

Incorporating CLIL in Mixed-Ability Classes

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1. Introduction

Content and Language Integrated Learning (CLIL) is a teaching approach that integrates the 4Cs: “content (subject matter), communication (language learning and using), cognition (learning and thinking processes), and culture (developing intercultural and global citizenship)” (Coyle, Hood, & Marsh, 2010, p.41). CLIL is also considered to be beneficial to enhance content and language knowledge, cognitive skills, motivation, and creativity of multilevel learners (Marsh, 2002). As there is a growing demand for language teachers to cope with mixed-ability classes, where students differ greatly in wide-ranging variables (Ainslie, 1994), it is essential for them to cope with such diversity in the classroom. Taking these factors into consideration, an exploratory case study was conducted to investigate the effectiveness of CLIL in a mixed-ability setting.

2. Research Questions

As there is still insufficient research that incorporated CLIL in mixed-ability classes, the present study is an attempt to explore the nature of such classroom situations through an investigation of the following research questions:

1. How do learners in a mixed-ability setting perceive classes taught in the CLIL approach?
2. What content and language knowledge do multilevel students learn in CLIL classes?
3. What instances of incidental teaching and learning can be observed in CLIL classes?

3. Research Procedure and Instruments

Table 1 describes the procedure and instruments used in the study. Firstly, six 90-minute CLIL lessons were planned by the researcher, based on CLIL principles and teaching strategies. Secondly, a student profile questionnaire was administered to understand the students' background information such as age, linguistic level, and language-learning background. Thirdly, six 90-minute CLIL lessons were conducted. After each CLIL lesson, the Uptake Recall Chart (URC), achievement test, and post-class questionnaire were administered. Finally, after all six

CLIL classes, a 90-minute semi-structured group interview was conducted to gain a deeper understanding of students' perceptions.

Table 1: *Research Procedure and Instruments*

Research Procedure	Description of Instruments
1. Materials Development	The handouts and visual materials were developed for six CLIL lessons: Lesson 1 (A Trip to Hawaii), Lesson 2 (Acknowledging Ethnic Diversity), Lesson 3 (Food Cultures Around the World), Lesson 4 (Food Waste in Japan), Lesson 5 (Athletes' Words of Wisdom), and Lesson 6 (2020 Tokyo Olympics).
2. Student Profile Questionnaire	The student profile questionnaire includes items regarding the participants' age, linguistic level, and language-learning background.
3. Six 90-minute CLIL classes	The Uptake Recall Chart (URC), achievement test, and post-class questionnaire were conducted after each class. The URC includes the content and language items that the students recall learning in the CLIL lesson. The achievement test includes both language and content items. The post-class questionnaire includes items regarding the participants' perceptions of the CLIL lesson, understanding of content/language of the lessons, and overall satisfaction.
4. Semi-structured Group Interview	Questions for the semi-structured interview were listed in an interview guide. Actual questions asked to the participants differed depending on their responses and flow of the conversation.

4. Participants

The participants were adult learners of English (n = 8) in a community college class in Tokyo. The participants (four males, four females) had different levels of language abilities, which were identified from both previously taken English proficiency tests and self-reports of their English level. The Common European Framework of Reference for Languages (CEFR) was used in describing the language level of the participants: A1, A2, B1, B2, C1, and C2 (A1 is the lowest level and C2 is the highest level).

Table 2 presents the participants' background information. The names used to refer to the participants are all pseudonyms. The table shows that the participants differed in wide-ranging aspects. Firstly, in terms of age, the participants differed greatly, where the youngest participant, Daisuke (S1), was in his early twenties whereas the oldest participant,

Shigeru, was in his late seventies. Secondly, in terms of their linguistic ability, Yuriko (S5) had the highest linguistic level (B1-B2 level) based on past language proficiency tests. On the other hand, Shota (S3) and Michiko (S4) had the lowest linguistic abilities (A2 level). Thirdly, in terms of students' living-abroad experiences, Michiko (S4), Fumie (S7), and Shigeru (S8) had living-abroad experiences for a range of three months to three years.

Table 2: *Participants' Background Information*

	<i>Age</i>	<i>Gender</i>	<i>Language Level (CEFR)</i>	<i>Living-abroad Experience</i>	<i>English use in daily life (per week)</i>
Daisuke (S1)	20s	Male	B1	No	0 hours
Tomoki (S2)	30s	Male	A2-B1	No	2-4 hours
Shota (S3)	30s	Male	A2	No	1-2 hours
Michiko (S4)	40s	Female	A2	Yes (Thailand, 3 years)	0 hours
Yuriko (S5)	40s	Female	B1-B2	No	0 hours
Akiko (S6)	40s	Female	A2-B1	No	2-2.5 hours
Fumie (S7)	50s	Female	A2-B1	Yes (U.K., 6 months)	5-6 hours (text only)
Shigeru (S8)	70s	Male	B1	Yes (Ireland, 3 months)	3 hours

5. Results

(1) How do learners perceive classes taught in the CLIL?

The first research question was investigated through the results of the post-class questionnaire and the semi-structured group interview. This section looks into the learners' perceptions of the CLIL classes in two respects: students' overall perceptions of the CLIL lessons; and preferences of tasks, activities, and topics.

1. Students' overall perceptions of the CLIL lessons

It was found from both quantitative and qualitative data that the participants had a relatively positive view towards the mixed-ability CLIL classes. Firstly, in terms of Item 1 (Did you enjoy the lesson?), Item 2 (Was the topic interesting?), and Item 3 (Are you satisfied with the lesson?), the results indicate that the participants, regardless of their differences in wide-ranging variables, perceived the CLIL lessons in a relatively positive manner (See Table 3). In regard to the mean scores, Items 1 (M=3.68, SD=0.41), 2 (M=3.78, SD=0.33), and 3 (M=3.74, SD=0.35) had higher scores than Items 4-7. This suggests that the participants, regardless of their differences in wide-ranging variables, perceived the CLIL lessons in a relatively positive manner. Moreover, the tendency seems to be rather homogeneous as SD indicates.

