

# An EAP curriculum design of a content and language integrated learning program for hospitality students in Taiwan

Un diseño curricular del inglés con fines académicos para un programa de aprendizaje integrado de contenidos y lengua extranjera para los estudiantes de hostelería en Taiwán

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## Abstract

*Most pedagogical approaches for teaching English for academic purposes (EAP) aim to prepare second language (L2) learners to engage in academic study. We report the findings of a case study, exploring the development and features of a content and language integrated learning (CLIL) program implemented at a hospitality university in Taiwan. We describe the theoretical basis of the program and its relationship to the study rationale in addition to program development and implementation processes. The data were collected during an academic year, using a combination of quantitative and qualitative methods including pre and posttests, a student questionnaire, field notes, and semi-structured interviews. The results show significant improvement in student language proficiency and content area knowledge. Students in the high-proficiency level group (HP) and the low-proficiency level group (LP) expressed differing opinions regarding the selected materials, content-based homework, combination of English instruction and academic knowledge acquisition, and difficulties in written tests. The results were consistent with those of previous studies. Practical implications for theory, practice, and future research are discussed.*

**Key Words:** English for academic purposes (EAP); curriculum design; content and language integrated learning (CLIL); higher education.

## Resumen

*La mayoría de los enfoques pedagógicos para la enseñanza del inglés con fines académicos (EAP) tienen como objetivo preparar a los estudiantes de segunda lengua (L2) para participar en estudio académicos. Se presentan los hallazgos de un estudio de caso que exploró el desarrollo y las características de un programa del aprendizaje integrado de contenidos y lengua extranjera (AICLE) implementado en una universidad de hostelería y servicio en Taiwán. Se describe la base teórica del programa y su relación con la justificación del estudio, además de la elaboración de programas y procesos de implementación. Los datos fueron recogidos durante un año académico, utilizando una combinación de métodos cuantitativos y cualitativos, incluyendo pruebas diagnósticas y de salida, un cuestionario para estudiantes, notas de campo, y entrevistas semi-estructuradas. Los resultados muestran una mejora significativa en el dominio del idioma del estudiante y el conocimiento del área de contenido. Los estudiantes en el grupo de alto nivel de dominio (HP) y el grupo de bajo nivel de dominio (LP) expresaron diferentes opiniones con respecto a los materiales seleccionados, la tareas basadas en el contenido, la combinación de la instrucción en inglés y la adquisición de conocimientos académicos, y las dificultades en las pruebas escritas. Los resultados fueron consistentes con los de estudios anteriores. Se discuten las implicaciones prácticas en la teoría, la práctica y en investigaciones futuras.*

**Palabras Claves:** inglés con fines académicos (EAP); diseño curricular; aprendizaje integrado de contenidos y lengua extranjera (AICLE); educación superior.



## INTRODUCTION

The internationalization of higher education is the first priority for numerous countries that face global challenges. In 2009, the Taiwanese government proposed a five-year national project called “The Intelligent Taiwan - Manpower Cultivation Project,” to link manpower cultivation, human capital, and competitiveness, ensuring that educational resources are efficiently allocated (Executive Yuan, 2009). Its primary higher education goal involved implementing the “Development Plan for World-Class Universities” and the “Teaching Excellence Project”. Both projects endeavored to cultivate high-level human resources and raise the standard of research and teaching in Taiwanese universities to world-class levels. Recently, the Ministry of Education (MOE) redoubled its efforts to attract foreign students to Taiwan and to enrich the international aspect of higher education. The MOE offered scholarships to more than 2,000 foreign students and added NT\$100 million (US\$3.3 million) to its budget to provide additional scholarship opportunities for foreign students (Executive Yuan, 2009).

To attract more foreign students to Taiwan, numerous higher education institutions now conduct classes in English. Based on MOE data, approximately 70% of public and private comprehensive universities in Taiwan offer courses taught in English, totaling 13,249 classes; foreign students represent 1.3% of all college students (Lin, 2011). At the end of 2012, the President of Taiwan pledged to increase the international competitiveness of universities, indicating that he expected increasing numbers of educational institutions to offer courses taught in English to attract foreign students (Huang, 2011). The president mentioned that the government expected to double the percentage of foreign students to 10% by 2020 (Hsu, 2012), acknowledging the emergence of English as an international language for academic instruction and excellence.

