points, and their one of listening test was 54 out of 100 points. The test also took 45 minutes for the listening test and 70 minutes for the reading test. The test itself might have been too hard for the participants. If another easier and more suitable level test had been used, for example

TOEIC bridge, the results might have been different. Thus, whether CLIL has a positive effect on reading and listening skills or not should be studied more with different research designs.

6.3. Research question 3: Why is CLIL effective?

The unique points of CLIL are the 4Cs framework (Communication, Content, Cognition, and Culture) and the integration of content and language. What is important about the CLIL approach is how content is dealt with, how the students think about the content, and how their learning culture changes by connecting with meaning (Sasajima 2020). All these may be possible reasons for the CLIL's effectiveness. In this study, the four points became clear, especially from the results of the KH coder text analysis for the open-ended questions and close-ended questions: 1) It was revealed that students wrote more about what they did in the CLIL class than about the non-CLIL class, 2) for the non-CLIL class, students wrote about just what they did in the class, while for the CLIL class, students wrote more in detail about what they had done in the class. For example, they mentioned the specific content topic they had learned, such as "food", "sleep", and "allergy", or the acquired knowledge or skills. Furthermore, 3) compared to the non-CLIL class (Figure 1), CLIL class' comment clusters (Figure 2) were more correlated to other clusters. As you can see from Figure 2, each CLIL class activity such as listening, reading, and discussion was thought to be more organically combined with each other. 4) Students had overall favorable impressions regarding the CLIL class, and they joined the class with a positive attitude. These findings indicate that different kinds of activities that were practiced in the CLIL class had the effect of organically combining with other activities and focusing on content topics. Because of this, the students effectively acquired content knowledge as well as some other new skills, and importantly they enjoyed the class.

From these findings, the effectiveness of CLIL can be explained by its focus on the content with the application of many cognitive engagement activities that allowed students to have significantly more opportunities to enhance their higher-order thinking skills, such as creating, evaluating, and analyzing, in the CLIL class than in the non-CLIL class. These things may have held students' attention from beginning to end and result in producing the effect. In addition to these unique instruction methods in the classroom, teacher ingenuity, creativity, and flexibility in adapting the CLIL 4Cs framework in the classroom could lead students to learn English, with this learning also connecting to the SLA theories (input, interaction, and output hypothesis). In CLIL classes, the questions or discussion topics are always open-ended, so teachers cannot expect or predict where students' interests or answers will go, and teachers need to be flexible and creative on all such occasions. Using two languages (target language and native language) at the same time is required for teachers in the class where students have opportunities to use and listen to two languages. Furthermore, CLIL materials are oftentimes originally made by teachers from scratch, since there are not so many readily available materials for all the CLIL classes (Ikeda, 2015). Trying to create a comfortable classroom culture (Sasajima, 2020) with teachers' ingenuity is also essential to reduce students' anxiety or worries when producing English in front of their classmates. The creation of a comfortable classroom atmosphere provides an added challenge to teachers, but a welcome role as, in this way, teachers' ingenuity plays an important role in CLIL, and it could be another possible reason for the efficacy of CLIL.

7. Conclusions

This study conducted empirical research into the value of using a CLIL approach in general university English education classes. From the result of the student's questionnaires (close-ended questions) and students' written observations (open-ended questions), it was suggested

that the students had overall positive impressions and attitudes toward the CLIL class compared with their other EFL classes, which was consistent with the results in previous studies (Yamano, 2013b; Lasagabaster & Sierra, 2009; Uemura et al., 2019). Although the students found the class to be challenging, they actively participated with an independent mindset. This could be attributed to the cognition focus in the CLIL 4Cs framework.

Students gave more extended comments on the open-ended questions for the CLIL class (899 words) than for the non-CLIL class (492 words). Moreover, students reported having a positive experience, with ‘presentation’ being the most frequent word in both classes. Many students commented that they thought they had acquired new skills and learned content topics in the CLIL class and had enjoyed learning new topics in English. However, the student’s comments on the non-CLIL class only commented on what they had done in the class, with no comments on what they had learned or acquired in the class. As meaningful content learning with comprehensible input, output, and interactions that incorporate SLA theories could enhance cognitive development, the high cognitive load in the CLIL class may have contributed to having motivated them to actively learn English.

Language learning in Japan tends to put too much weight on English knowledge or skills, such as vocabulary, grammar, and pronunciation and tends to neglect meaningful interactions or negotiation during communication activities. When conducting English activities at university, CLIL activities should be applied to help students focus more on the content meaning, not just grammar and vocabulary, using English to negotiate meaning through interactive activities with other classmates, while making use of teachers’ natural ingenuity and creativity.

This study proved that CLIL could be applied to general university education courses. However, the CLIL course was not found to promote listening or reading competence. Limitations of this study were the absence of a control group that does not receive CLIL class and the length of the study. Longitudinal studies on Japanese university student listening and reading skill development and a comparison between CLIL and non-CLIL class are needed. Additionally, to evaluate students’ listening and reading skills, different research designs or tests should be implemented. There is room for further investigation.

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