Table 3: Results of Post-class Questionnaire Items

	S1	S2	S3	S4	S5	S6	S7	S8	M	SD
1. Did you enjoy the lesson?	3.00	3.16	4.00	4.00	3.50	4.00	3.80	4.00	3.68	0.41
2. Was the topic interesting?	4.00	3.16	4.00	4.00	3.75	4.00	3.40	4.00	3.78	0.33
3. Are you satisfied with the lesson?	4.00	3.16	4.00	3.83	3.75	4.00	3.20	4.00	3.74	0.35
4. Was the English difficult?	3.00	1.83	3.00	2.33	2.00	2.20	2.20	1.00	2.19	0.64
5. Was the content difficult?	2.50	1.16	2.80	2.16	2.00	1.60	2.40	1.00	1.95	0.64
6. Did you feel nervous in the lesson?	3.00	1.33	3.40	1.50	2.00	2.00	2.00	1.00	2.02	0.81
7. Did you feel confident in the lesson?	2.00	2.50	2.80	2.50	2.50	3.00	2.20	3.50	2.62	0.47

In addition, it was found in the group interview that the participants perceived the CLIL lessons positively and enjoyed learning different topics. They were able to understand the lesson with the support from both their classmates and the teacher. For instance, Michiko (S4) mentioned that although she had difficulty comprehending the grammatical structures used in the lessons, she was able to understand them with the help of her classmates and the teacher. Akiko (S6) mentioned that the CLIL lessons were more enjoyable and meaningful for her compared to the other language classes that she had been taking, which were taught using the GTM. It was also found that despite being adult learners of English, who were cognitively mature and already had some background knowledge about various topics, the students all mentioned that they had learned about new topics and information in the CLIL lessons.

Secondly, in terms of Item 4 (Was the English difficult?), and Item 5 (Was the content difficult?), the results show greater individual differences, indicating that the students perceived the difficulty of the English/content differently: five students (Daisuke (S1), Tomoki (S2), Shota (S3), Michiko (S4), and Akiko (S6)) perceived the language to be more difficult than the content, whereas Fumie (S7) had the opposite impression. As for Shigeru (S8), he did not find the classes to be difficult at all for both the language and content ($M=1.00$), and seemed to have enjoyed and been satisfied with the lessons ($M=4.00$). Still, another student Shota (S3) perceived the language ($M=3.00$) and content ($M=2.80$) to be relatively difficult, but enjoyed the classes nevertheless ($M=4.00$). Such results show that there were differences in students' self-reported content/language difficulties, which do not necessarily affect the impressions toward the classes.

Thirdly, in terms of Item 6 (Did you feel nervous during the lesson?) and Item 7 (Did you feel confident during the lesson?), which related to students' psychological factors, the two items had the greatest variation among the participants. Item 6 ($M=2.02$, $SD=0.81$), regarding students' anxiety levels, had the greatest variation among the participants. For instance, Shota (S3) experienced a high level of anxiety ($M=3.40$) whereas Shigeru (S8) did not ($M=1.00$). In terms of students' confidence, on the other hand, Item 7 ($M=2.62$, $SD=0.47$) shows that there were less individual differences, suggesting that most learners felt relatively confident in the lesson, despite having different linguistic levels. In the group interview, some students mentioned that they felt anxious when required to speak in front of others or when they couldn't respond to the teacher's questions. The results suggest that students are likely to have different perceptions and needs, which should be also addressed when planning and conducting language lessons.

2. Preferences of tasks, activities, and topics

In this section, the tasks/activities in the CLIL lessons, which were perceived to be enjoyable or difficult, are mentioned. Table 4 lists the items in Section E (i.e. enjoyable tasks/activities) and Section D (i.e. difficult tasks/activities). For instance, in Lesson 1, the travel plan was perceived to be enjoyable for Shota (S3), while it was difficult for Daisuke (S1) and Akiko (S6). In Lesson 3, the foreign recipe activity was perceived to be enjoyable for Tomoki (S2) and Michiko (S4) while it was difficult for Yuriko (S5) and Shigeru (S8). There were also tasks that many of the students frequently enjoyed such as reading a text (Lessons 1, 3, 4), and food cultures (Lesson 3) or tasks that were frequently mentioned to be difficult such as writing a summary for the text (Lessons 1, 2, 3).

Table 4: *Preferences of Tasks/Activities and Topics*

		S1	S2	S3	S4	S5	S6	S7	S8
L 1	E	Reading	Test	T-plan Reading	Hawaiian cuisine		Scanning questions		Reading
	D	T-plan	N/A	Writing Summary	Writing Summary		T-Plan		Mini-Quiz
L 2	E		Discussion	Graph Activity	Mixed Plate	Mixed Plate		Ethnic Meals	Graph Activity
	D		N/A	Discussion	Writing Summary	Discussion		Word- phrase hunt	Discussion
L 3	E	Food Cultures	Foreign Recipe	Food Cultures	Foreign Recipe	Food Cultures	All	Reading	Food Cultures
	D	Food Cultures	N/A	Video	Food Cultures	Foreign Recipe	Writing Summary	Writing Summary	Foreign Recipe
L 4	E		Reading		Reading	Japanese food	Reading	Japanese food	Reading
	D		N/A		Discussion	Discussion	Scanning Questions	Reading	Map Activity
L 5	E		Translating Quotes	Translating Quotes	Popular Sports	Video	Athletes' Quotes	Favorite Sports	All