In 2009, the Ministry of Transportation and Communications of Taiwan proposed “Project Vanguard for Excellence in Tourism” to internationalize tourism and hospitality curricula, instruct hospitality professionals in English skills, and reform hospitality education in Taiwan. To accomplish these goals, a leading public hospitality university implemented a new content-and-language integrated learning (CLIL) program in 2010. At the tertiary level, CLIL approaches have not been sufficiently studied in a Taiwanese context; thus, its potential warrants investigation regarding applications to English for Academic



Purposes (EAP). This CLIL program is as an alternative EAP curriculum design that could provide valuable insight into similar programs in Taiwan or in other non-English speaking countries in Asia.

The CLIL approach involves combining content and language teaching, offering equal attention to each and is similar to content-based instruction (CBI) and immersion education. As Dalton-Puffer (2011) explained, depending on the cultural and political framework, CLIL typically refers to teaching a foreign language or a lingua franca, but not as a second language (L2). For example, English is a dominant CLIL language in Europe, South America, and Asia. In North America, this dual-focused approach was widely adopted as bilingual education and is typically referred to as a CBI or immersion programs. Classroom research in Europe and North America has shown that CLIL and CBI programs have resulted in positive learning outcomes including high student academic achievement levels and fluency in the target language (Archibald *et al.*, 2008; Costa & D'Angelo, 2011).

This study explored an English CLIL program designed for Applied English majors at a hospitality university in Southern Taiwan during 2010–2012. We evaluated whether the current program implementation achieved its goals, exploring participant perceptions regarding the CLIL program curriculum and attempting to elucidate how the features of the CLIL program contributed to target language learning and academic content in a vocational education setting. Norris (2006) identified four distinct purposes of program evaluation: judging, demonstrating, understanding, and improving. The central theme of program evaluation is attaining the potential for learning; that is, the stakeholder understanding of how language programs work in a particular context and how they can be improved (Kiely, 2009). Stakeholders comprise program participants (students and teachers), policy makers, sponsors (program and institution managers and accrediting bodies), and those who benefit from evaluation processes, findings, and outcomes such as language learning and teaching researchers, teacher educators, and the evaluation community (Kiely & Rea-Dickins, 2005). Because the Taiwanese government heavily invested in promoting internationalization and English learning, a stringent evaluation of this CLIL program is necessary to assess quality management, research for future EAP program development, and the accountability of government agents.



We adopted multiple data collection methodologies—both quantitative and qualitative—to provide a comprehensive understanding of the program and propose improvements. As Bonnet (2012) mentioned, integrating qualitative and quantitative research strategies increases the conclusiveness of findings and maximizes their validity. The research questions for this study were as follows:

1. Does the English competence of hospitality students improve after participating in the CLIL program?
2. How do students and faculty members respond to the CLIL program implemented at their specialized institution, and how do these opinions reflect the Taiwanese educational context?

### Literature review

Traditional L2 and foreign language educational researchers have primarily focused on the capability of students to learn target languages and their cognitive and intellectual development. Recent studies have suggested that language learning should be identified as a social activity and that learners acquire language skills through experiential interactions; thus, language is learned when learners are presented with target language materials in a meaningful and contextualized form. Therefore, integrating target language learning and subject-based content has received increased attention in Europe, North America, and throughout the world. As a result, several teaching and curriculum models have been developed, including immersion programs, CLIL, English as medium of instruction, and CBI. The following sections summarize concepts related to CLIL and EAP learning and CLIL and learner outcomes in Taiwan.

### *CLIL and EAP*

English for specific purposes (ESP) was designed to teach English for academic or occupational purposes, focusing on language in context rather than grammar or language structures. ESP addresses various subjects, such as biology, computer science, tourism, and business management, instructing English by integrating it with subject matter that is relevant to students rather than teaching it as a subject separated from student experiences. Several ESP teaching approaches have been proposed, including the corpus-based approach (Flowerdew, 2004, 2005; Swales, 2006), genre and discourse approaches (Bhatia, 1993; Swales, 1990), and CBI/CLIL (Coyle, 2007; Coyle, Hood, & Marsh, 2010).



