

## **The Effects of Content-based Instruction on Listening and Speaking Abilities of Thai EFL University Students**

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### **ABSTRACT**

This research investigated the effects of a 14-week content-based instruction (CBI) English course on Thai EFL learners' listening and speaking abilities. Eighty-one Thai university students were enrolled in the CBI English course titled *Learning English Through Cultures* which employed the teaching approach of content-based instruction for one academic semester. A computerized test of listening and speaking was developed and administered with students as a pre-test before the CBI teaching and as a post test after the instruction. Classroom observations were also conducted by the researcher by sitting in the class and taking notes. The qualitative data was triangulated with the quantitative testing results. Results revealed a significant increase in speaking and listening among all students. The students in the low proficiency group especially made a significant advance in both speaking and listening, compared with students in the high proficiency group who only showed a significant development in speaking. It is advisable that the course book or the teaching materials should be attractive to students. Further, it is suggested that scaffolding should be provided in various forms and CBI teaching should consider the needs of students at different levels of English proficiency. Future studies may apply a retention test and have a control group with a focus on improving specific aspects of listening abilities.

**Keywords:** Content-based instruction. Listening. Speaking. University students. Thai EFL

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## INTRODUCTION

English has become an essential foreign language in many Asian Countries such as China, Japan, and Thailand. In particular, across Southeast Asia, English is not only used as a lingua franca but also is endowed with an official position (Kirkpatrick, 2012). The establishment of the ASEAN Economic Community has raised the demand for skilled human resources with an appropriate proficiency level in English (Mala, 2016).

In Thailand, English is a compulsory subject in primary and secondary schools (Thai MOE, 2008). Though the Thai Education Ministry has stressed the importance of teaching and learning English nationwide, Thai learners' English proficiency is still far from being at a satisfactory level. A recent report by Education First, an education organization, showed that it was ranked at the bottom of the listed countries across Southeast Asia, the second from the last among the 9 countries (Education First, 2015).

Thai EFL learners are found to have limited listening and speaking proficiencies, which are two crucial communication language skills in social interaction. They are not familiar with native accents which could be one of reasons for deficiency in listening (Chumchaiyo, 2002 as cited in Phaisuwan, 2006). They are inclined to focus on linguistic pieces such as vocabulary and sentences rather than picture the whole story in mind while listening. Besides, they do not speak in a natural tone carrying their true feeling. The latest TOEFL score report showed that the performance of Thai exam takers in listening and speaking were not as good as those in other countries in Asia (Education Testing Service, 2015).

In order to stress the issue of the discrepancy of Thai learners in listening and speaking, effort has been put on implementing the communicative language teaching approach to English education in schools and universities. In addition, there has been an increase in English-medium instruction programs which are influenced by the notion of content-based instruction (CBI). For example, the Bureau of International Cooperation Strategy (2006) reported that 52 public and private tertiary education institutions established more new international education programs of which many were through CBI.

Positive effects of CBI have been shown in many empirical studies in both ESL and EFL contexts. For instance, Crandall and Tucker (1990) posited that a CBI curriculum provided a chance to contribute to the development of students' second and foreign language proficiency. The literature suggests that students achieve a significant improvement in second language proficiency regarding the four skills, listening, reading, writing and speaking (Song, 2006). CBI does not only benefit learners in language proficiency improvement in enriching their knowledge about various disciplines.

The main reason for the effectiveness of CBI to improve listening and speaking skills lies in Krashen's acquisition theory (1982). CBI is unique for its content-based features, and can provide a rich language context for "acquisition" rather than "learning" to occur. Learners have a greater chance to master a second language subconsciously than learn it consciously since the focus is no longer on linguistic pieces such as semantics, syntax, and discourse. Wilhelmer (2008) further posits by referring to Krashen's theory that CBI can contribute "i +1" language

input, which learners are able to understand although it surpasses their current proficiency level in the target language. In this vein, Krashen (1982) asserts learners would be motivated by the challenging language content. Wilhermer (2008) also believes acquisition can happen because the affective filter is lowered.

However, extensive research has concentrated more on the effects of CBI on reading and writing skills rather than listening and speaking abilities either in ESL or EFL settings. CBI in different educational settings is recommended to achieve its full potential (Garau &Noguera, 2015). In the EFL context, it is challenging for learners to learn the academic content which is even difficult even for native English learners. In this study, the content of the CBI course that the students were enrolled is not challenging academic matter from subjects in social science or natural science, but it is comprised of non-academic topics on cultures. It would be interesting to examine the effects of CBI on general listening and speaking abilities in an EFL developing country. Therefore, this study is to investigate the effects of the CBI English culture course on listening and speaking skills of a group of second year undergraduates in a Thai EFL tertiary learning context.

## **LITERATURE REVIEW**

### **Content-based Instruction**

CBI emerged in the 1960s in Canadian French immersion programs, and came into sight in the language teaching field in the 1980s and continued to become popular and be implemented widely in diverse contexts across North America for the whole of 1990s and the beginning years in 21st century (Duenas, 2004). Content-based instruction is the teaching approach in which specific content and language are integrated (Brinton, Snow & Welshe, 1989). The educational phenomena serves dual aims to teach language and academic substance. Though CBI had advanced three decades ago, it started to prevail in language teaching in the 1990s. At present, it is influential and in fashion, especially in European countries where there is a diversity of different languages and cultures. Content and Language Integrated Learning (CLIL), as CBI is named in Europe, has been growing very rapidly. CBI use is also expanding in other continents such as Asia and South America (Garau &Noguera, 2015).

Since CBI's emergence, it has been experimented and explored by educators in divergent environments. Because learners have different learning styles, many practical models of CBI have been developed. Met (1999) perceived the CBI models as the continuum where one end is content-driven, while the other end is language-driven. In content-driven models, mostly in the form of immersion programs, more importance is put on content mastery than language acquisition. In contrast, language-driven models set the priority on learning language rather than studying content.

