Thai EFL Learners' Attitudes and Motivation Towards Learning English Through Content-based Instruction

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ABSTRACT

This study examined EFL learners' attitudes and motivation towards learning English through content-based instruction (CBI) at a university in Thailand. Seventy-one (71) university students, the majority sophomores, answered a 6-point Likert scale questionnaire on attitudes and motivation together with six open-ended questions regarding learning the CBI-based course. Classroom observations were conducted and the scores of mid-term and final tests were collected. Statistical analysis showed that in general the students held a considerably positive attitude towards the CBI-based course and their motivation for learning English was at a moderate level. Significant differences were found in attitudes between students from the Faculty of Nursing and those from the Faculty of Medicine while motivation between the students from these two programs was not significantly different. It is recommended that teachers of CBI-based courses should adopt motivational strategies to enhance both the students' instrumental motivation and integrative motivation, and further studies should investigate learning environment, learner identity and learner engagement in the CBI classroom.

Keywords: *content-based instruction, attitude, motivation, university learners, Thai EFL*

INTRODUCTION

Content-based instruction (CBI) is a teaching approach which emphasizes the learners mastering both language and content (Stoller, 2008). Originating in North America, it has been widely implemented in English as a second language (ESL) classrooms (Brinton, Snow & Welshe, 2003). Its popularity has also spread to other continents, notably Europe and Asia, where large numbers of people learn English as a foreign language (EFL). In Europe, CBI is known as Content and Language Integrated Learning (CLIL- the terms CBI and CLIL are used synonymously in this paper) which emphasizes mastering subject matter together with acquiring foreign languages, including English (Coyle, 2007 cited in Juan-Garau & Salazar-Noguera, 2015). Similarly, interest in CBI is gradually increasing in Asia. Across many Asian countries including Thailand, CBI has been applied to design English curricula and programs in schools and higher education institutions, as witnessed by the rapid increase in new English medium programs at all levels in Thailand (Chalapati, 2007). These programs are considered to be a form of CBI since subject knowledge is the focus while English serves as a vehicle to learn subject matter.

It may be desirable to adopt CBI as an English teaching approach in EFL countries such as Thailand in which learners are encouraged to acquire English by teachers, parents, governments and societies as a whole. However, Runckel (2015) criticizes Thailand for not paying full attention to enhancing the English skills of learners at different educational stages and notes that it has somehow fallen behind some neighboring countries in Southeast Asia such as Vietnam. Moreover, Thai learners' English proficiency is ranked at 56th

out of 72 countries in the English Proficiency Index, an international survey carried out by Education First (EF Education First, 2016). Besides, Thai learners at different levels of English proficiency have a mixture of attitudes and different levels of motivation to learn English (Kitjaroonchai & Kitjaroonchai, 2012; Pengnate, 2012). Some low-proficiency learners have negative or moderate attitudes with low or modest motivation while many high-proficiency learners have positive attitudes with strong motivation.

Attitude and motivation are crucial factors in foreign language acquisition, and learners with positive attitudes and high motivation tend to achieve higher language proficiency than those with negative attitudes and low motivation (Dörnyei, 2005; Gardner, 2007; Dörnyei & Ushioda, 2009; Gao & Lamb, 2011; Murray, 2011). Eshghinejad (2016) posits that positive attitude and high motivation among learners have the potential to facilitate the learning of a second language. When learners have positive attitudes towards learning English, they show their interest in the language and are willing to learn more. With strong motivation, learners are more likely to succeed in acquiring a second or foreign language and to have stronger intention to put forth more effort even though they may meet obstacles.

Nevertheless, whichever teaching approach is employed, its effectiveness may be impaired if learners have negative attitudes and low motivation. CBI is still quite new in Thailand and faces challenges such as the dual focus on both content and language and students' difficulties in learning content through English (Suwannoppharat & Chinokul, 2015). Further, it cannot be assured that learners will take positive and similar attitudes towards learning English through CBI. If learners have low motivation, the full potential of CBI can never be achieved. Warrington (2008) argued that evidence in support of the efficacy of CBI derived from educational or cognitive psychology to some extent neglects the specific learning environment. He further argued that Asian EFL learners may lack sufficient knowledge of English and its culture to comprehend the content well, and learners may thus feel confused, worried, and even demotivated.

Thus, interest and motivation are critical factors which help achieve the goals of CBI, i.e. good learning results in difficult informational activities and the mastery of complicated skills (Stoller, 2004). Learners may become interested in a variety of contents in different disciplines. Their interest makes them engage with the content, exploiting their curiosity about different subjects. Genuine interest can thus generate intrinsic motivation, which enables learners to process content more deeply and develop a stronger association between topics in order to have better learning outcomes.

In Asian contexts, Lee and Chang (2008) claimed that CBI benefits learners by enhancing motivation to learn English, while Mackenzie (2008) suggested that it develops various aptitudes, and Marsh and Hood (2008) opined that it fosters positive attitudes towards English. Although it may be desirable to adopt the CBI teaching approach it has not to date been widely implemented despite showing many benefits in other studies. When adopting the CBI approach, teachers have to overcome learners' difficulties in comprehending content because subject areas such as science, math, and social science serve as the content in CBI classes in Thailand. The subject matter in these areas in such school subjects is often academically and cognitively challenging even for native English speakers let alone non-native speakers. Particularly in EFL countries learners have greater difficulties in understanding the academic content taught in English in CBI lessons. However, it is not yet known whether CBI employed with Thai EFL university learners can yield effective results since the context and the learners are not the same as those in previous studies.

This study was conducted in a low English-proficiency developing country, Thailand in Southeast Asia. Non-academic content about topics relating to culture was taught in the course focused on in this study, which aimed to provide pedagogical suggestions for CBI teachers and implications on how to implement the CBI approach in an Asian EFL context by investigating Thai learners' attitudes and motivation in a CBI English course at university level. It may also throw some light on the suitability of adopting CBI to teach medical students in English in their core subjects since most medical students use English medical textbooks at Thai universities.

Models of Content-based Instruction

With the continuous popularity of CBI, attempts have been made to develop models to suit different educational settings. Brinton, Snow, and Weshe (2003), for instance, suggested three fundamental models: sheltered courses, adjunct models, and theme-based courses. Each model has different objectives in terms of knowledge mastery and linguistic improvement. Sheltered courses stress learning content in a second language (L2) while theme-based courses emphasize learning an L2 through content. Adjunct models focus

on learning both content and language. Lyster and Ballinger (2011) view those different models as points on a continuum with curricula distinguished according to their leaning towards language or content.

Further, Coyle, Hood and Marsh (2010) suggested the 4Cs framework in relation to the integration of content and language. The framework contains four constructs: content, communication, cognition, and culture which refer to subject knowledge, language pragmatics, learning and thinking processes, and enhancing intercultural awareness, respectively. The framework can also be interpreted as representing four goals of CBI, that is, content mastery, language proficiency, cognitive ability, and cross-cultural understanding.

Content in CBI can range from subjects in an official state curriculum to topics in an educational project. It can be thematic (e.g., sports or environment), cross-curricular (e.g., living, economy or agriculture), interdisciplinary (e.g., design an intelligent bicycle) or have a focus on citizenship (e.g., global understanding) (Coyle et al., 2010). Content serves a paramount role in providing a rich context for language learning while language is a tool to access content. Learning both content and a language concurrently is challenging (Marsh, 2002). Pinner (2013b) posited that a CBI approach can engage both learners and teachers more cognitively and enhance learners' motivation.

In this study, a theme-based CBI model was adopted which used cultural topics to help learners understand different cultures and improve their listening and speaking proficiency in English. "Little c" culture (i.e. beliefs attitudes and values) served as the content of the course to develop learners' basic communicative competence. Therefore, learners were involved with different kinds of learning tasks, either heads-on (cognitive engagement) or hands-on (active engagement) activities, using both individual work and group work. In this case, learners may have different learning attitudes and motivation to learn English, which still need further investigations.

Theoretical Framework

Language learning attitude and motivation theory.

Attitude toward a language and motivation to learn it are important factors contributing to language learning achievement. Motivation is a complex construct that includes multiple levels. It has been viewed from various perspectives e.g., Gardner's (1985) socio-cultural model, Deci & Ryan's (2000) self-determination theory, Dörnyei's (2009) motivational self-system, and Ushioda's (2009) person-in-context. This study adopted Gardner's socio-cultural model regarding attitude and motivation in language learning as the theoretical framework.