Teaching EAP requires meeting the cognitive, social, and linguistic demands of particular academic contexts and tailoring instruction to specific rather than general purposes (Benesch, 2001; Hyland & Hamp-Lyons, 2002). In addition to preparing learners for English study, EAP instruction involves developing the communicative skills necessary for participating in academic discourses (Hyland & Hamp-Lyons, 2002). One of the pedagogical approaches to achieving these goals is CBI/CLIL, in which language instruction is integrated within a specific academic context, allowing students to follow concurrent language and discipline-specific content (Brinton *et al.*, 2003; Johns, 1997, 2001). In this approach, content and language are integrated for engaged learners, who must use complex language for complex tasks (Kong, 2009). After implementing this approach in an EAP context, Brinton *et al.* (2003) stated four theoretical rationales based on language acquisition, socio-cultural and L2 learning and teaching perspectives:

1. ESP perspective: subject areas demonstrate distinct specialized languages or registers. Therefore, learning specific subjects and registers is essential for mastering specific content.
2. Motivational and cognitive perspective: the model linking content with language is thought to promote effective learning outcomes because language is learned using the informational content, which motivates learners.
3. Pedagogical perspective: teaching is built on the prior experience of a learner based on the subject matter and academic environment.
4. Learner perspective: this model focuses on effective language use, where language learning is focused on contextualized and social functions.

In response to academic English proficiency needs of college and university students, diverse CLIL programs have been developed in South America, Europe, and Asia. Regarding tertiary CLIL programs, Coyle (2006, 2007) suggested employing the 4Cs-Framework, which is integrative and offers a sound theoretical and methodological foundation for CLIL curriculum design and material construction. The model involves addressing content (subject matter, theme, or cross-curricular approaches), focusing on the relations among content (subject matter), communication (language), cognition (thinking), and culture (awareness of self and 'otherness') to build on the synergies of integrated



learning (content and cognition) and language learning (communication and cultures).

Successful CLIL teachers and lesson planners require flexible tools and recommendations on designing quality programs and developing appropriate materials based on the 4Cs-Framework. Quality and accountability (Coyle, 2007) must be improved; recent studies have revealed unresolved issues in CLIL classrooms, including the lack of target language use or academic discourse by students (Dalton-Puffer, Nikula, & Smit, 2007; Vollmer, 2008). Therefore, embracing the CLIL approach does not automatically yield successful learning. To realize the value of CLIL, teachers and lesson planners must embrace a new teaching and learning paradigm; thus, they require tools and templates to help them plan lessons and create or adapt teaching materials.

Several studies involving self-reported data in an academic context have reported that the CLIL model exhibits various strengths (Coyle, 2007; Fortanet-Gómez & Räisänen, 2008; Lasagabaster, 2008). Its primary strength is facilitating positive attitudes, target language proficiency, and academic skills among students, allowing mastery of the subject-matter content. Furthermore, student performance in academic courses is enhanced, particularly in terms of reading ability. Students in CLIL programs mentioned an increased interest in international or study abroad programs or international careers (Coleman, 2006). The weaknesses of this model are accuracy problems regarding target language usage, and in producing receptive skills rather than productive skills (Dalton-Puffer, Nikula, & Smit, 2007). As Coleman (2006) stated, implementing CLIL programs in higher education settings requires extensive resources including teaching staff, the systematic coordination of content area curricula, and instructional materials.

### ***CLIL Research Findings in Taiwan***

The MOE of Taiwan started promoting CLIL for higher education in 2011. Prior to 2011, the terms CBI and bilingual education were widely used. In 2011, the MOE launched a faculty-training project in cooperation with the Regional English Language Centre (RELC) and the Southeast Asian Ministers of Education Organization in Singapore (NCCU, 2012).

The purpose of the MOE project was to produce teachers interested in offering CLIL courses at universities and colleges, through a selection process



that included sending them to Singapore for three weeks to attend the CLIL training courses offered by the RELC. The MOE subsidized tuition and accommodation. In the summer of 2011, the first group of 15 faculty members from colleges and universities participated in this project. The training course designed by the RELC (NCCU, 2012) focused on issues including understanding CLIL concepts and L2 acquisition theories (27 hours), content area text types and materials design (27 hours), personal language development (27 hours), and visiting higher education institutions in Singapore (9 hours). In August 2012, another group of 21 faculty members went to the RELC for this training program. However, no research papers or academic reports on the outcomes of this faculty-training project have been published, so the effectiveness of this program is unknown.