Between the two extremes on the continuum, Brinton, Snow and Weshe (2003) introduced three fundamental models in higher education: sheltered courses, adjunct model, and theme-based courses. In a sheltered course, content teachers mostly teach students subject matter instead of second language (Brinton et al., 2003). In an adjunct model, there is an intentionally developed language course in line with a regular subject course in which one language teacher

and one subject teacher are needed (Duenas, 2004). Theme based courses refer to the instruction organized around topics or themes enabling the integration of area content across different subjects (Shanahan, 1995).

A language course should serve the needs of an academic course and enable students to learn both content and language simultaneously. The previous two models are usually practiced in ESL settings. However, theme-based courses may be the most welcoming and largely performed model of CBI over all levels, from primary schools to universities in both ESL and EFL environments (Duenas, 2004).

Although there are different models in CBI, they do share many characteristics in common. Stryker and Leaver (1997) describe CBI's features as basis on subject substance, use of authentic texts and language, and satisfaction of the needs of target students. The CBI curriculum design should build on the topics or themes of various subject matter. Similarly, the teaching focuses more on content areas rather than language elements. Accordingly, the content serves as the context to make language learning occur in a natural way. In authentic language and texts, selection of teaching materials for real life purposes in natural language has been stressed. It is also essential to suit the language proficiency level of learners, appeal to their interests, and meet their other specific needs.

The roles that both learners and teachers take are reflected much on the characteristics of CBI. In the CBI classroom, learners not only engage themselves in studying autonomously and interpret the input of area knowledge actively but also participate in supplying their own content by selecting topics and tasks (Roger & Richards, 2001). On the other hand, teachers are supposed to take responsibility for several roles: curriculum designer, content developer, classroom organizer, and learning motivator. It is necessary for CBI teachers to be equipped with both expertise linguistic command and rich subject knowledge (Leaver & Stryker, 1993). Furthermore, teachers should have the capacity to plan a curriculum, develop various content, organize group activities in the classroom, and motivate students' learning (Richards & Lockhart, 1994; Roger & Richards, 2001; Stryker & Leaver, 1997; Tedick, Jorgensen & Geffert, 2001).

### **Related studies**

Implementing the CBI in the ELT has been reported as having a positive impact on developing not only students' content knowledge but also their English language skills, particularly reading and writing in the ESL settings (Kasper, 1997; Kasper, 2000; Papai, 2000; Shih, 1986; Snow & Brinton, 1988). CBI not only improves learners' reading and writing abilities but also enhances their listening and speaking abilities. Snow and Brinton (1988), for instance, applied the adjunct model of CBI with 224 ESL students enrolled in the Freshmen Summer Program (FSP) at the University of California, Los Angeles. The results showed that the students made a greater improvement than those in non-CBI programs on listening and reading comprehension.

Although studies on CBI's effectiveness gradually expanded from ELS to EFL contexts for over a decade, research has found CBI's positive effects on improving overall language proficiency including on speaking and listening abilities (Chang & Xia, 2011; Chau Ngan, 2011;

Nieto Moreno de Diezmas, 2016; Ouazizi, 2016). For instance, Airey (2009) found that CBI still improved students' listening skill although some students reported to have obstacles in comprehending the English lectures in such classes taught through CBI.

Further proof on the positive effects of CBI on listening research in CBI was found in many studies in the EFL context (Aguilar & Rodríguez, 2012; Navés and Victori, 2010; Prieto-Arranz, Fabra, Calafat-Ripoll & Catrain-González, 2015). In European research settings, Navés and Victori (2010) investigated the effects of CBI in Catalan primary and secondary educational environments to compare students' performance in CBI and non-CBI classes in listening comprehension, and found that CBI students performed better than their non-CBI peers in listening comprehension. Prieto-Arranz, Fabra, Calafat-Ripoll and Catrain-González (2015) also examined CBI Spanish English learners' listening improvement, and found that CBI learners did significantly better in News Listening than their non-CBI counterparts. Besides, Aguilar and Rodríguez (2012) explored CBI's effects in the Spanish tertiary context, and found that the students majoring in engineering mastered more vocabulary and had enhanced listening ability after a 15-week semester through CBI in English. Regarding studies in Asian countries, Chang & Xia (2011) examined the effects of content-based courses on English-major students' English proficiency in a Chinese university, and found students improved their listening ability through CBI culture and literature courses. The positive effects of CBI are not only revealed in listening ability improvement, but also in enhancing speaking proficiency.

In regard to speaking, it is generally thought that a CBI class is communicative owing to the frequent use of the target language. Learners not only expose themselves to rich input from content learning and teacher speech but also have many opportunities to produce oral output. In this sense, learners have the tendency to acquire a second language implicitly instead of learning it explicitly in traditional language classrooms. Learners in CBI classes can develop their speaking proficiency in the target language better than those in non-CBI classes. Studies have found CBI's positive effects on speaking (Corrales & Maloof, 2009; Juan, 2010; Lasagabaster, 2008; San Isidro, 2010). For instance, Corrales and Maloof (2009) examined the effects of CBI on oral proficiency development of Colombian students in an EFL setting, and found that students improved their English oral and discourse skills in a meaningful, challenging and relative way because CBI was employed by integrating language with content. Similarly, Juan (2010) investigated the effects of CBI on the fluency development of some young EFL learners in a Spanish secondary school, and found that the learners in the CBI programs achieved better fluency than those only in a common EFL program in terms of speech rate and pausing duration, thus gaining more confidence in speaking. The effects of CBI on speaking were also studied together with reading and writing and found to have a positive result (Lasagabaster, 2008; San Isidro, 2010).

The positive effects of CBI on listening and speaking have been shown in many studies in the literature reviewed above. However, the research context varies, and it is crucial to find out whether CBI can be implemented to improve learners' speaking and listening abilities in a more specific EFL context in Thailand. These two basic communication skills are essential for Thais to integrate themselves into the ASEAN community either culturally or economically.

## RESEARCH QUESTIONS

To examine the effects of content-based instruction on students' listening and speaking, the current study answers the following research questions:

1. To what extent may a content-based English course influence students' English listening and speaking abilities?
2. What different effects does a content-based English course have on the listening and speaking abilities of students at different language proficiency levels?