Attitude is an essential factor in measuring learners' motivation. Gardner (2001) posited that it is ineffective to learn languages without adequate support from positive language attitudes. Language learning attitudes include attitudes toward the language, and the target language community as well as the learning situation, which in turn refers to a learner's responses to anything associated with the current learning setting, particularly the teacher and the curriculum. In this study, attitude refers to learners' reaction to different aspects of the teaching and learning in the CBI English course entitled *Learning English Through Cultures*.

Various factors can affect achievement in second and foreign language learning, one of which is motivation. Motivation represents the fundamental strength to start learning an L2 and the energy to continue a possibly boring studying procedure (Dörnyei, 2005). Without motivation, even the best learners are unlikely to achieve their goals. And well-designed curricula and outstanding teaching may not assure successful study outcomes for learners with low motivation.

Gardner (2004) designed the Attitude/ Motivation Test Battery (AMTB) to measure motivation which includes different attitudinal and motivational scales. Motivation is the integration of a goal, effortful behavior, a desire to achieve the goal, and sound attitudes toward learning activities (Gardner, 1985). He also proposed a socio-educational model with the emphasis on two types of motivation: integrative and instrumental. Integrative motivation represents a learner' desire to achieve a level of language proficiency or even integrate with the target language community. Instrumental motivation is described as the practical reasons for learning a language, for example, better employment or obtaining a degree (Gardner, 2007). In this study, motivation was defined as learners' desire to learn English in terms of social and cultural factors. Thus, motivation was classified as either integrative or instrumental motivation according to Gardner's theory. Integrative motivation is measured based on learners' attitudes towards the English language, its community and its culture, and instrumental motivation is measured by learners' attitudes towards the social

value of learning English. Motivation intensity is measured based on learners' levels of desire and willingness to learn English.

Taking a psychological perspective, Deci and Ryan (2000) proposed self-determination theory which incorporates intrinsic and extrinsic motivation which bear some similarity to integrative and instrumental motivation. They defined self-determination as making a choice in initiating and regulating one's own behavior and intrinsic motivation as referring to one's desire to carry out certain actions for inner fulfilment such as interest and happiness. Extrinsic motivation, on the other hand, represents a personal expectation of an external prize such as high scores or others' appreciation.

More recently, as research into motivation to learn languages has developed, there have been new understandings and ideas. Some scholars view motivation as a very individual factor, which accords with self-determination theory. In this vein, some psycho-linguists such as Dörnyei consider motivation as different layers of language selves. Specifically, Dörnyei (2008) proposed a new approach to understand motivation, the L2 motivational self-system which comprises ideal L2 self, ought to L2 self, and L2 learning experience. Dörnyei (2009) maintained that ideal L2 self, representing the L2-specific aspects of one's ideal self, is a strong motivator to learn an L2 owing to the desire to bridge the gap between the ideal and actual selves; the ought-to L2 self incorporates the qualities one thinks one should have to reach one's aspirations and to avoid potential failures; L2 learning experience is relevant to contextualized intentions in the instant learning situation and experience under the influence of the curriculum, achievement, the teacher, and the peer group.

It has been argued that linear approaches to motivation emphasize generalizable learner types such as motivated and unmotivated learners in an ideal context (Dörnyei & Ushioda, 2011). To respond to the limitations of this approach, Ushioda (2009) proposed a "person-in-context relational view of motivation" in which attention is paid to the complicated individuality of real people. Ushioda (2009) asserted that learners should be regarded as real people who have identities and personalities which are affected by cultural and historical circumstances, and whose motivational structure is created by different contexts.

In sum, attitude and motivation are vital constructs which affect the success in language learning. It is desirable to investigate learners' attitudes and motivation in a new learning situation through using CBI teaching approach at a Thai university.

Previous Studies on Attitudes and Motivation

Although CBI has been quite widely implemented in Europe, it still seems to be a relatively new concept in Asia. Studies of CBI have mostly focused on content development (Broadaway, 2012), curriculum design (Butler, 2005), teacher collaboration (Creese, 2010), and cognitive engagement (Kong & Hoare, 2011). Recently, however a number of researchers have conducted studies to investigate how learners' attitudes and motivation are influenced by CBI in the teaching of English in Asian countries such as Malaysia, Japan and China, and which have investigated the perceptions or perspectives of learners, teachers and other stakeholders towards the integration of content and language teaching (Ikeda, 2013; Pinner, 2013a; Yamano, 2013; Yang & Gosling, 2013; Yassin, Marsh, Ong & Lai, 2013).

In Malaysia, Yassin, Marsh, Ong & Lai (2013) studied the perceptions of 1048 grade-four pupils towards the instruction of primary science through English. It was found that higher English proficiency pupils' received more support from their parents and their experience of using English was also superior, and their attitudes were significantly more positive than those of lower English proficiency pupils. This result in Malaysia revealed that the learners' attitudes towards CBI were linked with their English proficiency and parental support.

Attitudes towards CBI are also associated with an important feature of CBI, authenticity. To examine learners' perspectives on the authenticity of content-based teaching, Pinner (2013a) studied a group of Japanese university students and found that they considered that content and language were equally important, although content was considered as the defining factor for the authenticity of language exposure and production. In addition, the students did not favor the grammar translation teaching method but supported a more authentic and content integrated approach. However, this study did not investigate sufficiently how authentic content promoted language learning, nor the different impacts of the grammar translation approach and CBI.

To examine more specifically how different learners perceived CBI and other forms of English teaching, Ikeda (2013a) used a questionnaire and an essay writing test to evaluate the teaching experienced

by 80 upper secondary school students in Japan aged between 16 and 18 years with a lower intermediate level of English and their learning outcomes. It was found that the students were able to identify the difference between content-based courses and other types of English classes and thought highly of CBI which they felt provided them with constructive learning, cognitive tasks, richer content knowledge and better communicative competence. The effectiveness of CBI is usually measured by learning outcomes, mainly content mastery and language proficiency improvement. In Ikeda's study the students showed improvements in listening, reading, and discussion in English at a modest level as well as in their writing, in which the students enhanced their ability, especially in cohesion and complexity although not in accuracy. Yet, it is still not known how students were motivated by CBI.

As well as examining learners' attitudes, Yang and Gosling (2013) investigated different stakeholders' perspectives and attitudes towards content-based education in the context of Taiwanese higher education. Their study found that most of the Taiwanese college students included in the study considered that their English proficiency improved. However, they reported a lower level of confidence in content mastery although they recognized the benefits of CBI in enhancing their motivation to learn both content and language. Nonetheless, they felt pressured by the difficulty in understanding content, and anxious about following the teachers' instruction. It was also noted that the different attitudes of teachers and students towards CBI education somehow influenced learners' motivation especially when the learners were confronted with challenges in understanding the content and the teaching.

Apart from studies focusing on learners and teachers' attitudes regarding CBI, there have been only a small number of studies (Lasagabaster, 2011; Doiz, Lasagabaster and Sierra, 2014) conducted regarding motivation in the CBI classroom, as compared to research in a conventional EFL context (Gao & Zhang, 2011; Murray, 2011; Lamb, 2011), and in general there has been insufficient research on motivation carried out in content-based EFL environments in Asia.

Kobayashi (2014) examined notions of CBI, learning motivation, and improvement in the English of 166 university students in TOEIC reading classes at two Japanese universities. The results showed that the students were motivated to learn in a collaborative classroom in which different motivational strategies were used. CBI was also found to yield good results in motivating learning. However, it was not quite clear whether the teacher's motivational strategies or the teaching approach of CBI itself contributed to this positive effect, and more studies were recommended in order to reach a more definite conclusion about CBI's effects on learning motivation.

Further, Sylvén and Tompson (2015) investigated the connection between learning motivation and CBI (CLIL). They administered the Motivational Factors Questionnaire (MFQ) to 109 students from CBI programs and 68 students from non-CBI programs at three high schools in Sweden. It was found that CBI students reported more positive attitudes towards English learning, a greater interest in foreign languages, more self-confidence in English, a higher willingness to communicate in English, and a stronger ideal L2 self than non-CBI students who were significantly more ethnocentric and more anxious about English. Though the CBI students had a more positive attitude than the non-CBI students, it was noted that CBI programs in many European countries are selective, and students who are enrolled in them have a preference for CBI programs. It is thus natural that CBI students would have a more positive attitude towards CBI than non-CBI programs. More investigations are needed to see a different result in an Asian context.