Some studies focusing on CBI programs have been published in Taiwan (Chung, 2006; Hsu, 2007; Lee, 2007; Liaw, 2007; Pan & Pan, 2009; Shang, 2009; Tseng, 2005). Most of these studies are literature reviews (Hsu, 2007; Pan & Pan, 2009; Shang, 2009; Tseng, 2005) and tend to propose appropriate models for higher education in Taiwan. Lee (2007) evaluated a CBI program for a molecular biology course implemented at a medical college. The participants of this study believed that the CBI program was vital to improve their English learning. Additionally, they were all satisfied with the program arrangement, particularly concerning teacher performance in English presentations and material preparation. They also believed that the CBI program helped them to improve their English listening abilities, but did not help their reading, writing, or speaking skills. Knowledge of the subject also increased through CBI instruction (Lee, 2007).

Among the studies conducted in Taiwan, only two reports (Chung, 2006; Liaw, 2007) have emphasized student performance and language proficiency in CBI classrooms. In Liaw (2007), the study subjects were junior high school students, and the results showed that students substantially improved their language proficiency, critical thinking skills, and knowledge of the subject-matter content. In Chung (2006), the study subjects were students at a military academy, and their EFL competence did not improve. In both studies, students showed positive attitudes toward CBI instruction. When compared with current research, the results for CBI in Taiwan were not sufficient or representative enough to be



considered significant. Thus, more research on this area, in a higher education setting, is needed.

## METHOD

### The Study

This section addresses the critical issues involved in implementing a CLIL program at a public hospitality university in a Taiwanese EFL setting. The case institution received a “Teaching Excellence Project” grant from the MOE of approximately NT\$45 million (US\$1,500,000) in 2009. The project was conducted throughout four academic semesters and internationalization was a key goal. Because of nationwide government promotion of higher education internationalization (Executive Yuan, 2009), and an increasing focus on Taiwan as a major tourist destination in Asia (Ministry of Transportation and Communications, 2009), the university acknowledged the importance of integrating English language development and course content; thus, the need for CLIL programs became apparent.

### Context

The first challenge of implementing CLIL programs is convincing faculty to participate. Because the case school specialized in hospitality, the doctoral faculty members specialized in various disciplines in the humanities, hospitality management, travel and tourism management, culinary arts, and the social sciences; approximately 25% received their doctorate overseas. Although highly qualified in their respective fields, these instructors lacked professional training in English education, L2 acquisition, or instructional methods. Only 10 faculty members in the Applied English Department had obtained foreign language teacher training. The Academic Affairs Office promulgated various policies to encourage faculty to become involved in the CLIL teaching program. The incentives included doubling their teaching hours, providing teaching assistants, and offering grants to develop educational materials.

After careful consideration and evaluation, the CLIL program was established in the fall of 2010, for freshmen in the Applied English Department. The administrators believed that students in Applied English were proficient in English and had additional English training prior to entering the university. The



curriculum model was a combination of English CLIL courses and regular English training courses, which facilitated exposure to the target language. Three introductory-level content courses were offered as CLIL courses: (a) Introduction to Hospitality Management; (b) Introduction to Service Management; and (c) World Food Culture. Each of the courses yielded two credits following successful completion and comprised 36 hours of class time that was divided into 2-hour sessions each week, for 18 weeks. Table 1 lists a description of each course.

**Table 1. CLIL course description at the hospitality-specialized university in Taiwan.**

Course Title	Course Content	Required Course	Class Size
Introduction to Hospitality Management	Introduction to the Tourism and Leisure Industry; The Hotel Business: Development and Classification; Hotel and Rooms Division Operation; Hotel Operations: Food and Beverage Division; The Culinary Arts and Restaurant Business: Development and classification; Restaurant Operations	Yes	45
Introduction to Service Management	Issues in Customer Service; Factors influencing successful/failed customer service; Dealing with customers' complaints; Loyal customers; Leadership in customer service; Future trend in service industry	No	44
World Food Culture	Food and Culture; Food and Religion; Europeans; Africans; Latinos; Asians; China and Taiwan; Intercultural Communication in the Foodservice Workplace.	No	48

This CLIL program aimed to foster bilingual global citizens who demonstrate professional knowledge and service-oriented attitudes. To meet this challenge, these courses facilitated opportunities for gaining target language proficiency that mimicked situations the students were likely to encounter in other content-specific courses (that is, not only domain-specific terminology required for hospitality-based subjects, but professional discourse styles that characterize future career communication skills). The CLIL program functioned as an EAP program, providing a forum for students to learn new skills and a context for the cognitive demands of academic knowledge; it involved instructing students



regarding academic skill development, self-assessment, and learning independence, instructing them in the discourse skills required for various courses. These courses were subject-specific, and dealt with the specific skills and strategies needed in a given study area. English was used as the medium of instruction and the students learned to use full-length, authentic texts. They integrated information from more than one source and performed independent or group projects that comprised written and oral reports. Moreover, they expanded their general academic vocabulary and developed specific professional knowledge.