## METHODOLOGY

### Setting

The study was conducted in the department of languages and linguistics of a Thai university, where a variety of English courses were offered to cater to non-English major students from all faculties in the university. Among those courses were several content-based courses, one of which was selected for the current study, *Learning English through Cultures* taught by both Thai and native English speakers.

### Participants

Eighty-one students aged between 19 and 21 years old, most in the second year of their study in the second semester of the academic year 2016, participated in the present study. The majority of them were medical and nursing students, while the rest were from different faculties. Eighty-four percent (68) were female and 16 percent (13) were male. They were at an intermediate level of English proficiency when enrolled in the content-based course *Learning English through Cultures* in two sections, one with nursing students, and the other with medical students as the majority.

The instructor was a Canadian English native speaker who had taught this course for two years. He applied CBI to teach topics about cultures worldwide with the objective of improving students' English proficiency and enriching their cultural knowledge after receiving training in CBI.

### Instrument

A proficiency test consisting of two subtests on listening and speaking was employed. The reliability of the listening and speaking tests was measured by Kuder-Richardson 20 test (KR 20) with the values of 0.98 (high internal consistency) and 0.59 (moderate internal consistency), respectively, which indicates an acceptable reliability ( $r = [0.50, 1]$ ) (Salvucci, Walter, Conley, Fink, & Saba, 1997)

### *Listening test*

A listening sub-test adapted from a computerized English testing program on a non-profit website (Englishteststore, 2015) used for educational purposes, was administered on the computer. The consistency and reliability of tests were ensured by the extent of standardization, the structure, and rich test aids of computer-based testing while the quality and validity could be affected by the variability of paper-pencil tests (Prometric Inc., 2012). In addition, computer-

based testing improved the efficiency and accuracy of scoring which enabled test organizers and test-takers to avail the scores instantly. Therefore, we decided to administer the test on computer.

The items in the listening sub-test were reviewed by three experts in English language teaching with agreement on its content validity. The audios were well recorded by native speakers. The test contained 50 objective items in six parts, including true or false, picture descriptions, filling in the blanks, statements, conversations, and lectures. Among these 50 objective items, 40 items were in the form of multiple choice while 10 items were in the form of blank filling. The total score for the listening sub-test was 500, each item accounting for 10 marks. Students' listening proficiency was placed at five different levels ranging from the elementary to the advanced based on the scores.

Table 1 The scale of proficiency levels

Scores	Levels
0-100	Elementary
101-200	Pre-intermediate
201-300	Intermediate
300-400	Upper-intermediate
401-500	Advanced

### ***Speaking test***

The questions in the speaking test, developed under the guidelines of the Cambridge Certificate of Proficiency in English speaking (UCLES, 2013), were examined by 3 language experts and then revised to achieve its validity. It was then administered in a computer lab where students recorded their speaking via a software. The audio files were mailed to the researchers for grading. The speaking test required test candidates to introduce themselves. Then they were paired to discuss playing sports and purchasing expensive goods.

Our rating criteria, adapted from the speaking rating rubrics for the Cambridge Certificate of Proficiency in English Speaking Test, included 4 areas: grammar, vocabulary use, delivery and intelligibility, communicative effectiveness. Each area was in a five-degree scale: very poor, poor, satisfactory, good, and excellent. The criteria was also reviewed by two experts in English language teaching. Necessary revisions were made accordingly. Since a 5-point Likert scale was used to grade four aspects of speaking, the total score for the speaking test was 20 marks.

### ***The content-based course***

The theme-based CBI course *Learning English Through Cultures* consisted of 30 units, organized around culture topics. The teacher also prepared supplementary teaching materials, worksheets, pictures, realias, videos, etc. The course outline virtually followed the course book

*People like us: Exploring cultural values and attitudes* (Greenall, 2003).

In the course it was expected that students would use English for accessing information, for exposure and discussions on Thai and other cultures, for instance, customs, concepts, gestures, songs, and festivals, etc. The course used the medium of small “c” culture to develop all communication skills, particularly listening and speaking through individual and group activities. The course focused on comparing several international cultures from countries across different continents, and the meaning of culture in personal, work and general environments. The objectives of the course were to enable students to use English in a cultural context, access information about culture in English, and develop and express opinions about Thai and other cultures.

Students were in the 14-week CBI course conducted by a Canadian teacher twice a week, each class lasting about 2 hours and covering the contents of one unit. They were provided with opportunities to communicate and interact with each other through talking, discussing, working cooperatively in most classroom tasks. Lessons were structured around various tasks with an emphasis on listening and speaking to achieve linguistic and content objectives.

A sample lesson plan for the CBI English course	
Topic	<i>Dating and Marriage</i>
Class size	40 students
Level	second year Thai college students
Lesson Duration	1 hour
Lesson Aims	To enrich students’ knowledge of dating and marriage in different cultures To enhance students’ knowledge of vocabulary about dating and marriage To develop students’ listening and speaking skills To provide a foundation for further studies on language and related topics
Materials	Listening audio, audio script
Lesson description	The lesson helps teachers and students develop linguistic and cultural knowledge about dating and marriage at a certain level of width and depth.
Procedure	
Lead-in (5min)	The teacher introduces the topic on girlfriend and boyfriend. Students share their ideas about what their ideal girlfriends or boyfriends should look like and what their characteristics they should have.
Task 1 Drawing and Describing (15 min)	The teacher asks students to draw their ideal girlfriends or boyfriends and think of some words to describe their appearances and personality. Students are asked to draw the picture by working in a group of three. Students can discuss with each other on what words to use to describe their imagined person. When students finish drawing, they need to talk about the appearance and personality of the person they drew.