Therefore, there is still a need to investigate students' attitudes towards CBI and their motivation to acquire the English language particularly in the more specific context of Thailand. Hence, the present study investigated a theme-based language instruction model which taught non-academic topics to Thai university students.

Objectives of the Study

Motivated by the literature relating to motivation studies in CBI-EFL settings, the present study aimed to investigate if Thai university students' attitudes and motivation are influenced by or benefit from content-based instruction. To address this objective, it sought to answer three research questions, as follows:

1) What attitudes towards English learning do learners in this content-based English course hold? How do these attitudes vary between learners from different programs?

2) What is the level of the learners' motivation for learning English in the content-based course? How does the motivational level vary between learners from different programs?

3) What is the relationship between learners' attitudes towards English learning and their learning motivation in the content-based English course?

METHODOLOGY

Research Site and Sampling

The study was conducted at a university in the South of Thailand, which shares a border with Malaysia. The study participants included the teacher and students enrolled in the CBI English course entitled Learning English through Cultures, which required students to attain knowledge about different cultures and master language skills, mainly listening and speaking. The sample was purposively selected because the teacher was the only native English speaker available at the study site who could conduct a CBI course entirely in English and the students selected were mainly from the health sciences, namely nursing and medicine, and were the only students assigned to be taught in this course by the teacher. The teacher had adequate teaching skills and knowledge about CBI and had taught the same content-based course for two years. The students involved in the study were 81 undergraduates aged between 19 and 21 years and were mostly in their second year at the university.

Research Design

A case study design was applied to acquire the necessary data from English learners majoring in nursing and medicine in a Thai university and the research employed both quantitative and qualitative methods to collect data addressing the research questions. A 6-point Likert scale questionnaire was used to survey the attitudes and motivation of the learners in the CBI English course and observations were conducted in the classroom to obtain more insightful qualitative data.

Research Instruments

Questionnaire.

A questionnaire based on a 6-point Likert scale adapted from Gardener's (2004) AMTB was employed to collect data. It contained 50 items, divided into four parts: 1) participants' demographic information (including gender, year of study, age, and faculty); 2) attitudes towards the content-based English course (34 items); 3) learning motivation (16 items); 4) open-ended questions. Some of the items were also adapted from sample questionnaires from Dörnyei (date) and Taguchi (2010). The items on attitudes toward the course and motivation to learn English were assessed on a 6-point Likert scale: 1=strongly disagree, 2=disagree, 3=slightly disagree, 4=slightly agree, 5=agree, and 6=strongly agree.

Six open-ended questions were included in the last section of the questionnaire. These questions were as follows: 1) What do think you did well in this subject? 2) What do you think you did not do well in this subject? 3) What is the most helpful thing you learned from this subject? 4) Why do you think it is the most helpful for you? 5) What suggestions do you have for this subject? 6) What difference do you find between this subject "Learning English through Cultures" and other English subjects you learned before university? The students wrote their responses to these questions on the questionnaire in Thai.

The questionnaire was reviewed by three experts in the field of ELT research followed by necessary revisions. In administering the questionnaire, the English version of the questionnaire was translated into Thai by a proficient English-Thai translator. The Thai version was reviewed by an expert in translation and English linguistics. Revision was made with assistance from a peer who has a good command of both Thai and English. Hence, content validity was achieved by reliable content experts and good language translators.

Classroom observation.

The classroom observation scheme was adapted from Guilloteaux and Dörnyei's (2008) Motivational Orientation Language Teaching Scheme (MOLTS), which covers important aspects of pedagogy such as individual work, pair work, group work, and students' behaviors in the classroom. The scheme served as a guide for the researcher in making observations.

Data Collection

Prior to actual data collection, the questionnaire was piloted with 43 second-year nursing students who shared similar characteristics with the target participants and who were enrolled in the same CBI course in different sections. The overall value of Cronbach's Alpha (α), which measures the internal consistency

estimating of reliability of the test, was 0.95 in a desired range $\alpha > 0.7$ (George & Mallery, 2003), which indicated a high overall reliability of the questionnaire.

In order to be included among the participants in the study, the students had to complete the CBI English course and return two completed questionnaires. The course lasted for 14 weeks or one academic semester, and covered topics related to culture, such as the family, personal space, festivals, customs and traditions. Towards the end of the course, the questionnaires were distributed to the students. Due to the length of the questionnaire (50 items), it was divided into two sub-parts which were distributed on two occasions to avoid the participants becoming bored while completing it. The students completed the questionnaires following necessary guidelines. During the data collection procedure, one student withdrew from the course. In addition, 9 students did not complete the whole survey for different reasons. Eventually, 71 complete questionnaires were obtained.

The researcher observed the teacher and students as a non-participant sitting in the classroom and the MOLTS was used as a guide to observe the events. Notes were made simultaneously. Observations were conducted in both nursing and medical student classes, both of which had two lessons every week for 14 weeks. Observations were carried out on four occasions in the 1st, 4th, 8th, and 12th weeks during the 14 weeks. In addition, the scores from the students' mid-term and final tests were also collected with the permission of the department and the lecturer for the course as additional data.

Data Analysis

The data from the questionnaire was analyzed with descriptive statistics and independent sample t-tests using the SPSS software package. An interpreting scale was adapted from a 5-Likert scale used in Paran and Tibli's (2009) study to define the level of the students' attitudes and motivation (see Appendix). The descriptive statistics and the results of the t-tests were directed at answering research question 1 which investigated students' attitudes towards the content-based language course, and research question 2 relating to motivation to learn English after the course. The answers to the open-ended question were also used to support the quantitative results. Grouping was used to analyze the main ideas in the students' responses. Some popular ideas were reported to support the quantitative results from the questionnaires.

A Pearson correlation coefficient was derived to answer research 3 concerning the relationship between attitude and motivation. The scores of the mid-term and final examinations were also analyzed by comparing the achievements of the nursing and medical students through an independent paired-sample t-test to support the results derived from the questionnaires. The observation notes in association with classroom engaging learning behaviors were triangulated with the quantitative data.

RESULTS

Only 71 (60 female and 11 male) out of the 81 participants returned completed questionnaires. The majority of the students who returned completed questionnaires were in their second year with only one in his or her first year. They were aged between 19 and 21 years, 36 were nursing students and 34 were medical students studying physical therapy while one was studying at the Faculty of Management Science. (see Table 1)

Table 1 Participant Demographics

Variables	Number of students	Percentage (%)
Major		
Nursing	36	50.7
Medicine	34	47.9
Management Sciences	1	1.4
Gender		
Male	11	15.5
Female	60	84.5
Age (years)		
19	28	39.4
20	41	57.7
21	2	2.8
Total	71	100

Students' Attitudes towards CBI Learning Situation

In respect of research question 1, Table 2 shows that the students who took the content-based English course had a slightly more positive attitude ($\bar{x}$=4.84, SD=.55) toward the course instruction in general compared to the mean attitude toward English improvement ($\bar{x}$=4.65, SD=.66), while the students generally held positive attitudes towards the course content ($\bar{x}$=4.92, SD=.65), life association ($\bar{x}$=4.92, SD=.74), understandable input ($\bar{x}$=4.82, SD=.67), and learning activities ($\bar{x}$=4.91, SD=.57).

Table 2 Students' Attitudes towards Learning Situation in the CBI English Course

Measure	Average	
	$\bar{x}$	SD
Overall attitude	4.84	.55
Course content	4.92	.65
English improvement	4.65	.66
Association with life	4.92	.74
Understandable input	4.82	.67
Learning activities	4.91	.57
Overall evaluation	4.82	.69

In response to the open-ended questions in the questionnaire, more than half of the students stated that she did well in more than two skills and easily understood what the teacher taught. Most students also wrote that the cultural knowledge was varied, rich and comprehensible. Three-fifths of the students described the most helpful aspects from this course as listening, speaking learning more vocabulary, and knowing about other countries' cultures because of being able to obtain new knowledge and apply it in her daily life. One third of them also reported that they were satisfied with working in different group learning activities such as brainstorming together.