	D		Creating Quotes	Translating Quotes	Popular Sports	Translating Quotes	Athletes' Quotes	Popular Sports	Video
L6	E		Class Reflection	Schedule for U.S.	Quiz		Schedule for U.S.	Quiz	
	D		N/A	Manners	Schedule for U.S.		Schedule for U.S.	Manners	

Note. E: Tasks/Activities that were enjoyable D: Tasks/Activities that were difficult

Furthermore, the results show that some learners perceived certain tasks and activities to be both difficult and enjoyable. For instance, in Lesson 3, Daisuke (S1) perceived the staple food activity to be difficult but enjoyable. Similarly, Shota (S3) perceived the quote translation activity in Lesson 5 to be the most difficult but enjoyable, which was similar to Akiko's (S6) perception of the U.S. team schedule in Lesson 6. These results suggest that students enjoyed the class even if the tasks were cognitively engaging.

In terms of students' preferences of CLIL topics, the students ranked the six CLIL lessons from 1 (favorite) to 6 (least favorite), which are presented in Table 5. The results show that there were great individual differences in the preferences of topics. For instance, Lesson 2 (Ethnic Diversity) ranked first for Shota (S3), Akiko (S6), and Shigeru (S8); third for Tomoki (S2); fifth for Fumie (S7); and sixth for Michiko (S4). These results suggest that different learners, regardless of their language proficiency levels, prefer certain topics above others.

Table 5: *Preferences of CLIL Topics (Ranking)*

	S1	S2	S3	S4	S5	S6	S7	S8
1		L5: AQ	L2: ED	L1: HT		L2: ED	L3: FC	L2: ED
2		L4: FW	L1: HT	L3: FC		L4: FW	L5: AQ	L4: FW
3		L2: ED	L3: FC	L4: FW		L5: AQ	L6: TO	L5: AQ
4		L3: FC	L6: TO	L5: AQ		L1: HT	L1: HT	L3: FC
5		L6: TO	L5: AQ	L6: TO		L3: FC	L2: ED	L6: TO
6		L1: HT	L4: FW	L2: ED		L6: TO	L4: FW	L1: HT

Note. L1: HT (Hawaii Trip) L2: ED (Ethnic Diversity) L3: FC (Food Cultures)

L4: FW (Food Waste) L5: AQ (Athletes' Quotes) L6: TO (Tokyo Olympics)

(2) What content and language knowledge do multilevel students learn in CLIL classes?

The second research question was investigated through the results of the achievement test and the Uptake Recall Chart (URC). The achievement test was administered to understand content/language knowledge that students learn in CLIL classes. The URC was used to gain a more dynamic view in the students' learning process, students' uptake in the CLIL classes.

1. Results of the Achievement Test

The overall mean scores and SD of the achievement test in Lessons 1 to 6 are shown in Table 6. The test scores were calculated for the language (10 points) and content (10 points) items, the total score being 20 points. Spelling mistakes were not penalized. Overall, Table 6 shows that the average score for language items (M=8.41) was lower than that of content items (M=9.05). The total mean score for all lessons was 17.46. In addition, it can be seen from the table that there were greater individual differences in the language items (SD=0.86) than the content items (SD=0.59).

Table 6: *Overall Results of Achievement Test (Lessons 1-6)*

	M	SD
Language Items	8.41	0.86
Content Items	9.05	0.59
Total Score	17.46	1.14

On the other hand, on an individual level, Table 7 shows the achievement test scores for each individual. The result shows that whether the student got higher scores for language or content differed from individual to individual. In addition, the result shows that despite the participants having different linguistic levels, there was not much difference in terms of the test scores regarding the lowest total score (M=15.40) and the highest total score (M=18.83). Moreover, learners who were perceived to have higher linguistic level, such as Yuriko (S5), who was on the level of B1-B2 level in CEFR, did not necessarily get higher scores in the CLIL achievement test than the other learners with lower linguistic abilities. Therefore, the CLIL achievement test may have been more or less difficult for all learners, regardless of their

language proficiency levels, as the test required both language and content knowledge. Such results suggest the potentiality of multilevel learners to feel a sense of achievement in the CLIL lessons.

Table 7: Individual Results of Achievement Test

		Daisuke (S1)	Tomoki (S2)	Shota (S3)	Michiko (S4)	Yuriko (S5)	Akiko (S6)	Fumie (S7)	Shigeru (S8)	M	SD
L1	Lg.	9/10	8/10	6/10	8/10		8/10	10/10	7/10	7.00	3.07
	Ct.	10/10	6/10	8/10	9/10		8/10	10/10	8/10	8.42	1.39
	Ttl.	19/20	14/20	14/20	17/20		16/20	20/20	15/20	16.40	2.37
L2	Lg.	10/10	9/10	7/10	7/10	8/10	10/10	9/10	9/10	8.62	1.18
	Ct.	9/10	10/10	7/10	9/10	8/10	10/10	9/10	7/10	8.62	1.18
	Ttl.	19/20	19/20	14/20	16/20	16/20	20/20	18/20	16/20	17.25	2.05
L3	Lg.	10/10	9/10	8/10	7/10	10/10	9/10	7/10	9/10	8.62	1.18
	Ct.	8/10	4/10	6/10	10/10	10/10	8/10	10/10	10/10	8.25	2.25
	Ttl.	18/20	13/20	14/20	17/20	20/20	17/20	17/20	19/20	16.87	2.35
L4	Lg.	9/10	8/10		8/10	7/10	7/10	9/10	9/10	7.12	2.99
	Ct.	10/10	10/10		10/10	10/10	10/10	10/10	8/10	9.71	0.75
	Ttl.	19/20	18/20		18/20	17/20	17/20	19/20	17/20	17.85	0.90
L5	Lg.		10/10	7/10	6/10	10/10	9/10	9/10	10/10	8.71	1.60
	Ct.		10/10	10/10	10/10	8/10	10/10	10/10	10/10	9.71	0.75
	Ttl.		20/20	17/20	16/20	18/10	19/20	19/20	20/20	18.42	1.51
L6	Lg.		7/10	8/10	6/10		8/10	10/10	9/10	6.85	3.28
	Ct.		10/10	10/10	10/10		10/10	10/10	10/10	10.00	0.00
	Ttl.		17/20	18/20	16/20		18/20	20/20	19/20	18.00	1.41
M	Lg.	9.50/10	8.50/10	7.20/10	7.00/10	8.75/10	8.50/10	9.00/10	8.83/10	8.42	0.86
	Ct.	9.25/10	8.30/10	8.20/10	9.67/10	9.00/10	9.33/10	9.83/10	8.83/10	9.05	0.59
	Ttl.	18.75/20	16.80/20	15.40/20	16.67/20	17.75/20	17.83/20	18.83/20	17.66/20	17.46	1.14
SD	Lg.	0.58	1.05	0.84	0.89	1.50	1.05	1.10	0.98		