<p>Task 2                  Match words                  with meanings ( 10min)</p>	<p>Students try to learn the meanings of new words by learning vocabulary in the matching exercise on their own.                  Tip: Students can discuss with their classmates and consult a dictionary freely. When students finish the exercise, the teacher explains the exercises and sorts out a group of phrasal verbs such as “flirt with” “go out with” “break up with”.</p>
<p>Task3                  Discussion                  (15min)</p>	<p>The teacher prepares a series of questions on relationship between young people. Students read the questions and share their opinions on each question. Questions are as below:                  Could you ever have a girlfriend or boyfriend from a very different culture than your own?                  Do you think you should ask for your parents’ permission before you get married?                  If your parents did not approve of your boyfriend or girlfriend, would you end the relationship?                  If you have a daughter who is 19, is it acceptable for her to stay out all night?                  If you and your partner kissed in the street, what would people think?                  Is it okay for a couple to live together before marriage?                  If a woman is over 37 and still single, what would other people think?                  Is dating for you the same as it was for parents?                  Tip: The teacher also shares his own opinions, experience and general perspectives regarding these questions.</p>
<p>Task 4                  Listening                  Exercise                  (10 min)</p>	<p>The teacher tells students that they will listen to dating practices in different countries around the world. Students listen twice and answer four questions in the textbook. After finishing the exercise, the audioscripts for the listening are distributed. Students check the answers by highlighting the right points in the audio script. The teacher gives the correct answers to the students and explains some difficult points in the listening exercises.</p>
<p>Task5 Debating                  on self-choosing                  a marriage                  partner or                  having arranged                  marriage (5min)</p>	<p>The teacher divides the whole class into two big groups. One group is for self-choosing their marriage partner, the other is for arranged marriages. Either group should give at least 3 reasons for what they stand for. Students can discuss these for some minutes before they report the reasons.</p>
<p>Follow up                  Activities                  (Homework)</p>	<p>Find out which kind of marriage may have a higher divorce rate and what reasons may cause divorce.                  Look for marriage customs and traditions in your culture and prepare slides to make a brief presentation in the class.</p>

### ***Classroom Observation***

Observation was conducted based on a planned observation scheme adapted from Motivational Orientation of Language Teaching (MOLT) Observation Scheme (Guilloteaux & Dörnyei, 2008). An observation form was developed to observe classroom undertakings and students' behaviors. The form consisted of two columns, the time and frequencies together with students' engaged and disengaged behaviors. The time duration lasted 55 minutes for one class period. The frequencies included how often students ask questions and answer teacher's questions in the classroom, how many students had engaged and disengaged behaviors. Engaged behaviors are considered actions involving individual work, pair work and group work, presentation, and discussion on related content. Behaviors such as being off task, being unresponsive, talking about unrelated things and leaving one's seat or room are treated as disengaged. Detailed observation notes were made by the researcher to capture what was going on in different learning activities.

### **Data Collection**

Three stages involved in the data collection procedure were: pre-test, teaching experiment, and post-test. The proficiency test was administered in the pre-test and post-test stages. A request letter was submitted to the faculty to ask permission to conduct the research prior to the data collection.

The pre-test on listening and speaking was administered to 81 students at the beginning of the course. Seventy-five students (5 students absent for unknown reasons) took the test in a computer lab. Both oral and written instructions were given before the 2-hour long test began. Scores were automatically calculated by the computer immediately after they finished the listening test. The scores were then recorded by the researcher. Recording audios were mailed to the researchers as soon as they completed the speaking test.

The speaking test audios were rated by two English native speakers based on the scoring rubrics. The same proficiency test was administered on the post-test soon after the course ended. Seventy-eight students sat for the post-test in a computer lab while only 2 students failed to participate. The post-test followed the same procedure as the pre-test, as did the scoring and rating.

The researcher entered the classroom and sat together with the class without participating in any of their activities, and just noticed classroom happenings and kept as many notes as possible. When it was necessary, the researcher asked students to confirm the observation information was correctly recorded, which made the data more reliable.

### **Data Analysis**

In order to ensure the reliability of the speaking scores, the inter-rater reliability was calculated by Pearson r correlation test for both pre- and post-tests at the significant level of  $p \leq 0.05$ . To answer research question 1 regarding students' overall improvement on listening and speaking, the means of pre and post tests were compared by using paired sample t-test. Based on the pre-test scores, students were grouped into high, middle and low proficiency. The means of pre and post of high and low proficiency groups were compared by independent sample t-test to find the different effects on listening and speaking of students with high and low proficiency, which

answered research question 2.

## RESULTS OF THE STUDY

Owing to the absence of some students in the pre- and post-tests, 69 complete cases were used in the final statistical analysis. They were divided into high and low groups using the 33% principle based on their pre-test total scores of both speaking and listening tests. The middle group was excluded to achieve an effective comparison.

### *Inter-rater reliability*

The scores from the two raters were significantly correlated at a moderate level ( $r = [0.50, 0.70]$ ) (Rumsey, 2016), in both pre (Pearson  $r = 0.49$ ) and post (Pearson  $r = 0.62$ ) tests at the level of  $p \leq 0.01$ . It indicates an acceptable inter-rater reliability of the test.

### *Listening and speaking ability improvement*

In response to research question 1, it was found that students significantly improved their English listening and speaking abilities, as shown in Table 2. They obtained a significantly better score in listening,  $M=222.54$ ,  $SD=77.42$ ; and  $M=189.71$ ,  $SD=67.45$  in the post- and pre-tests, respectively. It can be interpreted that their English listening skills were enhanced during the instruction. A significant difference was also found in their speaking scores,  $M=8.20$ ,  $SD=1.74$ ; and  $M=10.53$ ,  $SD=1.92$  in the pre- and post-tests, respectively. To conclude, they made a greater progress in speaking.

Table 2. Results of the pre and post-test on listening and speaking. (N=69)

Skills	Pre-test		Post-test		t-test			
	$\bar{x}$	<i>SD</i>	$\bar{x}$	<i>SD</i>	<i>t-value</i>	<i>df</i>	<i>p</i>	ES
Listening	189.71	67.45	222.54	77.42	4.22**	68	0.01	1.02
Speaking	8.20	1.74	10.53	1.92	12.09**	68	.00	2.70

Note. The total score for listening is 500 and the total score for speaking is 20.