For example, one student stated that she could comprehend dialogues used in the course and acquired cultural knowledge about other countries. She further explained that she was able to apply the knowledge gained and know more about foreigners. Likewise, another student noted that he could also understand conversations and was able to learn more about the cultures of foreign countries, and the differences between Thai and other cultures and had thus gained more general knowledge.

"When I studied the course, I was able to understand dialogues in the listening, apply the knowledge I learned, and know more about foreigners."

"I was able to understand the conversations in the class. And I also got more knowledge about cultures in foreign countries as well as the differences between my own culture and others."

As shown in Figure 1, more than 85% of the students agreed that the cultural topics in the course were interesting, the vocabulary, dialogues and exercises were suitable to their English level, and they understood different cultural practices well. Most students also accepted that the examples of cultures were relevant to their life, the teaching materials and tasks were authentic and meaningful, and learning diverse

cultures also helped them to understand Thai culture better. Less than one-fifth of them thought in the opposite way.
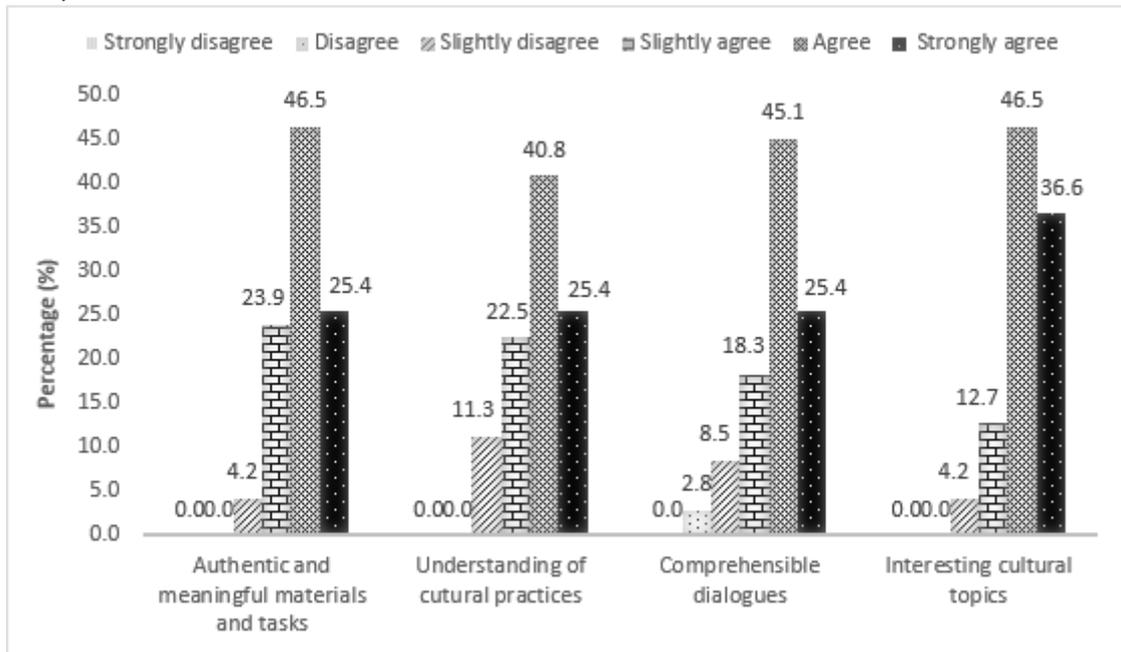

Figure 1. **Students' attitudes towards course content**

Figure 2 shows students' attitudes towards life association and comprehensible input. Only 4.2% of the students did not think that the teacher linked students' past experience with the new content clearly. Similarly, 4.2% did not agree that the teacher incorporated the new knowledge with the students' background well. Concerning students' understanding of the content, 94.3% thought that they understood the teacher's talk in the class but 5.7% did not agree. In terms of reading comprehension of the passages used, 93% of the students believed that they grasped the meaning well enough to do the relevant exercises but 7% of them did not agree. For listening, 15.5% did not think that they comprehended the texts well, yet 84.5% of them had a good understanding of the audio material used.
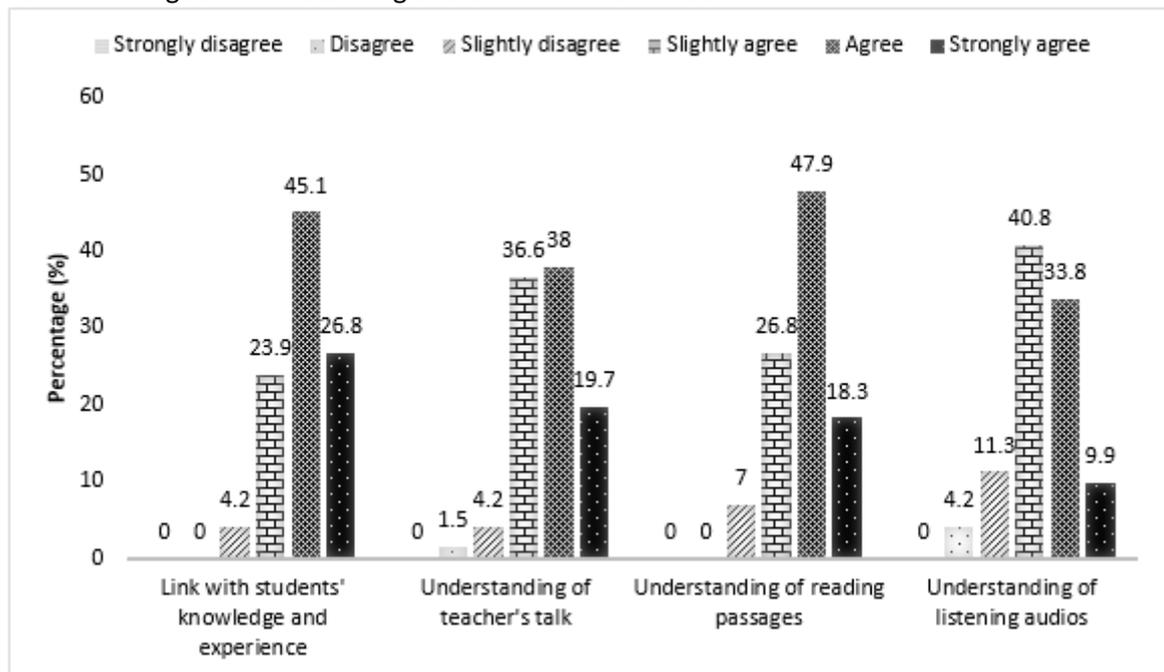

Figure 2. **Student attitudes towards life association with learning and comprehensible input**

As the results in Figure 3 show, 47% of the students strongly agreed and 32% agreed that they had more exposure to the target language through CBI than other English classes taught through conventional approaches with 2.8% disagreeing, and more than 70% of the students reported that they had more opportunity to speak English in the classroom as well as learning useful vocabulary with 28.2% of the opposite opinion. Moreover, 38% of the students slightly agreed and 31% agreed that they felt less worried when they spoke English in the CBI class, and 71.8% of them considered themselves to be more confident in speaking English than after other English courses. Overall, 83.1% of the participants were satisfied with their English improvement.
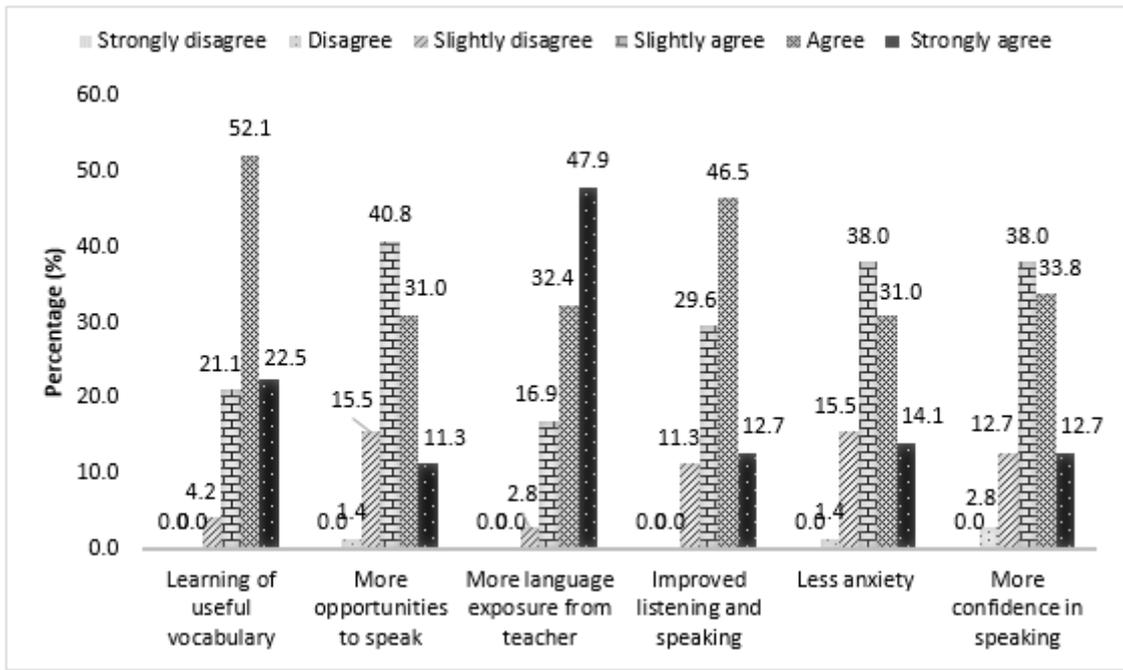