2. Results of the Uptake Recall Chart (URC)

Results of the URC for Lesson 1 are presented in Table 8. Items in the URC are presented in the original form written by the students, and the correct forms of some of the items are given in square brackets. In addition, instances of incidental learning, that is, items that were not initially intended to teach by the researcher are underlined. It is clear from the table that the participants seemed to uptake different language and content items, varying in quantity and quality. Data also indicates that students recalled items that had been taught both intentionally and incidentally.

Table 8: Results of the Uptake Recall Chart (Lessons 1-6)

Participants	Language Items	Content Items
Daisuke (S1)	-Vocabulary: self perfection, realization -Grammar: <u>never/ever</u>	-アロハが単なる挨拶ではなく、ハワイの人々の信仰や哲学に関する言葉であること。 -タロ、サイメン[サイミン]、アサイー
Tomoki (S2)	- <u>and</u> で続く場合、 <u>[カンマ]</u> で繋げる	-Aloha は様々な意味の言葉で構成されている。
Shota (S3)	-Vocabulary: wikipedia, quick, gasolin station, gasolin [gasoline] stand	-Aloha's meaning -ハワイの食べ物, activity, tour, 旅行スケジュール, -ハワイの成り立ち、ハワイの位置、島の数、名称
Michiko (S4)	-Vocabulary: sprits [spirits], love ourselves, create feeling and thought, presence, breath, philosphy[philosophy]	-Aloha has [a] deep meaning, Hawaii -food,,pancakes, poke, acai bowl, humbergars[hamburgers] -peal herver [pearl harbor], activety [activity], marine sports
Yuriko (S5)		
Akiko (S6)	-Vocabulary: inspired by, philosophy, respect, Aloha's meanings self-, spread -Grammar: we want to eat ~ . , because....	-loco moco -アロハという言葉の意味が深まった。愛ぐらいしか知らなかったが、隣人愛、哲学、尊敬と深い意味を持つ良い言葉。 -ハワイの食事、local foods についての知識。 -ハワイの観光資源について(アクティビティ、ショッ

		ピング、sightseeing spots)
Fumie (S7)		-about Aloha, reading the meaning, expressing Aloha -Travel plan in Hawaii -Hawaiian food and activity
Shigeru (S8)		-ハワイについて、Aloha の意味 -ハワイの食べ物、ハワイ旅行の planning

(3) What instances of incidental teaching and learning can be observed in CLIL classes?

The third research question was investigated using the achievement test and audio-recordings of the CLIL lessons. In the present study, incidental teaching and learning were investigated through items that were categorized as language through learning, that is, language that is used to support students to deeply thinking about the topic to enhance their language learning (Coyle et al., 2010). Instances of incidental learning and teaching were identified through the URC and audio-recordings of the CLIL lessons, examining the language and content knowledge that were not intended to teach by the teacher in the initial lesson plan.

1. Incidental Learning and Teaching of Language Items

Language items that were categorized as language through learning in each of the six CLIL lessons are presented in Table 9. The items were classified into vocabulary/phrases and grammar sections. The items that were mentioned in the URC are underlined as instances of incidental learning. It shows the students who recalled the items in the URC in the parentheses. It can be noted however, that the teacher also observed many instances where the students asked and confirmed with each other for words that they could not come up with during the pair/group work, which may not have been heard in the audio-recordings.

Table 9: *Incidental Teaching and Learning of Language Items*

CLIL Lesson	Language Items	
	Vocabulary/Phrases	Grammar
Lesson 1: A Trip to Hawaii	-self-enhancement -I want to eat both -underwater	- <u>You do not say Have you never eaten...?</u> - <u>and</u> で続く場合、 <u>comma</u> で繋げる