\*  $p < 0.05$  , \*\*  $p < 0.01$

Table 3 shows that the students in general made a significant improvement in grammar, vocabulary, delivery, and communication effectiveness in the speaking post-test, leading to their overall speaking ability improvement. Although the improvement in grammar accuracy (Cohen's  $d = 2.30$ ) and related aspects in speaking showed a large effect size. The development in vocabulary (Cohen's  $d = 3.45$ ) had a greater effect size than other aspects, meaning they had greater development in vocabulary than grammar accuracy, delivery fluency and communication effectiveness.

Table 3. Results of speaking ability analysis in pre- and post-tests. (N=69)

Groups	Categories	Pre		Post		<i>t-value</i>	<i>df</i>	<i>p-value</i>	ES
		$\bar{x}$	<i>SD</i>	$\bar{x}$	<i>SD</i>				
Overall (n=69)	Grammar	1.80	.37	2.31	.41	9.42**	68	.00	2.29
	Vocab	1.91	.40	2.62	.40	14.10**	68	.00	3.42
	Delivery	2.35	.63	2.84	.68	6.72**	68	.00	1.63
	Effectiveness	2.14	.67	2.76	.71	7.63**	68	.00	1.85
	Overall	8.20	1.74	10.53	1.92	12.09**	68	.00	2.93

Note. The total score for listening is 500 and the total score for speaking is 20.

ES= Effect Size

\*  $p < 0.05$  , \*\*  $p < 0.01$

### *Differences in pre-post test scores between low and high proficiency groups*

Research question 2 was answered by the statistical test results in Table 4. An increase in listening scores of the high proficiency group was found from  $\bar{x}=255.22$  in the pre-test to  $\bar{x}=270.43$  in the post-test although that difference was not statistically significant. In contrast, they scored significantly higher in their speaking in the post-test than in the pre-test. Generally, the high proficiency group did improve their listening and speaking ability.

Table 4. Results of pre- and post-tests between high and low groups. (N=46)

Group	Skills	Pre		Post		t-test			ES
		$\bar{x}$	<i>SD</i>	$\bar{x}$	<i>SD</i>	<i>t</i>	<i>df</i>	<i>p</i>	
High N=23	Listening	255.22	67.01	270.43	82.32	1.04	22	0.31	
	Speaking	9.39	2.24	11.46	2.15	5.87**	22	.00	2.50
Low N=23	Listening	143.91	36.02	179.13	58.77	2.45*	22	0.02	1.04
	Speaking	7.02	.80	9.74	1.26	10.42**	22	.00	4.44

Note. The total score for listening is 500 and the total score for speaking is 20.

ES= Effect Size

\*  $p < 0.05$  , \*\*  $p < 0.01$

As for low proficiency students, a significant improvement in both listening and speaking was found in the post test. In other words, their speaking and listening significantly improved. Both high and low proficiency groups demonstrated a large effect size in listening improvement,  $d=2.50$  and  $d=1.04$ , respectively. Compared with the high proficiency group, the low proficiency group had a much greater effect size in speaking development,  $d =2.50$  and  $d = 4.44$ , respectively.

Regarding overall speaking ability, Table 5 shows that the high proficiency group made significant improvement on overall grammar accuracy, vocabulary use, delivery and fluency, and communication effectiveness. The effect sizes of development in each aspect were at a large level (Cohen' s  $d \geq .80$ ). Yet, the improvement in vocabulary ( $d=3.33$ ) was greater than that of grammar accuracy ( $d= 1.54$ ), communication effectiveness ( $d= 1.19$ ), and delivery ( $d =2.27$ ).

Table 5. Results of speaking analysis of high and low proficiency groups.

Groups	Categories	Pre		Post		<i>t</i>	<i>df</i>	<i>p</i>	ES	
		$\bar{x}$	<i>SD</i>	$\bar{x}$	<i>S.D.</i>					
High (n=23)	Grammar	1.98	.49	2.37	.48	3.600	**	22	.00	1.54
	Vocab	2.15	.49	2.72	.50	7.807	**	22	.00	3.33
	Delivery	2.61	.81	3.24	.67	5.319	**	22	.00	2.27
	Effectiveness	2.65	.73	3.13	.79	2.802	**	22	.01	1.19
	Overall	9.39	2.24	11.46	2.15	5.869	**	22	.00	2.50
Low (n=23)	Grammar	1.67	.24	2.24	.37	6.240	**	22	.00	2.66
	Vocab	1.72	.29	2.57	.27	11.569	**	22	.00	4.93
	Delivery	1.96	.40	2.43	.48	3.539	**	22	.00	1.51
	Effectiveness	1.67	.39	2.50	.48	9.527	**	22	.00	4.06
	Overall	7.02	.80	9.74	1.26	10.420	**	22	.00	4.44

Note. The total score for listening is 500 and the total score for speaking is 20.

ES= Effect Size \*  $p \leq 0.05$  , \*\*  $p \leq 0.01$

Comparably, students in the low proficiency group also displayed a significant development in all aspects i.e. grammar, vocabulary, delivery and communication effectiveness in speaking. They showed a large effect size in all those aspects similarly to the high proficiency group. However, the improvement in vocabulary (Cohen's  $d= 4.93$ ) and communication effectiveness (Cohen's  $d=4.06$ ) were larger than that of grammar (Cohen's  $d=2.66$ ) and delivery (Cohen's  $d= 1.51$ ).

In comparing the speaking and listening abilities of both groups, a significant improvement was shown in all aspects of speaking ability in Table 6. However, low proficiency group ( $\bar{x}=2.72$ ,  $SD= 1.25$ ) made a greater speaking improvement on overall than their counterpart ( $\bar{x}=2.07$ ,  $SD =1.69$ ) though it was not statistically significant. Further, the improvement in each aspect between the two groups was different. In grammar and communication effectiveness development, the high proficiency group ( $\bar{x}=.39$ ,  $SD =.52$ ;  $\bar{x}=.48$ ,  $SD =.82$ ) made greater progress than the low proficiency group did ( $\bar{x}=.57$ ,  $SD =.43$ ;  $\bar{x}=.83$ ,  $SD =.42$ ). A significant difference ( $p=.00$ ,  $p \leq 0.01$ ) was found in the vocabulary development between these two groups. There was also a large effect size discovered in vocabulary (Cohen's  $d= .90$ ) development in speaking between the high and low proficiency groups.