## Participants

The participants comprised 36 freshmen and 2 faculty members who taught the CLIL program at the case university. The students demonstrated various backgrounds and levels of English proficiency. Among them, 5 (13.9%) were male and 31 (86.1%) were female. The instructors participated in qualitative interviews. The first was in his late forties and had taught at the school for approximately 12 years. The other was in his late fifties and directed an administrative unit at the school; he previously taught in Taiwanese tertiary settings full-time for over 20 years. Two randomly selected students also participated in interviews: 1 male and 1 female.

## Data Collection

Quantitative and qualitative data were collected. The quantitative data comprised pre and posttest scores of subject tests conducted in English. To assess student progress in subject-matter knowledge and English language learning, pre and posttests for one of the CLIL courses were administered at the beginning and end of the spring semester of 2012. The tests were constructed based on an evaluation of student progress regarding technical vocabulary and terminology. To ensure its validity and level of difficulty, we consulted with two experts in the hospitality management field before administering the test.

Thirty-six students completed the program evaluation questionnaire, which was administered at the end of 2012 and provided data for quantitative analysis. The questionnaire employed a Likert scale, was written in Mandarin, and was designed to investigate student opinions regarding CLIL program goals, content, materials, contributions to curricular subjects, and English learning



feedback for suggesting future improvements. A four-point scale (1 = strongly disagree, 2 = disagree, 3 = agree, and 4 = strongly agree) was adopted, representing a forced choice method to prevent participants from simply choosing the middle (or neutral) option. The questionnaires were pilot tested and modified based on feedback from three respondents: two students and one faculty member.

The qualitative data comprised interviews with two students and two faculty members, field notes, and classroom artifacts such as teaching materials, syllabi, and student work. The faculty and student interviews involved content similar to that of the student questionnaire; thus, a semi-structured interview instrument was developed to provide in-depth information. The interviews were conducted by the researcher and a graduate student for 25 to 30 minutes and audio recorded. The interview was used to supplement the information obtained using the questionnaire, facilitating increased reliability and validity.

## Data Analysis

The data were analyzed using SPSS, version 14.0. Student responses to the questionnaire were divided into two groups based on English proficiency. Students who demonstrated English proficiency test scores higher than the CEF B1 level (Common European Framework of References for Languages) were placed in the high proficiency level group (HP). Students who scored lower than CEF B1 were placed in the low proficiency level group (LP). These two groups were comprehensively compared to yield various student perspectives. Moreover, to effectively present the questionnaire data, scale options 1 (strongly disagree) and 2 (disagree) were compiled in the “disagree” category and 3 (agree) and 4 (strongly agree) were compiled in the “agree” category. We subsequently conducted descriptive analyses and chi-square tests.

## RESULTS

### Quantitative Analyses

Students enrolled at the university through the following channels: 36.1% based on recommendation interviews, 13.9% based on applications, 47.2% based on the joint entrance exam, and 2.8% based on outstanding accomplishments in international or national competitions. All had obtained at least one certification



of English proficiency such as TOEIC or TOEFL. These test scores could be transferred to an equivalent level for the CEF. Nearly six-tenth of the participants (58.3%) passed the TOEIC 550 (CEF B1), and over four-tenth (41.7%) passed the TOEIC 750 (CEF B2). Over one-fourth (30.5%) had been to a foreign country for either short-term study or a visit. The students took an average of 25 credits in Fall 2011.

The group test scores were compared and analyzed, attaining a significant difference (Table 2). Student English ability and professional knowledge significantly increased regarding the content area.

**Table 2. Pre- and post-test scores.**

	M	SD	P
Pre-test	72.33	12.58	*
Post-test	86.27	8.51	

Level of Significance: \*p <.05; \*\*p <.01; \*\*\*p <.001

The questionnaire data showed positive student opinions toward the CLIL program and course goals; most students understood the program and course goals (Table 3). In addition, over 80% of students stated that the teachers had clearly explained the course goals and the teaching content matched these goals. Over three-fourths of the students mentioned that the CLIL program matched their learning needs. The LP and HP groups demonstrated a significant difference regarding the CLIL program and their learning goals. Nearly one-third of the HP group disagreed that the CLIL program matched their learning goals, whereas less than 15% of the LP disagreed, suggesting that the HP group found the CLIL program more challenging compared with regular language training classes and had little expectation of high marks in their assignments or exam grades. Thus, they might have felt that the CLIL classes did not match their personal learning goals.