<p>Lesson 2: Acknowledging Ethnic Diversity</p>	<ul style="list-style-type: none"> -freshly-caught -all at once -<u>inbound and outbound</u> -immigration -immigrants -What are others? -one-fourth [how to read fractions] -the background of each person -<u>Don't force your own culture onto others</u> -<u>take a while</u> 	<p>-<u>one of the victims (put s after victim)</u></p>
<p>Lesson 3: Food Cultures Around the World</p>	<ul style="list-style-type: none"> -fried bread with sugar -longtime favorite -powdered milk -frozen tangerine -grind -spelling of almond, cabbage, parsley -<u>wheat/flour</u> -pronunciation of butter -pronunciation of oven 	<p>-<u>place + noun</u> -sugar is an uncountable noun</p>
<p>Lesson 4: Food Waste in Japan</p>	<ul style="list-style-type: none"> -rainy season -rice crackers -economy -self-sufficiency rate -temperature -climate -<u>million/trillion</u> -leftover -raise awareness -dominate -corporate end の end の使い方 	<p>-<u>another...extra...</u></p>
<p>Lesson 5: Athletes' Words</p>	<ul style="list-style-type: none"> -triathlon -The Imperial Palace 	

of Wisdom	- <u>That's my boy</u> - <u>lazy</u>	
Lesson 6: 2020 Tokyo Olympics	- <u>Paralympics</u> -position of players	

Firstly, the overall results of the six lessons indicate that there were 39 vocabulary/phrase items that were classified as language through learning, which were taught mainly through the students' asking questions when they encountered words that they were unable to say in English. For instance, the phrase *freshly-caught* in Lesson 2 was introduced during the first task when Shigeru gave a presentation about his travel plan and wanted to find how to say 獲れたての in English. Another example is *longtime favorite*, which came up in the task where students had a discussion about the school lunches that they had experienced in the past and wanted to know the English word for 長年愛される.

Secondly, in terms of grammar items, there were six items that were classified as incidental learning in the lessons. The grammatical items were taught mainly through the teacher's realization of students' errors during the teacher-student or student-student interaction. For instance, when Shota (S3) asked, "Have you *never* eaten...?" during a pair work in Lesson 1, T decided to give a form-focused instruction in front of the whole class, mentioning that 'ever' is used instead of 'never' when asking a question about their interlocutor's experiences. Another example is in Lesson 2, where many students forgot to put an 's' after victim in "one of the victims." T noticed the error and decided to give a form-focused instruction to introduce that the noun after "one of the..." should be used in the plural form.

Furthermore, the results show that some of the items that were taught incidentally were also recalled in the URC. As for vocabulary items, eight out of 39 incidental vocabulary items were recalled in the URC by some of the participants. As for grammar items, five out of six incidental grammar items were recalled in the URC. Such results suggest that grammar items that were taught incidentally through a form-focused instruction were more likely to be recalled afterwards in the URC, although there were individual differences. To sum up, the results suggest that classes that incorporate the CLIL approach generate a more flexible and dynamic usage of language, which go beyond what the teacher had intended to teach the students in the original lesson plan.

2. Incidental Teaching and Learning of Content Items

Content items that were incidentally taught and learned are presented in Table 10. Overall, there were 12 instances of incidental learning regarding content items. The items came up incidentally mainly through the questions that the students asked throughout the lessons such as why there is a union jack in the Hawaii state flag (Lesson 2), what people with a vegan diet cannot eat (Lesson 4), and the American custom where restaurants provide doggy bags to take home leftover food (Lesson 4). In addition, some of the content items were taught by the students, such as Kabaddi and Muay Thai in Lesson 5, which were sports that the teacher did not know and could not explain. The student who knew the sports and their rules were asked to explain them to the other students.

Table 10: *Incidental Teaching and Learning of Content Items*

CLIL Lesson	Content Items
Lesson 1: A Trip to Hawaii	-whether the color of poi is its original color -A Japanese word equivalent of the word “Aloha” that is simple but contains many deep meanings
Lesson 2: Acknowledging Ethnic Diversity	-Why there is a union jack in the Hawaiian state flag (former colony of the U.K.) -concept of time differs from country to country -what is appropriate in one country may not be the case in others (e.g. It is OK to be 30 minutes late for a party in Mexico)
Lesson 3: Food Cultures Around the World	-powdered milk was offered in Japanese schools as school lunches over 65 years ago -tapioca can be made from cassava
Lesson 4: Food Waste in Japan	-What people with a vegan diet cannot eat -doggy bags in the U.S. (you can take home food that you couldn’t finish at the restaurant)
Lesson 5: Athletes’ Words of Wisdom	-The three sports in a triathlon -the basic rules of Kabaddi, Muay Thai, polo

Lesson 6: 2020 Tokyo Olympics	No items were found for incidental teaching and learning of content items
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Furthermore, as students differed in ages, they were able to share their different experiences, learning from one another through different tasks/activities. For instance, Akiko (S6), who worked in a company with workers from different countries, shared her experience in Lesson 6 regarding how she struggles with people who had different manners. Shigeru (S8) also shared his experience in Lesson 3 regarding what Japanese school lunches were like several years after the World War II. Such findings suggest that content knowledge were introduced and co-constructed by both the teacher and student in the CLIL lessons. To sum up, it can be said that CLIL is a dynamic teaching approach with many opportunities of incidental learning and teaching, thus providing a greater variation of content and language items, which were taught by both the teacher and the students.

6. Theory of Practice

Coyle et al. (2010) suggest the importance of language teachers to express their theory of practice, consolidating one’s knowledge and theories of learning implicitly through actual teaching. Therefore, this section interprets the results by presenting the theory of practice of the researcher, mentioning how CLIL was incorporated in a mixed-ability setting in relation to past theories, literature, and research studies. As the teacher of the mixed-ability CLIL class, I will illustrate how the lesson was planned and conducted from a teacher’s point of view.

1. Incorporating the CLIL Approach

The main tool used to design the CLIL lessons was the CLIL lesson framework designed by Ikeda (2016). Table 11 presents an overview of the CLIL lesson framework for all six lessons, which were incorporated in the present study. I will present how each section was considered when planning and conducting the lessons with reference to actual tasks and activities. In addition, I will mention how the lesson procedure was considered in terms of activating, input, thinking, and production.