Table 6. Comparison of speaking and listening mean differences of high and low groups

Categories	High (n=23)		Low (n=23)		<i>t</i>	<i>df</i>	<i>p</i>	ES	
	$\bar{x}$	<i>SD</i>	$\bar{x}$	<i>SD</i>					
	Mean Differences								
Grammar	.39	0.52	.57	0.43	1.23	44	.23		
Vocabulary	.57	0.35	.85	0.35	2.98	**	44	.00	0.90
Delivery	.63	0.57	.48	0.65	-.47	44	.64		
Effectiveness	.48	0.82	.83	0.42	1.56	44	.12		
Overall	2.07	1.69	2.72	1.25	1.59	44	.12		
Listening	15.28	70.12	35.22	68.88	0.98	44	.33		

Note. The total score for listening is 500 and the total score for speaking is 20.  
ES= Effect Size \*  $p < 0.05$  , \*\*  $p < 0.01$

### ***Observation Data***

The classroom observations showed that the learners engaged themselves both behaviorally and cognitively in meaningful learning tasks such as vocabulary association, crossword, drawing and labeling a house, performing cultural activities. In these tasks, not only did learners get a lot of exposure to the target language but also they had sufficient opportunities to produce oral output through discussion, interaction, scaffolding, negotiation and meaning co-construction. Learners were observed to involve themselves in a lot of listening and speaking activities concerning different cultural topics. Learners studied totally for 48 hours, twice a week, each time 1 hour and a half for a whole semester which was about 4 months. This means learners exposed themselves to English for 48 hours. Apart from that, learners had to spend more time doing out-of-class assignments and preparing for presentations.

## **DISCUSSIONS**

This study mainly investigated the effects of CBI on learners' listening and speaking ability in a Thai university context. It was found that the students made a significant improvement in both listening and speaking.

### ***a. Listening improvement***

Students' listening ability was found to significantly improve. The finding is consistent with that of Navés and Victori (2010), who found that Spanish university students in engineering improved their listening after a 15-week CBI course. In this study, the fact that the CBI culture course provided sufficient comprehensible language input, especially listening input in different forms and that students exposed themselves to audios, videos, peer interaction and teacher talk, contributed to their listening ability improvement. Students were observed to have exposed themselves to a variety of language input which focused on cultural content.

### ***b. Speaking improvement***

It was found that the students improved their speaking at a significant level. This result is similar with that of Corrales and Maloof (2009), who found that CBI benefited Colombian students in developing their oral communicative competences. Corrales and Maloof (2009) further explained that it was because CBI shifted its focus from language mechanism to meaning, and thus students became less anxious about linguistic errors and paid more attention to expressing their ideas. In the current study, the students were observed to speak English in pair work and group work in a comfortable and relaxed learning environment with opportunities provided to discuss and answer questions. Given sufficient access to rich language input from several sources, the students steadily became more fluent in delivering English utterances.

It was observed the students felt very excited and showed a great interest in most of the topics on culture. This means the content in the textbook was relevant, interesting and meaningful. Different authentic materials such as TV shows, maps, recipes, realias etc were also employed in cultural learning. It satisfied learners' needs, motivated them, and made them feel less worried. As a result, the students' levels of confidence increased in speaking English.

In regard to the improvement of different aspects in speaking, the students were found to

have developed their grammar accuracy, vocabulary, speech delivery and communication effectiveness significantly. This finding is consistent with that of Juan (2010), who found that young Spanish EFL students improved their oral fluency regarding speech rate and pause duration in CBI programs. The students in the present study could also speak more fluently as well as use more accurate grammar with fewer errors and a larger vocabulary. It was seen that the students had a lot of speaking practice to make their speech flow better with less hesitation and pauses in learning activities such as performing cultural occasions and oral presentations, which provided a rich context.

On the other hand, it is worth mentioning that the teacher provided scaffolding before the students undertook any speaking task. The teacher used the cultural content in videos or worksheets to activate the students' schemata. Thus, students elicited their previous knowledge to produce more oral output. The students were either paired or grouped to cooperate and negotiate with each other to complete many learning tasks. During this process, they had freedom to seek for support from either their peers or the teacher.

It is interesting that the effect size of score increase in vocabulary was larger than those of other aspects in speaking. One reason was that many new words were introduced both from the book and from other sources like TV shows and other handouts. On the other hand, vocabulary teaching is the most explicit in CBI compared with other implicit aspects (Dalton-Puffer, 2007). When the students received explicit instruction, they tend to understand the knowledge more easily and were more likely to improve. It is more difficult when the language as a vehicle is taught implicitly through content.

### *c. Different English improvement between high and low proficiency groups*

An interesting result was found that low proficiency group had a significant increase in their listening scores in the pre- and post-tests while the high proficiency group did not show significant growth. The listening proficiency of the high group was significantly higher than that of the low group. However, this finding concurred with Kato's (2009) study on improvement in listening ability in its acquisition for aviation English proficiency. It was found that Japanese students in a low proficiency group enhanced their listening ability more than high proficiency students since they had achieved a fairly high level of listening comprehension. In this study, the low proficiency group were observed to make more effort to learn the content and needed to listen more times than the high proficiency group. The students in the high proficiency group were observed to fill out most of the blanks in the listening exercises the first time they listened to the audio. However, both groups obtained similar amounts of exposure to the target language. One more reason could also be that the language input for high proficiency group was not challenging enough to improve their listening proficiency.

In addition, a significant difference was found in vocabulary development between the two groups in speaking. The low proficiency group had greater improvement in vocabulary use than the high. From the classroom observation, the high proficiency group could quickly respond to the meaning of the vocabulary in the lesson while the low proficiency group spent more time reacting to the vocabulary meanings. Thus, the high group acquired a large amount of vocabulary, in contrast to the low group students who had a low knowledge background of vocabulary in the field of culture. Therefore, the low group had a significant gain in vocabulary when it was given a similar language input as the high group.