Figure 3. **Students' attitudes towards English improvement**

The students showed a positive reaction towards the learning activities in the content-based course. As shown in Figure 4, 69% of the students felt that the teacher provided enough scaffolding to complete classroom assignments. Almost 30% of the students strongly agreed that they enjoyed performing various cultural activities and liked collaborative work with other classmates. Over half of them stated that they had sufficient chance to communicate and discuss with classmates, enough time to negotiate meaning in group work, and associated cultural knowledge and language to use in classroom tasks.
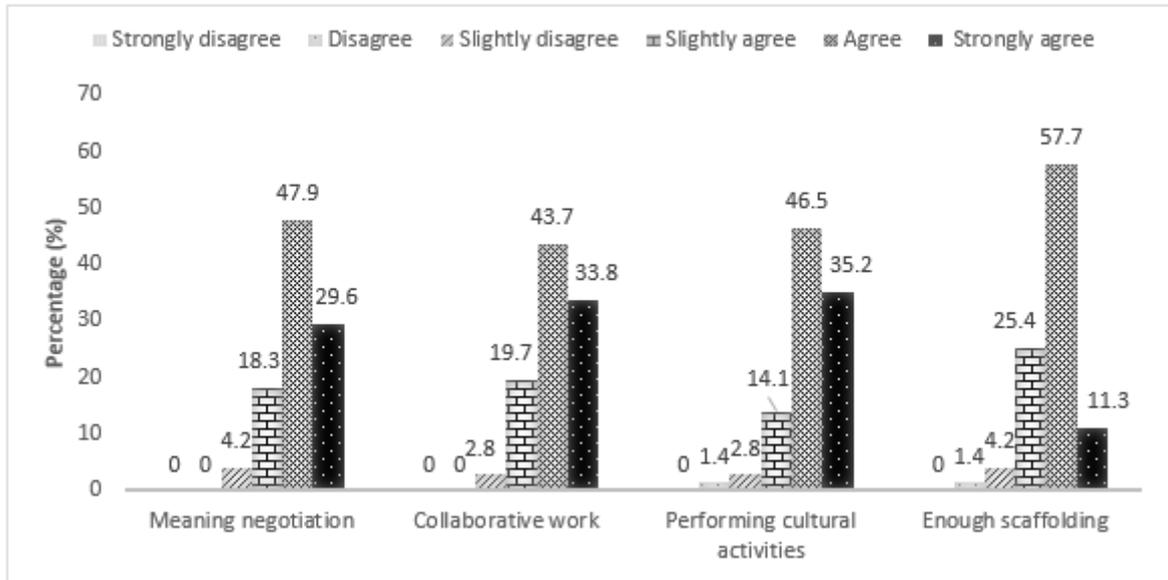
Figure 4. **Students' attitudes towards learning activities**

In all, the students conceived learning in the CBI course as a positive learning experience in their overall evaluation. As presented in Figure 5, 94.4% reported that they enjoyed learning the course. Over 90% of them opined that the course made them want to learn more English and enhanced their motivation. However, 20% did not think (i.e. slightly disagreed) that they mastered both content and language, and 52.1% felt (slightly agreed) that they did. Regarding achieving the dual objectives of content mastery and language learning, the students gave a much less positive response.
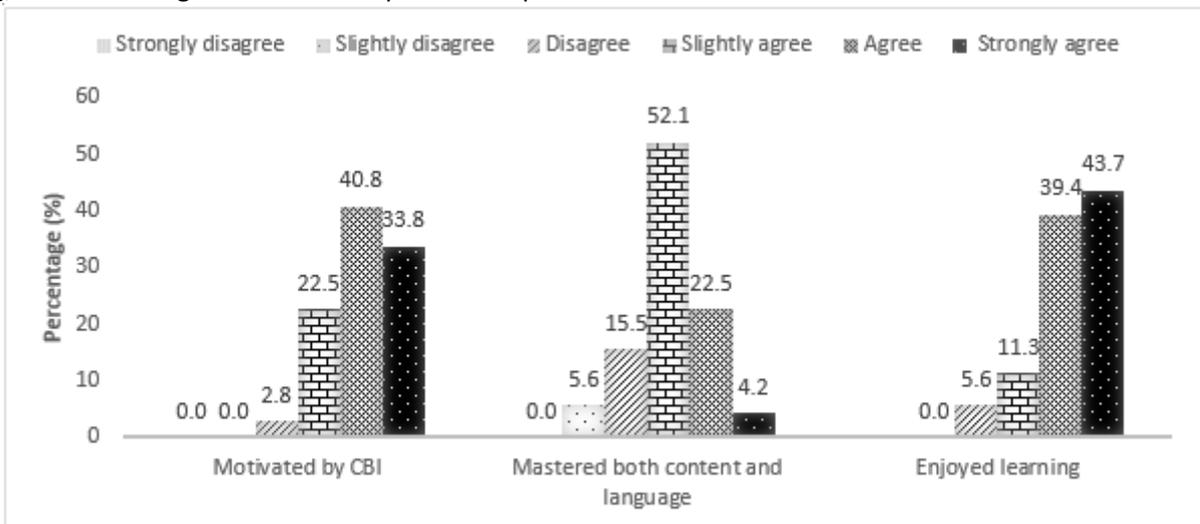

Figure 5. **Students' overall evaluation of the course**

Since there was only one student from the Faculty of Management Sciences, that student was excluded from the comparison between different majors which were confined to nursing and medical majors. As shown in Table 3, in the comparison of students from the two different faculties, it was found that students from the Faculty of Medicine ($\bar{x}$=5.08, *SD*= .42) held a more positive attitude toward the course than those from the Faculty of Nursing ($\bar{x}$=4.56, *SD*=.54), and the difference was found to be significant at the 0.001 level, representing the largest difference in attitudes between medical and nursing students (Cohen's *d*=1.12) and indicating that the medical students held substantially different perspectives about the course from the nursing students. In contrast, the lowest level of difference found was in the attitude toward comprehensible input (Cohen's *d*=.54) which suggested that both medical and nursing students considered that they had received comprehensible input. Large effect sizes were also found in attitudes towards course content

(Cohen's *d*=1.08), English improvement (Cohen's *d*=.96), life association (Cohen's *d*=.87), and learning activities (Cohen's *d*=1.01) between the nursing and medical students, showing that the attitudes toward those aspects were different in the two groups.

Table 3

Analysis of Attitudes towards Learning Situation by Program

Measure	Medicine		Nursing		t-test			Cohen's d
	$\bar{x}$	SD	$\bar{x}$	SD	t	df	sig.(p)	
Overall attitude	5.08	.42	4.56	.54	4.47	68	.000***	1.08
Course content	5.22	.51	4.59	.63	4.63	68	.000 ***	1.12
English improvement	4.92	.54	4.35	.65	3.97	68	.000 ***	.96
Association with life	5.21	.61	4.62	.76	3.58	68	.001 ***	.87
Understandable input	4.97	.63	4.63	.65	2.21	68	.031 *	.54
Learning activities	5.16	.43	4.65	.60	4.15	68	.000 ***	1.01
Overall evaluation	5.03	.60	4.58	.71	2.89	68	.005 **	.70

Note. p<0.05 p**<0.01 p***<0.001*

Students' Learning Motivation

In respect of research question 2, the students' overall motivation in learning English was found to be at a moderate level ($\bar{x}$=4.65, SD= .65) following the course, as shown in Table 4. In addition, the students had a higher degree of instrumental motivation ($\bar{x}$=4.93, SD=.75) than integrative motivation ($\bar{x}$=4.41, SD=.80). Further, the students generally agreed on the importance of learning English for different reasons, yet they viewed functional uses of English as being more important than interest in the language itself. Moreover, the overall motivation intensity was at a moderate level.