**Table 3. Students opinions regarding the CLIL program needs and goals.**

Survey items	Total	LP	HP	$\chi^2$
I understand the overall CLIL program goals.				
Disagree	2.8%	7.1%	0%	
Agree	97.2	92.9	100	
The teachers have explained the goals of the courses clearly in the beginning of the semester.				
Disagree	19.4	21.4	18.2	
Agree	80.6	78.6	81.8	
The teaching content matches the course goals.				
Disagree	16.7	14.3	18.2	
Agree	83.3	85.7	81.8	
The CLIL program matches my learning goals.				
Disagree	25.0	14.3	31.8	*
Agree	75.0	85.7	68.2	
The CLIL program matches my learning needs.				
Disagree	25.0	21.4	27.3	
Agree	75.0	78.6	72.7	

Level of Significance: \*p <.05; \*\*p <.01; \*\*\*p <.00

When the students were asked to evaluate the materials used in the CLIL courses, more than 80% mentioned that the materials used in the courses matched the course goals and improved their knowledge of the subject. Nearly 60% of the participants reported satisfaction with the selected materials, which improved their English proficiency. Over half of the students indicated that the selected materials matched their current level of English ability. The groups demonstrated a significant difference in viewpoint regarding improvement in their subject area knowledge by using the selected materials (Table 4). Over one-fourth of the LP group indicated that the materials did not improve their subject knowledge, whereas only 7% of the HP group indicated the same. This suggested that the LP group lacked the knowledge to understand the specialized language and register; thus, they experienced difficulties mastering the specific content by reading the materials.



**Table 4. Student opinions regarding CLIL course materials.**

Survey items	Total	LP	HP	$\chi^2$
The selected materials match with the course goals				
Disagree	19.4%	14.3%	22.7%	
Agree	80.6	85.7	77.3	
The selected materials match my English proficiency level.				
Disagree	41.4	35.7	45.5	
Agree	58.3	64.3	54.5	
The selected materials can improve my English ability				
Disagree	25.0	21.4	27.3	
Agree	75.0	78.6	72.7	
The selected materials can improve my knowledge in subject matter content.				
Disagree	19.4	27.3	7.1	*
Agree	80.6	72.7	92.9	
I am satisfied with the selected materials				
Disagree	38.9	28.6	45.5	
Agree	61.6	71.4	54.5	

Level of Significance: \*p <.05; \*\*p <.01; \*\*\*p <.00

Regarding student perceptions of the teaching instructions, both groups showed similar patterns. Approximately 90% indicated that their teacher spoke at appropriate speed, the multimedia equipment enhanced learning, and they understood the content taught in English. Less than half reported that the oral English skills of the teacher affected their content learning. There was a significant difference in the viewpoints of these two groups regarding comprehension of the content taught in English (Table 5). Over one-fifth of the LP group could not understand the content taught in English, whereas less than 5% of the HP group was unable to understand it. As Bruton (2013) mentioned, low-proficiency students experience difficulties learning unfamiliar or complicated content even if the instruction is clear.



**Table 5. Student responses regarding teaching instructions.**

Survey items	Total	LP	HP	$\chi^2$
My teachers' talk in English was in an appropriate speed.				
Disagree	8.3%	7.1%	9.1%	
Agree	91.7	92.9	90.9	
My teachers' oral ability in English will not affect my learning.				
Disagree	52.8	50.0	54.5	
Agree	47.2	50.0	45.5	
The teachers used lecturing approach.				
Disagree	44.4	35.7	50.0	
Agree	55.6	64.3	50.0	
Integrating with the multimedia equipment can enhance my learning				
Disagree	8.3	7.1	9.1	
Agree	91.7	92.9	90.9	
I can comprehend the content through English instruction.				
Disagree	11.1	21.4	4.5	**
Agree	88.9	78.6	95.5	