## CONCLUSION

### *Summary of findings*

In conclusion, CBI presented a positive effect on English learners' listening and speaking abilities. However, the findings are not conclusive enough because the high proficiency group did not make a significant improvement in listening ability despite their counterpart improving listening significantly. Both low and high proficiency groups achieved significant higher scores in speaking, which indicates that CBI does produce a positive effect on learners' speaking ability. Although high and low proficiency groups made similar improvements in these two skills, the low proficiency group made a significantly greater development than their counterpart in using vocabulary in speaking. The present study contributed new empirical evidence to support the effectiveness of CBI. It further showed that CBI can improve some specific aspects of learners' speaking competence.

### *Pedagogical Recommendations*

The significant improvement in listening and speaking after taking the content-based course suggests that the course book in CBI should be interesting and relevant to students. It also implies that authenticity should be in consideration regarding content learning. The content in various forms, either audios, videos, pictures, or newspapers, should be made for real communication purposes. Further, the teaching materials should engage students participating in the classroom.

Since Thai learners are not proficient enough in speaking English, it is necessary to scaffold and encourage them to speak as much as possible in CBI classroom activities. Scaffolding can take the form of not only comprehensible input but also advanced and low proficiency students' pairing. It is suggested to consider learners' proficiency levels when the teacher provides any language input. The tasks should neither be too easy nor too difficult. The teacher should offer clear and comprehensible instructions for any task. In other words, it should follow the *i+1* principle proposed by Krashen (1982).

Appropriate pairing or grouping can also be a good scaffolding. The students at high proficiency levels can be paired with those at low proficiency levels. In this way, the high proficiency group can scaffold the low to improve their English speaking while the low proficiency group can learn from the high.

It is highly recommended that CBI teaching cater for the learning needs and preferences of students at different levels, especially the advanced students. The significant difference between the high and low proficiency groups was found in the improvement when using vocabulary in speaking. It implies that the language needs of students at different proficiency levels should be considered in CBI teaching practice. When preparing the lessons, teachers can tailor teaching materials based on additional language needs of the advanced students.

Despite the importance of caring for those at a low level of English proficiency, by no means should we neglect the speaking development of advanced students. Low proficiency students can usually seek enough help from their advanced peers. However, advanced students may not obtain sufficient support in speaking activities. Therefore, it is recommended that the advanced students be provided with more assistance.

#### *Limitation and future study*

Due to a tight research timeline, students were only administered with a pre-test and a post-test. It is suggested a retention test be given to minimize the “backwash” effect in testing. This test can confirm the real effect of CBI on students’ listening and speaking.

This study is an experimental research design. Because it was difficult to find a group with similar characteristics and control variables related to the study, the research did not match a suitable control group with the experimental group. It would be more comparative if it had a control group.

Aspects of speaking development were examined carefully. Yet, the study has not investigated the detailed aspects of listening. Future study may look into the improvement of listening ability for gist, specific information and details, speakers’ attitudes.

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#### **REFERENCES**

- Airey, J. (2009). *Science, Language and Literacy: Case Studies of Learning in Swedish University Physics*. PhD Thesis.
- Brinton, D., Snow, M., & Wesche, M. (2003). *The content-based second language instruction (2nd ed.)*. Ann Arbor: The University of Michigan Press.
- Bureau of International Cooperation Strategy (2006, September 19). *Study in Thailand 2005-2006*. Retrieved from Commission on Higher Education, Bureau of International Cooperation Strategy: <http://inter.mua.go.th/thai-he-fact-figures/>
- Chang, J., & Xia, Y. (2011). A Study of the Effects of the Content Based Instruction for English Majors in the Chinese Context. *Chinese Journal of Applied Linguistics (Quarterly)*, 34(3), 26-38.
- Chau Ngan, N. T. (2011). Content-based Instruction in the Teaching of English for Accounting at Vietnamese College of Finance and Customs. *Canadian Center of Science and Education Journal of English Language Teaching*, 4 (3), 90-100.
- Corrales, K., & Maloof, C. (2009). Evaluating the effects of CBI on an English for medical students program. *Latin American Journal of Content & Language Integrated Learning*, 2(1), 1-23. doi:10.5294/lacil.2009.2.1.3
- Crandall, J., & Tucker, G. (1990). Content-based language instruction in second and foreign

- language. *The Regional Seminar of Language and Teaching Methodology for the Nineties the Regional Language Centre* (pp. 83-96). Singapore: Regional Language Centre.
- Dalton-Puffer, C. (2007). *Discourse in Content and Language Integrated Learning (CLIL) Classrooms*. Amsterdam: John Benjamins Publication Company.
- Duenas, M. (2004). The whats, whys, hows and whos of content-based instruction. *International Journal of English Studies*, 4(1), 73-96.
- Education First (2015). *The world's largest ranking of countries by English skills*. Retrieved from Education First: <http://www.ef.co.th>
- Education Testing Service (2015). *Test and Score Data Summary for TOEFL iBT Test*. Princeton: Educational Testing Service.
- Englishteststore. (2015, September 12). *Check Your English Listening Level*. Retrieved from English test store:  
[http://englishteststore.net/index.php?option=com\\_content&view=article&id=14441&Itemid=369](http://englishteststore.net/index.php?option=com_content&view=article&id=14441&Itemid=369)
- Fabra, L. R., & Jacob, K. (2015). Does CLIL enhance oral skills? Fluency and pronunciation errors by Spanish-Catalan learners of English. In M. Juan-Garau, & J. Salazar-Noguera (Eds.), *Content-based language learning in multilingual educational environments* (pp. 163-178). Cham: Springer.
- Flowerdew, J. (1993). Content-based language instruction in a tertiary setting. *English for Specific Purposes*, 12, 121-138.
- Grabe, W., & Stoller, F. (1997). Content-based instruction: research foundations. In M. A. Snow, & D. M. Brinton (Eds.), *The content-based classroom: Perspectives on integrating language and content* (pp. 158-174). New York: Longman .
- Greenall, S. (2003). *People Like Us: Exploring Cultural Values and Attitudes*. Toronto: Macmillan.
- Guilloteaux, M., & Dörnyei, Z. (2008). Motivating language learners: a classroom-oriented investigation of the effects of motivational strategies on student motivation. *TESOL Quarterly*, 42(1), 56-77.
- Juan-Garau, M. (2010). Oral fluency development in secondary education CLIL learners. *Current Research on CLIL*, 19(3), 42-48.
- Juan-Garau, M., & Salazar-Noguera, J. (2015). *Content-based language learning in multilingual educational environments*. Cham: Springer.
- Kasper, L. F. (1997). The impact of content-based instructional programs on the academic progress of ESL students. *English for Specific Purposes*, 16(4), 309-320.
- Kato, S. (2009). Listening activities for the acquisition of aviation English proficiency test. *Bulletin of Chiba University Language and Culture*, 3, 47-59.
- Kirkpatrick, R. (2012). English education in Thailand: 2012. *The Asian EFL Journal*, 24-40.
- Krashen, S. (1982). *Principles and practice in second language acquisition*. Oxford: Pergamon Press.
- Lasagabaster, D. (2008). Foreign language competence in content and language integrated courses. *The Open Applied Linguistics Journal*, 1, 30-41.
- Leaver, B., & Stryker, S. (1993). Content-based instruction for foreign language classrooms. *Foreign Language Annals*, 22(3), 269-275.
- Mala, D. (2016, January 2). *Asean Community challenges Thai English skills* . Retrieved from