Table 11: *CLIL Lesson Framework (Lessons 1-6)*

Content	Communication	Cognition	Culture
<p>Declarative knowledge (Lesson 1) -Hawaiian cuisine -About the Aloha Spirit -Tourist spots and activities in Hawaii</p> <p>(Lesson 2) - Hawaiian Mixed Plate -History of the plantation -Ethnic background -Ms. Ariana Miyamoto</p> <p>(Lesson 3) -Names of staple food -Names of ingredients -Recipes of foreign meals</p> <p>(Lesson 4) -Food scarcity around the world -Food waste in Japan</p> <p>(Lesson 5) -Names of Sports -Facts about sports -Famous quotes of athletes</p> <p>(Lesson 6) -Information about Sports and the Olympics -Japanese manners</p>	<p>Language Knowledge (Lesson 1) -Present perfect -To infinitive</p> <p>(Lesson 2) -Past tense -Comparatives</p> <p>(Lesson 3) -passive voice -auxiliary verbs</p> <p>(Lesson 4) -auxiliary verbs -relative clauses and pronouns</p> <p>(Lesson 5) -comparatives -superlatives -negatives</p> <p>(Lesson 6) -prepositions -should and shouldn't</p>	<p>LOTS (Lessons 1-6) -Remembering -Understanding -Applying</p>	<p>Cooperative Learning (Lessons 1-6) -Pair work -Group work -Class Discussion -Peer Scaffolding</p>
<p>Procedural knowledge (Lesson 1)</p>	<p>Language Skills (Lessons 1-6)</p>	<p>HOTS (Lesson 1-6)</p>	<p>Global awareness (Lesson 1)</p>

<p>-Expressing opinions regarding about food, tourist spots, and activities</p> <p>-Creating travel plans for different places</p> <p>(Lesson 2)</p> <p>-Analyzing the demographic graph</p> <p>-Thinking about the relationships between variables</p> <p>(Lesson 3)</p> <p>-Analyzing and drawing conclusions from maps</p> <p>-Considering issues and its solutions using data</p> <p>-Writing recipes of a meal</p> <p>(Lesson 4)</p> <p>-Utilizing different information from various sources to express opinions and ideas</p> <p>(Lesson 5)</p> <p>-Creating new quotes from athlete's quotes</p> <p>-Expressing reasons why you like a particular sport</p> <p>(Lesson 6)</p> <p>-Planning for the 2020 Tokyo Olympics using the information and following the requirements</p>	<p>-Reading</p> <p>-Listening</p> <p>-Speaking</p> <p>-Writing</p>	<p>-Analyzing</p> <p>-Evaluating</p> <p>-Creating</p>	<p>-Different food cultures</p> <p>-Values of the Hawaiian people</p> <p>-Learning about different countries and cities</p> <p>(Lesson 2)</p> <p>-Ethnic Groups</p> <p>-Ethnic Diversity</p> <p>-Understanding people who are different</p> <p>(Lesson 3)</p> <p>-Different school lunches</p> <p>-Food cultures around the world</p> <p>(Lesson 4)</p> <p>-Food issues around the world</p> <p>-Which food to recommend to foreign people</p> <p>(Lesson 5)</p> <p>-Comparing popular sports in Japan and the U.S.</p> <p>-Famous quotes of foreign athletes</p> <p>(Lesson 6)</p> <p>-Recommending Japanese restaurants and tourist spots</p>
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Firstly, I began by considering the Content section by brainstorming topics that may be interesting for the students, reflecting on their interests, background knowledge, areas of expertise, hobbies, strengths, and weaknesses of each student. After deciding some possible topics that can be incorporated into the CLIL lessons, I did some research to find different texts, information, videos, graphs, statistics, stories that may be relevant to the topic to consider how they may be used as learning materials in the CLIL classes. Afterwards, the Communication section was considered to decide how different language knowledge and skills could be incorporated using the learning materials. For instance, for Lesson 2 (Acknowledging Ethnic Diversity), to analyze and compare different graphs that showed the ethnic backgrounds of the people in Hawaii and the U.S. average, I decided to incorporate comparatives. As for Lesson 4 (Food Waste in Japan), I found a reading text about food waste in Japan, which frequently used relative pronouns and relative clauses.

In terms of the four language skills (listening, reading, speaking, and writing), opportunities to use different language skills were provided through wide-ranging tasks/activities. Firstly, listening was mainly incorporated through teacher-student and student-student interaction or watching videos. I also provided some activities focusing on listening, where students listened to the recipes of foreign meals (Lesson 3) or an interview by Kei Nishikori (Lesson 5), filling in the blanks while they listened. Furthermore, I used English as much as possible in the oral introduction or responded to students' Japanese utterances in English. Secondly, for reading skills, I provided different types of texts that were related to the topic so that students could learn about the topic further through the reading materials. I also wrote down some of the key sentences or ideas mentioned during the discussion so that students could see the written form as well. Thirdly, for speaking skills, students were given different opportunities to express in English in different learning arrangements. I also had students become familiar in talking with smaller groups first before they were asked to report back to the whole class. Fourthly, for writing skills, students were given opportunities to write a summary of the text or write English compositions for homework about a related topic.

In addition to Content and Communication, the Cognition and Culture sections were also considered. As for Cognition, the tasks and activities were designed in such a way that both lower-order thinking skills and higher-order thinking skills were used. Lower-order thinking skills (remembering, understanding, and applying) were used mainly in the first stages of the lesson, so that the language and content knowledge could be activated and clarified for a smooth

transition into the latter part of the lessons, which required deeper and critical thinking. Some of the examples of the tasks/activities in the CLIL lessons that required lower-order thinking skills include the following: videos, brainstorming, and form-focused instruction. On the other hand, higher-order thinking skills (analyzing, evaluating, creating) were used to provide cognitively engaging tasks and activities so that the learners were required to think deeply, which included some of the following: analyzing maps and graphs, discussions about ethnic diversity, food culture, food waste, and creating a travel plan.