Level of Significance: \*p <.05; \*\*p <.01; \*\*\*p <.00

Regarding participant views of English and academic learning, both groups showed similar patterns, agreeing with the statement that in-class activities helped them learn both the academic content and English. The groups showed significant differences concerning the influence of homework on knowledge acquisition, English ability for taking written in-class tests, and course evaluation methods (Table 6). More than 90% of the HP group agreed that homework helped them learn the content, whereas approximately 70% of the LP group agreed. Although more than 95% of the HP group indicated that their English ability was sufficient to complete the written tests, whereas only two-thirds of the LP group agreed. Over 90% of the HP group reported that the evaluation methods matched the teaching content, whereas less than 80% of the LP group agreed. The LP students likely lacked knowledge of academic discourses, which may have hindered their learning of the academic content, or they may have experienced productive skill problems. Furthermore, complicated homework could have hindered language and academic knowledge acquisition among the LP group.



**Table 6. Student opinions regarding their learning in English and content knowledge.**

Survey items	Total	L P	H P	$\chi^2$
The in-class teaching activities can improve my English ability				
Disagree	36.1%	35.7%	36.4%	
Agree	63.9	64.3	63.6	
The in-class teaching activities can improve my knowledge in content areas.				
Disagree	19.4	21.4	18.2	
Agree	80.6	78.6	81.8	
The assigned homework can improve my English				
Disagree	27.8	35.7	22.7	
Agree	72.2	64.3	77.3	
The assigned homework can improve my knowledge in subject content				
Disagree	16.7	28.6	9.1	*
Agree	83.3	71.4	90.9	
My English ability can handle the in-class written tests.				
Disagree	19.4	31.8	4.5	**
Agree	80.6	68.2	95.5	
The evaluation methods match with the teaching content.				
Disagree	13.9	21.4	9.1	*
Agree	86.1	78.6	90.9	

Level of Significance: \*p <.05; \*\*p <.01; \*\*\*p <.00

Regarding suggestions for future CLIL program improvements (Table 7), over half of the participants described the CLIL program as an appropriate program design for instructing freshmen. Nearly 70% showed a positive attitude toward small class size and a variety of CLIL courses. Over 70% would recommend CLIL courses to other students.



**Table 7. Student opinions for future CLIL program suggestions.**

Survey items	Total	L P	H P	$\chi^2$
I think the CLIL program is appropriate for freshmen.				
Disagree	44.4	35.7	50.0	
Agree	55.6	64.3	50.0	
For CLIL courses, there should not be over 30 students in one class.				
Disagree	30.6	35.7	27.3	
Agree	69.4	64.3	72.7	
I will recommend CLIL courses to others.				
Disagree	27.8	28.6	27.3	
Agree	72.2	71.4	72.7	
I think there should be more CLIL courses at the schools.				
Disagree	30.6	28.6	31.8	
Agree	69.4	71.4	68.2	

Level of Significance: \*p <.05; \*\*p <.01; \*\*\*p <.00

When the participants evaluated their motivations for learning English and the subject-matter content, both groups showed similar results. Approximately two-thirds indicated that CLIL courses increased their learning motivations for both English and subject-matter content. Furthermore, over 90% thought that participating in a CLIL program increased their level of internationalization (see Table 8).

**Table 8. Students' opinions regarding learning motivations and future expectations.**

Survey items	Total	L. P.	H. P.	$\chi^2$
Taking CLIL courses can enhance my English learning motivation				
Disagree	33.3	42.9	27.3	
Agree	66.7	57.1	72.7	
Taking CLIL courses can increase my learning motivation for subject content				
Disagree	36.1	42.9	31.8	
Agree	63.9	57.1	68.2	
Taking CLIL courses can make me become more internationalized				
Disagree	8.3	7.1	9.1	
Agree	91.7	92.9	90.9	
Taking CLIL courses can help me to plan my future career				
Disagree	22.2	21.4	22.7	
Agree	77.8	78.6	77.3	

Level of Significance: \*p <.05; \*\*p <.01; \*\*\*p <.00



## Qualitative Analyses

The data from the student interviews were consistent with the questionnaire results. Both students showed positive attitudes toward the CLIL program, stating that the program increased their learning motivations for both English and the subject-matter content. They discerned the differences between the CLIL course and typical language training courses. Both indicated that the CLIL program made learning English fun, using content materials, assigned activities, homework, and group projects; the subject-matter content was comprehensible because the teachers adopted multiple teaching methods and multimedia that supported learning. Student A mentioned that although they experienced difficulties listening to instructions and reading textbooks at the beginning of the semester, they quickly overcame these problems (that is, after 3 to 4 weeks). They said this was probably because they lacked similar experiences in senior high school and found the CLIL program challenging. Student B mentioned that instructors tried to use simple language to explain complicated concepts, which caused them to struggle. Therefore, they relied on the textbook and spent substantial time reading. Student B also mentioned the need for additional CLIL courses in the sophomore year.