- Bangkok Post: <http://www.bangkokpost.com/learning/learning-news/813852/asean-community-challenges-thai-english-skills>
- Met, M. (1999). *Content-based instruction: Defining terms, making decisions*. The National Foreign Language Center: Washington, DC.
- Navés, T., & M. Victori. (2010). CLIL in Catalonia: An overview of research studies. In D. Lasagabaster & Y. Ruiz de Zarobe (Eds.), *CLIL in Spain. Implementation, results and teacher training* (pp. 30–54). Newcastle-upon-Tyne: Cambridge Scholars Publishing.
- Nieto Moreno de Diezmas, E. (2016). The Impact of CLIL on the acquisition of the learning to learn competence in secondary school education in the bilingual programmes of Castilla-La Mancha Uppsala: Acta Universitatis Upsaliensis. *Porta Linguarum*, 25, 21-34.
- Ouazizi, K. (2016). The effects of CLIL education on the subject matter (mathematics) and the target language (English). *Latin American Journal of Content and Language Integrated Learning*, 9(1), 110-137. doi:10.5294/laclil.2016.9.1.5
- Papai, N. D. (2000). Literacy development through content-based instruction: A case study. *Working Papers in Educational Linguistics*, 16(2), 81-95.
- Pérez-Vidal, C., & Roquet, H. (2015). CLIL in context: Profiling language abilities. In M. JuanGarau, & J. Salazar-Noguera (Eds.), *Content-based language learning in multilingual educational environments* (pp. 237–255). Berlin: Springer.
- Phaisuwan, C. (2006). *A study on needs and problems of Seagate planners in using the English language to establish an ESP course*. Bangkok: Thammasat University.
- Prieto-Arranz, I., Fabra, R., Calafat-Ripol, C., & Catrain-González, M. (2015). Testing progress on receptive skills in CLIL and non-CLIL contexts. In M. Juan-Garau, & J. Salazar-Noguera (Eds.), *Content-based language learning in multilingual educational environments* (pp. 123-138). Cham: Springer.
- Prometric Inc. (2012). *The Benefits and Best Practices of Computer-based Testing*. Retrieved from Prometric: <http://prometricbrand.com/documents/Final~WP~CBTBESTPRACTICE.pdf>.
- Richards, J. C., & Lockhart, C. (1994). *Reflective teaching in second language classrooms*. Cambridge: Cambridge University Press.
- Richards, J. C., & Rodgers, T. S. (2001). *Approaches and methods in language teaching*. Cambridge: Cambridge University Press.
- Rumsey, J. D. (2016). *Statistics for dummies, 2nd edition*. Indianapolis: Wiley Publishing, Inc.
- Salvucci, S., Walter, E., Conley, V., Fink, S., & Saba, M. (1997). *Measurement error studies at the National Center for Education Statistics (NCES)*. Washington D. C.: U. S. Department of Education.
- San Isidro, X. (2010). An insight into Galician CLIL: Provision and results. In D. Lasagabaster & Y. Ruiz de Zarobe (Eds.), *CLIL in Spain. Implementation, results and teacher training* (pp. 55–78). Newcastle-upon-Tyne: Cambridge Scholars Publishing.
- Shanahan, D. (1997). Articulating the relationship between language, literature, and culture: Toward a new agenda for foreign language teaching and research. *The Modern Language Journal*, 81, 164-174.
- Shih, M. (1986). Content-based approaches to teaching academic writing. *TESOL Quarterly*, 20 (4), 617-648.
- Song, B. (2006). Content-based ESL instruction: Long-term effects and outcomes. *English for*

- Specific Purposes*, 25, 420–437. doi:10.1016/j.esp.2005.09.002
- Stryker, S., & Leaver, B. (1997). *Content-based instruction in foreign language education*. Washington DC: Georgetown University Press.
- Tedick, D. J., Jorgensen, K., & Geffert, T. (2001). Content-based language instruction: The foundation of language immersion education. *The Bridge: From theory to practice*, 1-8.
- Thai MOE (2008). *The Basic Education Core Curriculum B.E. 2551 (A.D. 2008)*. Retrieved from Office of Basic Education Office: [academic.obec.go.th/web/doc/d/147](http://academic.obec.go.th/web/doc/d/147)
- UCLES. (2013). *Cambridge English: Proficiency sample Speaking test with examiner's comments*. Retrieved from CambridgeEnglish: [www.CambridgeEnglish.org](http://www.CambridgeEnglish.org)
- Wilhelmer, N. (2008). *Content and language Integrated Learning (CLIL) Teaching Mathematics in English*. Austria:VDM.

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