Lastly, for the Culture section, tasks and activities that required cooperative learning and global awareness were incorporated throughout the six lessons. In terms of cooperative learning, I had students discuss in pairs or groups first, confirming the answers before asking them to share with the whole class so that students could help each other if they had any difficulty with comprehending the language or content to encourage cooperative learning. In addition, there were some tasks such as the travel plan in Lesson 1 or the schedule for the U.S. team in Lesson 6 where the students had to work together to complete the task. In terms of global awareness, there were some topics that required students to think about different issues related to global awareness such as acknowledging ethnic diversity in Lesson 2 and food issues around the world in Lesson 4. There were also tasks/activities that required students to think about other people in foreign countries such as the discussion in Lesson 4, where they came up with a Japanese food that foreign people may like. In Lesson 6, students thought about some Japanese manners that foreign people may not know when they visit Japan.

In addition to the 4Cs of CLIL, I also considered the CLIL lesson procedure in terms of activating, input, thinking, and output. Firstly, I aimed at beginning the lessons with an activation of the students' topical knowledge so that there may be a smooth transition into the subsequent activities, as the activating stage refers to the stage where learners become familiar with the lesson topic, enhancing motivation, producing expectations, focusing on the topic, and acknowledging individual differences (Dale, van der Es, & Tanner, 2011). In this stage, I asked students different questions, showed videos, and conducted brainstorming sessions so that the learners were able to activate their background knowledge in different ways. Secondly, for input, I aimed at incorporating multimodal input through reading texts, oral introductions, and visual aids. Thirdly, for thinking, after students have become relatively familiar with the topic, I prepared tasks/activities that were slightly more challenging, as they required deeper cognitive skills. For instance, in Lesson 2, students were asked to analyze a graph that showed the ethnic

background of the population and later discuss how to cope with diversity. In Lesson 5, students were asked to create a quote based on the model quote mentioned by a famous athlete. Such tasks/activities required students to think deeply and critically think about the topic in wide-ranging ways. Fourthly, for production, there were opportunities for students to generate their opinions or ideas in both spoken and written forms. For instance, in Lesson 1, students created a travel plan in groups to write down what they wish to do in Hawaii, later presenting their travel plan to the whole class.

In summary, different types of procedure and learning arrangements were incorporated in the lessons so that students were able to learn in a more dynamic way. This was made possible by the flexibility of the CLIL approach to teaching, which allows for rich selection of tasks and activities and greater creativity in task designing and implementation, which would not be possible in such teacher-centered and grammar-oriented methods as GTM classes, where students typically spend their class time reading texts, translating sentences, analyzing grammar, and engaging in mechanical practice for the supposed purpose of consolidating learned knowledge.

2. Issues Surrounding Mixed-ability Classes

The students in the present study differed greatly in their age, language proficiency, educational background, goals, occupation, interests, anxiety levels, strengths and weaknesses. Taking such a diverse classroom situation into consideration, I adopted the CLIL approach instead of the Grammar Translation Method, which is designed for “an ideal homogeneous class” (Santhi, 2011, p.3), where students with greater language knowledge are more likely to get the correct answers. In addition, as the classes were not ability-based, as a teacher, I was not conscious about the language level of the class while teaching, which often happens in an ability-based class, where teachers send students in the lower classes a “downward spiral of low achievement and low expectations” (Dörnyei, 2001, p.35). Instead, as the students differed in wide-ranging aspects, I focused more on their strengths, interests, ideas, and experiences, which could be shared in the classroom through different tasks and activities. For these reasons, it can be said that incorporating the CLIL approach in mixed-ability classes is a better way to cope with learners with diverse backgrounds, strengths, and weaknesses than teaching in traditional teaching approaches or streaming students based on their language proficiency.

7. Pedagogical Implications

Based on these results obtained in the current study, some pedagogical implications can be suggested. First and foremost, CLIL is an appropriate teaching approach for mixed-ability classes, as it was incorporated in a highly diverse setting, where students differed greatly in age and background knowledge. It can be said that such classroom situations to be better than simply streaming students according to their language proficiency. Another implication is that CLIL may be a more flexible approach compared to the GTM or other traditional approaches, as multilevel students were able to gain a positive impression as well as a sense of achievement in the CLIL classes. In addition, the notion of an ‘advanced’ learner seemed to be more dynamic, as different students seemed to do better depending on the tasks/activities. Furthermore, the findings may well suggest that instead of focusing on students’ achievement of language knowledge (e.g. vocabulary and grammar), which is often emphasized in many of the tests in Japanese schools, a more dynamic assessment of students’ content and language knowledge is necessary to satisfy the intellectual demands of wide-ranging learners in this globalizing society.