The faculty interview findings provided valuable insight. Both instructors indicated a positive overall attitude toward CLIL programs for internationalizing curricula and facilitating the English-based acquisition of content knowledge. Instructor A mentioned that preparing the course and developing materials was highly demanding. They realized that the English ability levels of the students were lower than expected. Therefore, they had to modify the teaching content. Instructor A also mentioned learning attitudes and self-confidence, expressing the desire that students would actively engage in learning and practice speaking in public. For example, students should preview and review textbooks and other learning materials to yield strong learning outcomes. Class size caused a major problem for the CLIL course. More than 40 students were enrolled in one class; thus, he suggested that a decreased class size yields increased levels of student interaction. Instructor B suggested that the pedagogical strategies of CLIL courses should encourage classroom participation and offer opportunities to express ideas. Combining students for group work yield increased participation. The active participation and freedom of expression in CLIL classes resulted in improved student thinking skills and creativity. When asked about the



appropriateness of offering CLIL programs for freshmen, both faculty members expressed views similar to those of the students. Instructor B indicated that CLIL students must acquire academic study skills such as effective textbook reading and note-taking strategies. They proposed that these strategies should be instructed prior to enrolling students in CLIL courses. Moreover, Instructor B stated the need for administrative support. Instead of offering grants for material development, flexible regulations and administrative support should be established.

## DISCUSSION

The responses to the CLIL course were overwhelmingly positive. The student pre and posttests showed significant improvement regarding their English skills and knowledge of the subject area. The quantitative questionnaire data and qualitative interview data showed consistent results; however, the HP and LP groups expressed differing opinions regarding the learning materials, the combination of English instruction and academic knowledge acquisition, the content-based homework, difficulties in written tests, and evaluation methods. The results of this study were consistent with those of other research findings. CLIL provide relevant topics and content for learners, enhancing the international views and abilities in the target language and subject content (Brinton, Snow, & Wesche, 2003; Coleman, 2006; Liaw, 2007). Low-proficiency level students in CLIL programs may experience difficulties developing target language skills, acquiring subject knowledge, and wielding productive skills (Bruton, 2013). The faculty members also expressed positive attitudes toward the CLIL program.

Based on the results, we suggested the following for future CLIL programs in Taiwan. First, a small class size is critical for attaining effective learning outcomes. Moreover, a prior English placement test is crucial for arranging students into appropriate levels. Second, the needs and motivations of students should be investigated. Instead of allowing administrators to design program content, it is vital to understand which subject areas or teaching approaches interest students, promoting their learning in a CLIL context. Third, students should be instructed in academic study skills including textbook reading and in-class note taking strategies. Such study skills should be instructed during first semester of the freshman year and CLIL programs should be implemented during



the subsequent semester. Fourth, the content of CLIL instruction should focus on introductory level courses, and not implemented in advanced classes.

To implement a new CLIL program, the role of faculty is critical. Administrators and curriculum planners should be involved in the initial planning stage rather than faculty alone (Banegas, 2012). Faculty members should receive support and resources from administrative units to assist in curriculum development and program implementation. Furthermore, CLIL faculty training workshops should be regularly conducted to promote the concepts of CLIL teaching, impart teaching techniques, and increase faculty involvement levels.

This study also demonstrates that multiple methodologies of data collection for program evaluation are essential for capturing not only the measurable outcomes of language teaching but also the value of those outcomes from distinct perspectives. Rich evaluation findings through triangulation of data sources could help to offer particular answers to the question of what makes a language program more effective. CLIL courses should be implemented as part of a broad EAP program. Students, faculty, and administrators must be convinced of the importance of CLIL programs. Integrating language and content could raise student awareness of the language as an object of study and its role as a vehicle for acquiring academic concepts and text comprehension within the discipline. Although we obtained positive outcomes, the study had two limitations: (a) the small participant population, and (b) the lack of a control group. Future research should focus on program effectiveness and include longitudinal evaluations to explore the efficacy of such programs. In addition, such studies should include other educational models used in Taiwan to gain insight into the learning processes and relevant teacher and student experiences.

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