Table 4 also revealed that there was no significant difference in motivation between the medical and nursing students. However, the medical students' overall motivation was slightly higher than that of the nursing students. Moreover, both the integrative motivation and motivation intensity were higher for medical students than for nursing students. However, the nursing students' instrumental motivation was slightly stronger than that of the medical students.

Table 4 Comparison of Motivation by Program

Measure	Average		Medicine		Nursing		t-test		
	$\bar{x}$	SD	$\bar{x}$	SD	$\bar{x}$	SD	t	df	Sig.(p)
Overall Motivation	4.65	.71	4.70	.73	4.58	.70	.72	68	.24
Integrative	4.41	.80	4.46	.83	4.34	.78	.63	68	.27
Instrumental	4.93	.75	4.93	.78	4.94	.73	.04	68	.48
Intensity	4.61	.84	4.72	.85	4.48	.83	1.18	68	.12

Note. p<0.05 p**<0.01 p***<0.001*

As shown in Figure 6, 45.1% of the students agreed that learning English made them better understand and appreciate the lifestyles of native English speakers with 18.3% strongly agreeing and 26.8% slightly agreeing, but only 1.4% slightly disagreed and 8.5% disagreed. Additionally, 54.9% of the students agreed that learning English helped them understand English books, music and movies etc. while 36.6% gave a less certain response and 8.4% of them did not agree. Regarding integrative motivations, 70.5% of the students said that they would like to become more like English native speakers by learning the language but 29.5% or almost one-third did not agree. In terms of English culture, 47.9% agreed that English was important because they wanted to enjoy English arts and literature while 31% of them only slightly agreed. On the other hand, 21.1% of the students disagreed.
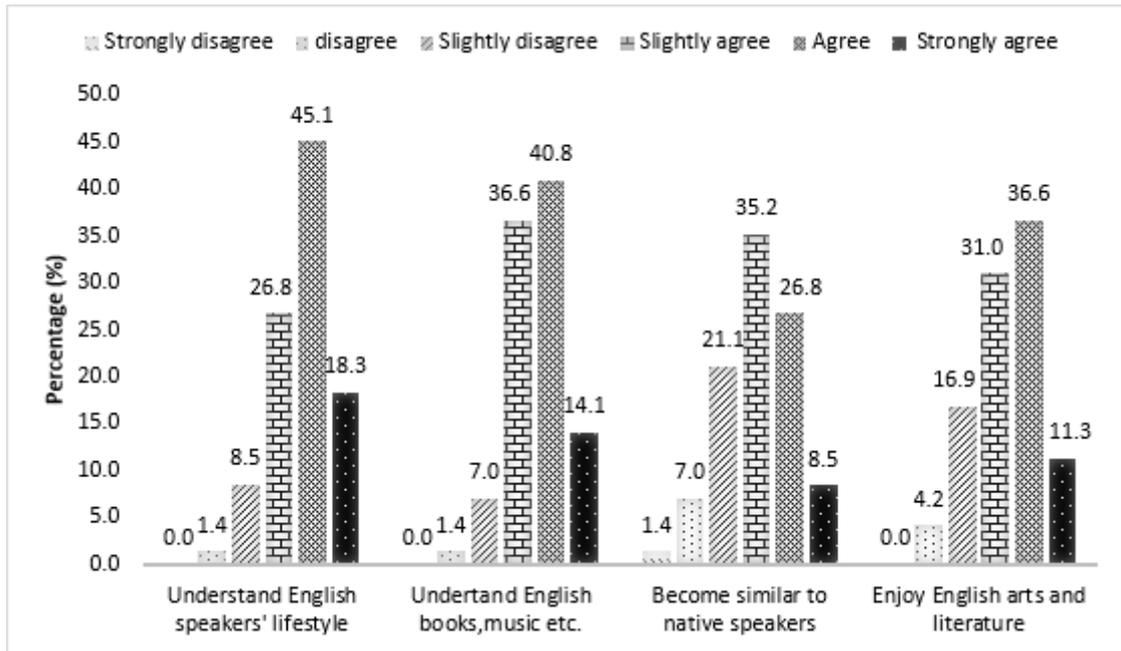
Figure 6. **Students' integrative motivation**

Figure 7 shows a detailed picture of the students' instrumental motivation. Sixty-nine percent of the participants agreed that it was important to learn English because they might travel internationally, 81.7% viewed learning English as important in order to gain good employment, 45.1% strongly agreed that learning English was of importance in pursuing further education, while only 9.9% slightly agreed with this view. Although only 19.7% strongly agreed that learning English was important to fulfil a requirement of graduating from university, 49.3% of them acknowledged that this was the case. Generally, less than 10% of the students expressed negative opinions on the different items relating to instrumental motivation, with only the final item registering a disagreement level of slightly over 10%.
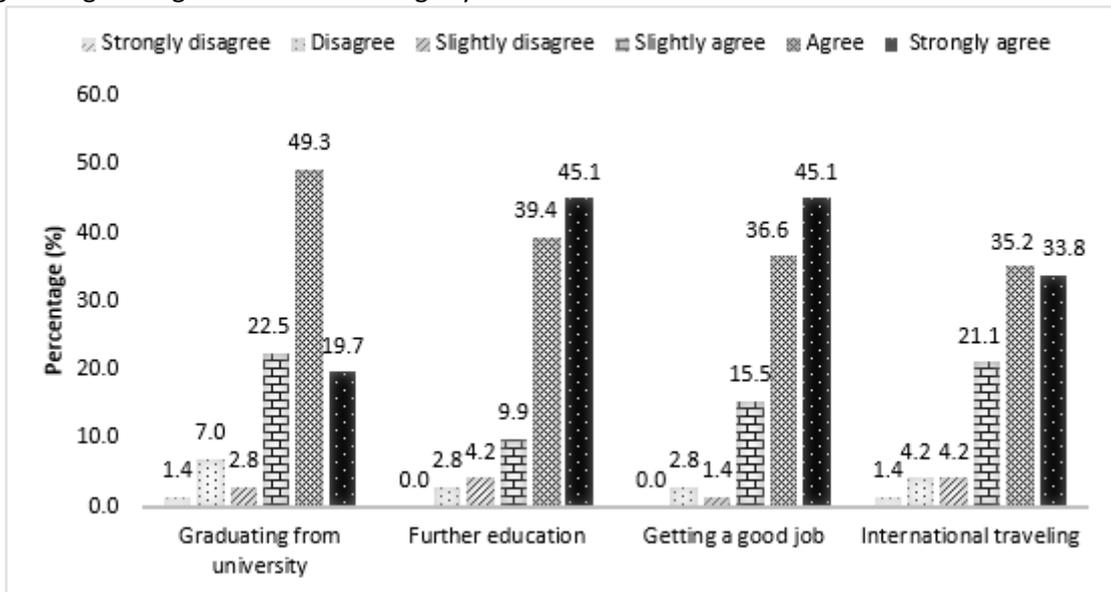