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Appendixes
Student Profile Questionnaire

Name お名前: _____

Age 年齢 (当てはまるものに☑を付けてください)

10代 20代 30代 40代 50代 60代 70代 以上

English-learning Experience 英語の学習歴について

1. When did you start learning English? (e.g. from junior high school)

英語はいつ頃から学び始めましたか。(例: 中学から)

2. Where did you learn English? (e.g. in English classes at school, at conversation schools)

どちらで英語を学習しましたか。(例: 学校の英語の授業、英会話学校、海外)

3. For those who have lived abroad for more than three months: Where did you live? For how long? (e.g. America, two years)

海外で3ヶ月以上暮らしたことがある方のみ:

滞在国・滞在期間をご記入ください。(例: アメリカ、2年)

English Use in Daily Life 日常の英語使用について

4. How many hours a week do you use English in daily life?

1週間に何時間程度英語を使用していますか。

_____ hours (時間)

English Proficiency Level 英語能力について

5. If you have taken any type of English proficiency test (e.g. TOEIC, TOEFL, Eiken), please indicate your highest score or grade. (e.g. TOEIC 550; Eiken Grade 2)

TOEIC、TOEFL、英検等の英語の能力を測る試験を受けたことがある場合はその点数または合格した級をご記入ください。(例: TOEIC 550 点; Eiken 2 級)

6. When did you take the English proficiency test? こちらの英語能力試験はいつ受けられましたか。

7. Please indicate which English level you think you are currently at based on the CEFR table shown below (e.g. A2 level) 現在のご自身の英語レベルに最も近いと思われるレベルを表から選び、ご記入ください。(例: A2)

CEFR	実用英語技能検定 1級-3級	GTEC Core Basic Advanced CBT	TEAP	TEAP CBT	IELTS	TOEFL IBT	TOEIC L&R/ TOEIC S&W	ケンブリッジ 英語検定
C2					9.0 8.5			230 (230) 200 (210)
C1	3299 (3299) 2600 (2630)	1400 (1400) 1350	400 375	800	8.0 7.0	120 95	1990 1845	199 (190) 180 (180)
B2	2599 (2599) 2300 (2304)	1349 (1200) 1190	374 309	795 600	6.5 5.5	94 72	1840 1560	179 (170) 160 (160)
B1	2299 (2299) 1950 (1980)	1189 (1000) 960	308 225	595 420	5.0 4.0	71 42	1555 1150	159 (150) 140 (140)
A2	1949 (1949) 1700 (1728)	959 (840) 690	224 135	415 235			1145 625	139 (120) 120
A1	1699 (1699) 1400 (1428)	689 (270) 270					620 320	119 100

赤の点数は各級合格スコア ※括弧内の数値は、各試験におけるCEFRとの対象関係として測定できる能力の範囲の上限と下限

Source: <https://www.fourskills.jp/cefr>

CEFR: _____

Post-class Questionnaire

Name: _____

こちらのアンケートでは選択式・自由記述の設問が含まれます。選択式の質問ではもっとも当てはまる番号をそれぞれ1~4の中から選び、ご記入ください。

- 1: No (そう思わない)
- 2: No, to some extent (あまりそう思わない)
- 3: Yes, to some extent (ややそう思う)
- 4: Yes (そう思う)

Overall Impression 授業全体の印象

- 1. Did you enjoy the lesson? 授業は楽しめましたか。

- 2. Was the topic interesting for you? トピックは面白かったですか。

- 3. Are you satisfied with the class? 授業に満足しましたか。

Difficulty of the class 授業の難易度

- 4. Was the English used in the class difficult for you in general?
授業で使われていた英語は全体的に難しかったですか。

- 5. Was the content (topic) of the class difficult for you?
授業のトピックは難しかったですか。

Psychological Factors 心理面について

- 6. Did you feel nervous during the class? 授業中に緊張しましたか。

- 7. Did you feel confident using English? 英語を自信を持って使えましたか。

Understanding of English and Topic 英語やテーマへの理解

8. How much of the English did you understand in the lesson? (Percentage) _____%

9. How much of the topic did you understand of the lesson? (Percentage) _____%

Tasks/Activities タスク/アクティビティについて

10. Which task/activity did you enjoy or find interesting? どのタスク/アクティビティが楽しかったですか。

11. Which task/activity did you find difficult?

どのタスク/アクティビティが難しかったですか。

Reflection of all the lessons 全体の振り返り(After Lesson 6 only)

12. 6つのCLILレッスンのうち、総合評価(楽しさ、印象、満足度)の高い順に隣の空欄に1～6の番号を書いてください。ご欠席された回には×をお書きください。

(1→最も高い評価 6→低い評価)

- ① Lesson 1: A Trip to Hawaii (ハワイ旅行プラン) _____
- ② Lesson 2: Ethnic Diversity (人種の多様性) _____
- ③ Lesson 3: Food Cultures Around the World (世界の食文化) _____
- ④ Lesson 4: Food Waste in Japan (日本の食料廃棄) _____
- ⑤ Lesson 5: Athletes' Words of Wisdom(スポーツ選手の名言) _____
- ⑥ Lesson 6: 2020 Tokyo Olympics (2020年東京五輪) _____

ご協力ありがとうございました!

Uptake Recall Chart (アップテイク・リコール・チャート)

Name: _____ Date: _____

Instructions: What do you remember in today's lesson? Please answer fully and in detail without looking at anything. 本日の授業で覚えている事項を可能な限り具体的にお書きください。感想を書く必要はありません。

Language (grammar, spelling, pronunciation, punctuation, ways of using the language, words and phrases)

言語について (文法事項・つづり・発音・句読点の使い方・言葉の使い方・語句・表現):

Content (knowledge and information about the topic):

内容について (テーマについての知識や情報):

Interview Guide

Educational Background/English-learning Experience

- What types of English classes did you experience as a JHS/SHS/university student?
- Have you ever experienced classrooms that were content or topic-based?
- Have you studied at a university? If so, what was your major in university?
- Why did you choose to take the course?
- What is your current goal in learning English?

Psychological factors

- In what situations did you feel nervous in using English?
- In what situations did you feel confident in using English?
- Has your nervousness/confidence in using English change in any way?

Students' Perceptions of CLIL classes

- How did you feel about the CLIL classes?
- Did you learn anything through the classes? If so, what?
- Do you have any further thoughts or comments about the classes?