Figure 7. **Students' instrumental motivation**

As is shown in Figure 8, motivational intensity was measured based on learners' increased interest and desire concerning English learning. More than four-fifths of the students reported that they looked forward more to English classes than before while 14.1% did not agree. The majority of the students agreed that it became more interesting to learn English after taking the CBI course with 7% not agreeing while 87.3% of the students agreed that they had a stronger desire to know all aspects of English after learning the CBI

course with 12.7% of the opposite view. Regarding classroom participation, 73.2% of the students thought that the CBI course made them volunteer more to answer in the class with 26.8% not thinking so.
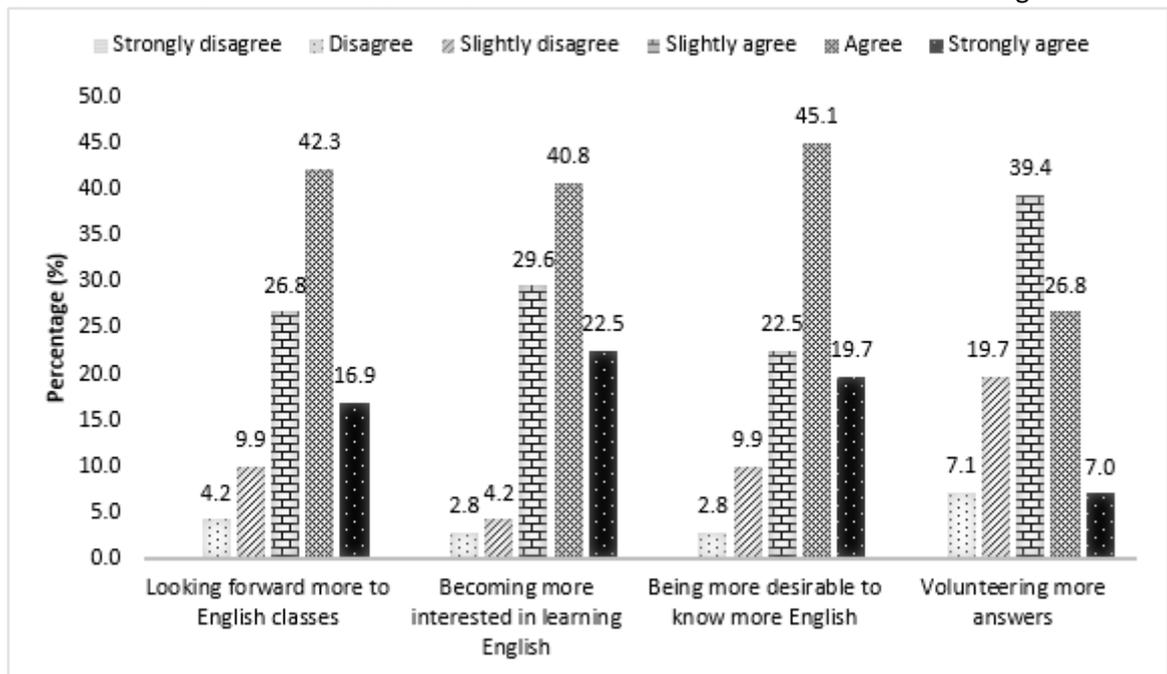

Figure 8. **Students' motivational intensity**

Learning Outcome and Classroom Engagement

In order to support the results obtained from the questionnaires, the scores from mid-term and final tests were analyzed to establish the students' learning outcomes, and classroom observations were also carried out to examine their learning engagement.

As presented in Table 5, the medical students ($\bar{x}$=16.49, SD=1.33; $\bar{x}$=16.27, SD=1.35, mid-term and final respectively) performed significantly better than the nursing students ($\bar{x}$=15.39, SD=1.20; $\bar{x}$=15.45, SD=1.15) in both tests at the 0.01 level. Both the mid-term and final tests accounted for 20% in the grade evaluation for the whole course. These two tests examined not only how well the students mastered the course content regarding different cultures but also how well the students acquired the language content.

Table 5 The Scores from the Mid-term and Final Tests for Students from the two Programs

Test (max. score=20)	Medicine		Nursing		t-test			
	$\bar{x}$	SD	$\bar{x}$	SD	t	df	Sig.(2-tailed)	Effect size
Mid-term	16.49	1.33	15.39	1.20	3.55**	66	0.00	0.87
Final	16.27	1.35	15.45	1.15	2.67**	66	0.01	0.66

*Note. p**<0.01*

The students became involved with interesting learning activities. These activities had interesting content and motivated the learners in the classroom. From the observation notes shown below, the students were attracted by pictures of different houses in different countries. They quickly became interested in the houses and discussed them with their classmates. When the teacher gave explanations about these buildings, the students paid attention and listened carefully.

Teacher asked students to write which country the houses presented in the pictures belonged to. Students wrote the name of the country the house was located after each picture was shown one by one. Students showed a keen interest in these pictures and had much discussion with their peers to decide which countries those houses were located. When the teacher explained about the reasons behind the shape, style,

structure of the house, students kept their attention and listened carefully. (Observation Note 1 at the Medical class)

The students were very motivated by familiar things from their daily life such as the prices of grocery items, easily making a clear link between their life and the classroom. Thus, they became engaged in these learning activities and were willing to make effort to produce oral output.

Students talked in pairs about the prices of several things like newspaper, cigarettes, cheese, milk, butter, and fish in Thailand. They were very happy to talk on the prices with their classmates in a very exciting and loud voice. (Observation Note 2 at the Nursing class)

In individual learning activities such as listening, the students also occupied themselves with taking necessary notes while listening to the audio material. When asked to read the audio scripts, the students followed the teacher's instruction to circle and highlight and found the answers to the exercises by themselves.

Students were taking notes to complete the exercises while listening to a conversation on vacation. When teacher gave the audio scripts of listening to students, teacher asked the students to read, circle, and highlight the scripts. Students read the script, made some marks, and found the answers for the listening exercises. (Observation Note 3 during a listening activity)

Correlation between Attitude and Motivation

To address research question 3, a Pearson correlation coefficient was derived between students' attitude and motivation. It was interestingly found there was no significant between students' attitude toward CBI and their motivation to learn English variables shown by Pearson correlation coefficient at the value of 0.07 ($p<0.01$).

DISCUSSION

Positive Attitude towards CBI

The statistical analyses showed that the students generally had a very positive attitude towards CBI, suggesting that they tended to prefer CBI teaching. This finding is in agreement with the result of a case study in Thailand conducted by MacKenzie (2008) who found that the students in a CLIL project had a positive attitude towards English learning.

Specifically, the students held a positive attitude towards the content in the CBI course. As reported in the questionnaires, the positive attitude was due to the interesting topics, the appropriateness of the content and the authenticity and meaningfulness of the learning tasks. The cultural topics made the students interested and have positive feelings. The appropriateness of the content can be reflected on the suitability of the level of difficulty of the dialogues and the cultural practices included. The content catered for the level of students' language proficiency, and could be understood with sufficient support. The authenticity and meaningfulness of tasks is critical in language learning. The authenticity of the tasks in this study such as talking about prices of daily groceries could be seen in the students' ability to associate the information with real life. In these authentic tasks, the teacher was able to link the students' experience and background knowledge with the new content, and make students apply what they learned to genuine life situations. The meaningful tasks allowed the students to negotiate and construct meaning with each other and engage in meaningful learning.

In regard to English improvement, the students reported that the course improved their English speaking and listening and it was also found that the students improved their speaking and listening significantly in pre and post-tests in the previous study (Lai & Aksornjarung, 2017 in press). This finding is in line with that of Doiz and Lagabaster (2016), who found that Spanish secondary school students perceived English improvements in different skills such as pronunciation, vocabulary, speaking, and listening. This improvement in English speaking and listening is closely related to the language input that the students obtained during the content-based instruction. Language input especially comprehensible input plays an important role in second or foreign language learning (Krashen, 1982).The students in the present study perceived that they understood the teacher's speech, and the classroom task instructions, and similarly most of them understood the reading texts and listening audio material used during the class. Lasagabaster and Doiz (2016) suggested that CBI/CLIL is an approach which exposes learners to more English and gives them

more chance to speak English while traditional EFL classes focus more on specific linguistic issues, for example, morphology and syntax.

Scaffolding is also an essential factor in students' improving their English. In this study, it was observed that scaffolding was not only provided by the teacher, such as by giving clear instructions as shown in observation note 3 (above) but came also from peer support such as group collaboration and meaning co-construction. The students reported that they had positive attitudes towards different components of the learning activities (See Figure 3) and scaffolding from different sources contributed to the students' good learning outcomes.

The findings regarding students' attitudes and motivation in this study align with those of Yang and Gosling (2013), who found that the students had positive perceptions of the improvement in their English through CBI and were found to have enhanced motivation, but reported difficulty and lower confidence in mastering content. Quite a few students in the current study gave less certain responses in regard to the mastery of both content and language (See Figure 4). In fact none of the students achieved full scores in both content or language in the mid-term or final tests. This corroborates the students' uncertain responses to the dual objectives of CBI i.e. content understanding and language learning.

However, in the present study, the medical students had significantly more positive attitudes than the nursing students and the results of the mid-term and final examinations showed that the medical students achieved significantly better scores than the nursing students, implying that the medical students acquired more content knowledge about cultural aspects and mastered the related language better. It may also be inferred that attitude affects the outcome in terms of language learning and therefore, that they understood the content better, and felt less anxious and more confident in different learning activities.

Motivation Variation

The students' overall motivation was found to be at a moderate level. However, they accepted that they felt more motivated by CBI. This result agrees with the study by Doiz, Lasagabaster and Sierra (2014), who found that Spanish students were strongly motivated by the CBI approach. However, they opined that they needed to work harder to grasp subject matter in English, and that it was also beneficial to master more English either to talk with foreigners or for future development. The result is also similar with that of Kobayashi (2014), who found that students enrolled in TOEIC classes viewed CBI as a way to enhance their interest in English and their motivation to learn it. Even so, she added that students may encounter many difficulties when taking a CBI course since they have to put more effort into learning both the language and the content.

It was found that the motivational level of the medical students was not significantly different from that of the nursing students. According to Gardener's (1985) socio-cultural model of motivation, the motivation to learn a second or foreign language is affected by both educational and social context. Both the medical and nursing students were in a similar educational environment in which they were taught through the CBI approach, and they were from indistinguishable social and cultural context in Thailand.

The level of the two types of motivation found in the present study also varied. The students' instrumental motivation was found to be only slightly higher than their integrative motivation although the difference was not significant. This finding is consistent with other studies of motivation in Thailand (Oranpattanachai, 2013; Hengsadeekul et al, 2014), and implies that Thai students are more motivated by practical functions of English rather than the language itself (Dörnyei, 2001). Atay and Kurt (2010) further argued that integrative motivation may have stronger connections with ESL contexts like Canada than it has with EFL settings in which learners have insufficient contact with the L2 culture and community and rarely achieve higher than an intermediate level. Since English is a foreign language in Thailand, many learners value it more as a communication tool in diverse social occasions.

Moreover, factors contributing to instrumental motivation consist of society, travel, employment, graduation and further study (Gardner, 2007). Hengsadeekul et al (2014) commented that education policies in Thailand have overstressed the instrumental merits of English learning and teaching in regard to social and economic development. Yet the importance of integrative motives is often neglected when learning English. The level of motivation intensity found in the present study confirms that CBI can raise learners' motivation to learn English because students become more interested in the CBI English classes and thus more willing to express their answers and to do assignments in English from the CBI course.

The Relationship between Attitude and Motivation

It was interesting, however, that no significant correlation between students' attitudes toward the course and their motivation for learning English was found. This finding does not align with Gardner's (1985) assumption that a positive attitude may lead to learners' higher motivation in language learning. Attitude is usually a person's response to anything linked with the immediate language teaching circumstances (Masgoret & Gardner, 2003), and motivation is a more complex psychological construct determined by many factors (Dörnyei, 2009).

There is no doubt that positive learning attitudes and high motivation can lead to success in learning a language. Many studies have used attitude as a measure to investigate the level of students' second or foreign language learning motivation. In these studies, attitude was treated as a construct under either integrative motivation or instrumental motivation. In this case, their attitudes were significantly correlated with motivation. Attitude is situational (Dornyei, 2001), and thus depends much on the learning situation. In this study, attitudes were towards the learning situation in a CBI English course. The students' motivation was mostly self-determined by individual internal factors and may have been influenced by other external factors (Deci & Ryan, 2000) Attitude can be temporary when the environment changes while motivation can last for longer because of some sustained reasons. Thus attitude towards the learning situation in this study may not have been significantly correlated with motivation to learn English.

Another reason for this result may be the small sample size. When considering relationships based on correlation coefficients it is better to have a big sample to determine the relationship between such general variables in second language study. In comparison to a number of other studies which considered the relationship between attitude and motivation, the sample size in the current study is smaller, and was therefore unable to produce a statistically significant result as has been found in other studies.

RECOMMENDATIONS FOR TEACHING PEDAGOGY

The learners showed a very positive attitude towards learning and teaching through CBI which is a teaching approach that can be applied to improve the English proficiency of learners in the EFL context in Thailand since it can help learners to learn both content and language. It may also be possible to teach some core academic courses to nursing and medical students in English.

It was generally accepted that the topics and other materials in the CBI classes were interesting, and that the students enjoyed learning in the content-based English course. They also perceived that the teaching materials and tasks were meaningful and authentic. Pinner (2013b) asserted that it is less difficult to get students motivated and make them engaged with authentic materials. Therefore, it is necessary for teachers to consider authenticity when selecting teaching content. The content should satisfy learners' needs, activate their schema, and relate to their real life.

It is also necessary to match the difficulty of the content to the level of the learners' language proficiency and should be neither too difficult nor too easy. The content should be challenging and comprehensible with support either from the teacher or peers. Language input, especially comprehensible input is also vital for learners to enhance their language ability.

In order to enhance or maintain students' motivation in learning English, teachers can implement different motivational strategies through four teaching practices: creating basic motivational conditions; generating initial motivation; maintaining and protecting motivation; encouraging positive self-evaluation (Dörnyei, 2001, p.29). In other words, teachers can build a motivating learning context which elicits learners' previous experience or knowledge, and arouses their interest and desire to learn more, and should develop teaching tasks that engage the learners and keep them motivated whilst providing positive feedback and encouraging learners to appreciate themselves.

Those responsible for setting policy in English language education should attach more importance to integrative motivation than to instrumental motivation and should introduce measures to foster learners' genuine interest in the English language and culture. Teachers can then follow these policies to strengthen learners' integrative motivation. Several studies (Kitjaroonchai, 2012; Oranpattanachai, 2013) have shown that Thai English learners are not really motivated to learn English by their integrative orientations but by instrumental reasons. If this finding is ignored, learning achievements may not be as good as expected.

Limitations and Further Study

This study was conducted quantitatively by using a 6-point Likert-scale questionnaire. Although open-ended questions were included to elicit more detailed qualitative information from the participants, the responses contained partial information. If a follow-up interview can be conducted, this may gather more in-depth qualitative information and establish the exact reasons for differences in attitudes toward learning and motivation.

Though motivation is a relatively stable construct in psychology, it still has the potential to change over time and in various situations. Waninge, Bot, and Dörnyei (2014) also suggested that motivation research should be guided by dynamic system theory. Therefore, questionnaires should be distributed three or four times during the study period, in order to build up a more complete picture of students' attitude and motivation changes over time.

Overall, however, further research into how leaners' attitude and motivation are affected by CBI teaching, and to probe more deeply into how CBI can contribute to the learning environment, learner identity and learning engagement is clearly called for (Gao & Lamb, 2011; Ushioda 2011).

CONCLUSION

In conclusion, this study has provided new evidence concerning attitudes and motivation related to CBI in an Asian EFL setting, and offered a detailed description of students' attitudes and motivation in learning English in CBI-based classes. The results showed that the students held positive attitudes towards learning English through CBI and that they were motivated in the CBI classroom. However, it was found that the students felt less certain about being able to achieve the dual objectives of mastering content and language. Half of the students reported slightly agreeing that they had mastered both language and content. Though the level of students' motivation was moderate, they were observed to engage in varied learning activities. The findings also revealed that the learners' instrumental motivation was slightly higher than their integrative motivation. A significant difference was found in attitudes toward CBI English learning between learners from the Faculty of Medicine and the Faculty of Nursing. It can be inferred that different attitudes may make a difference to learning outcomes. Interestingly, no significant correlation was found between attitude and motivation in this study. Finally, this study contributes further knowledge of how motivation theory applies to classroom learning and instruction (Ushioda, 2011), and not only provides some practical implications for both teachers and stakeholders in this field, but also combines theoretical research with classroom practice in CBI.

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APPENDIX

Below is the scale adapted from Paran and Tibli (2009) to interpret the level of attitude and motivation.

Number	Range	Verbal interpretation	Degree of attitude/motivation
6	5.50-6.00	Strongly agree	Very highly positive attitude Very highly motivated
5	4.50-5.49	Agree	Highly positive attitude Highly motivated
4	3.50-4.49	Slightly agree	Considerably positive attitude Motivated
3	2.50-3.49	Slightly disagree	Considerably negative attitude Slightly motivated
2	1.50-2.49	Disagree	Highly negative attitude Not motivated
1	1.00-1.49	Strongly disagree	Very negative attitude Not at all motivated