

EFL College Students' Perceptions toward Content-Based Learning

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Bang, Youngjoo. (2013). EFL college students' perceptions toward content-based learning. *Modern English Education*, 14(1), 23-47.

The purpose of this study is to investigate EFL college students' perceptions of learning subject areas through English in an attempt to measure the perceptions of their experiences of CBI. The participants in this study were 130 college students who enrolled in the subject areas via English mediated instruction in a university in Korea. Data were collected through a questionnaire and a semi-structured interview. The findings showed that students felt higher interest and strong motivation for acquiring content knowledge and English in CBI and paid more attention to the lesson. Furthermore, they showed a very positive response about the necessity of CBI. With regard to the beneficial effects of CBI for students, this study showed that students highly evaluated CBI in light of the contribution to lower levels of anxiety and the enhancement of motivation of learning English, convincing the value of CBI in the content and language learning process and the desire of taking more CBI courses in the future. However, the students, especially at low-level, expressed a great deal of anxiety due to the difficulty in understanding and also due to worrying about their own proficiency levels in comparison to others having higher English proficiency. Based on the findings, the present study offers some implications for effective CBI courses and also future studies.

[content-based instruction(CBI)/English-mediated instruction(EMI)/
내용중심교수법/영어전용강의]

I. INTRODUCTION

In this 21st century, the globalization and dominance of English as a global language is increasingly perceived as an indispensable competence. Especially, the significance of communicative competence in English is being underlined than ever before. This increased attention on communicative competence has led to implement communicative language

teaching (CLT), facilitating communicative language use through meaningful and authentic activities. CLT has indeed contributed to some significant changes in instructional approach, syllabus, materials, and teacher education program in EFL classrooms. Along with such trend, English-mediated instruction, using English as an instructional language, has become more useful for educational administrators and teachers to meet this goal in their own contexts, from primary school to higher education. English-mediated instruction could be understood as a type of content-based instruction (CBI). CBI is one of the approaches to language instruction that conform to CLT principles (Snow, 1998; Wechsle & Skehan, 2002).

To date, while there has been several studies conducted research on CBI, a number of studies have shown a great concern and attention on teaching English through English (TETE). For instance, these studies have focused on students' perceptions on TETE instruction (M. Kim, 2009; H. Oh, & E. Lee, 2010; Y. Pak, 2005; K. H. Pyo, 2009), teachers' perceived difficulties and concerns in implementing TETE instruction (S. Y. Kim, 2002, 2008; C. K. Min, 2008; Y. Moon, & K. Lee, 2002), and teachers' and students' perceptions on the effectiveness of teachers' English use (Y. Cho & S. Lee, 2009; S. A. Kim, 2002; Y. Kim, 2002; J. H. Lee, 2007). In the same vein, in the past two decades the number of universities offering English-mediated instruction across the various subject areas beyond English-related majors has been increasing. While instruction given in English is part of the globalization strategy of universities for the purpose of producing professionals equipped with international capacity, it has been sustainably expanded after being perceived as a way to simultaneously develop the students' specialty and improve language capabilities. Therefore, it has been widely acknowledged that CBI would provide meaningful input and motivation for the students since the content is relevant to students' majors and careers (Snow, 1998).

Based on the theoretical benefit that CBI classes provide a maximum of the meaningful and authentic language use to learners, a few studies have conducted on CBI across the various subject areas beyond English-related majors by researchers and practitioners in an EFL Korean context so far (J. B. Hwang, 2002; J. Jeon, 2002; A. J. Kang, 2007; D. H. Kang, 2008; S. H. Kang et. al., 2007; E. J. Kim, 2003; H. O. Kim, H. Han, U. Maeng., & S. Kim, 2012; Y. S. Shim, 2010). Although these studies have contributed to the understanding of CBI in Korea, more research reflected the current trend is essential for a better understanding of the problems inherent in implementing CBI. Also, there is little research to look into students' perceptions toward instructional benefits of CBI. The purpose of this study is to describe and analyze EFL college students' perceptions of learning subject matter through English. The purpose is further specified in the following research questions:

1. What is the students' overall reaction toward the current CBI class?

2. What are the students' perceptions of CBI in light of necessity of CBI, the benefits for students, anxiety arising from CBI, and considerations for future CBI courses?
3. What are the students' self-identified strategies for effective CBI?

II. THEORETICAL BACKGROUND

1. Content-based Learning

Since Mohan (1986) first explicitly proposed CBI in the 1980s, CBI has been widespread in both second and foreign language teaching. According to Mohan, CBI approaches promote extended practice with coherent content coupled with relevant language learning activities such as teaching how knowledge structures can be realized through language and content.

A major support for CBI comes from second language acquisition research, particularly the work of Krashen (1982). Krashen's emphasis that success in acquiring a L2 depends on focusing on meaning rather than form, on language input being just slightly above the proficiency level of the learner, and in an environment that has sufficient opportunity for meaningful interaction fits well with the CBI, which provides conditions similar to those present in L1 acquisition. CBI is a powerful innovation in language teaching across a wide range of instructional contexts. This practical aspect is well argued by Brinton, Snow, and Wesche (1989, p. 2):

In a content-based approach, the activities of the language class are specific to the subject matter being taught, and are geared to stimulate students to think and learn through the use of the target language. Such an approach lends itself quite naturally to the integrated teaching of the four traditional language skills . . . In this approach students are exposed to study skills and learn a variety of language skills which prepare them for the range of academic tasks they will encounter.

In addition, Swain (1985)'s output hypothesis focuses on relevant and contextually appropriate language forms to support content learning activities in the immersion programs. The combination of focused language instruction and content teaching is a prominent feature of a number of other CBI approaches as well, as a result of Canadian immersion evidence and partly as a result of the findings that follow.

Moreover, Vigotskian-based concepts extended theoretical support to the CBI. Lantolf and Appel (1994) highlighted that Vigotskian concepts of the negotiation in the Zone of Proximal Development, private speech (internally directed speech as problem-solving and rehearsing strategies), and student appropriation of learning tasks are important notions in

L2 learning. They claimed that students in CBI classes have many opportunities to negotiate the knowledge they are learning rather than simply interact or exchange information, and to extend their knowledge at increasing levels of complexity as more content is incorporated into the lessons. Furthermore, students have many occasions to engage in private speech while learning language, sorting out input and rehearsing as they interact with more knowledgeable individuals.

Up to the present, a number of studies have shown the effectiveness of CBI (Grabe & Stoller, 1997; Snow, Met & Genesee, 1989; Stoller, 2002; Wesch & Skehan, 2002). These studies have witnessed that CBI maximizes learners' exposure to the contextualized language by providing language input in the form of academic content. Stoller highlights an integrative approach that integrates content knowledge with the teaching of the four language skills, using language as a medium of teaching and providing an excellent opportunity to teach students the knowledge structures inherent in content. Also, Wesch and Skehan stress that learners in CBI could gain 'two for one,' acquiring academic content and language learning at the same time. In other words, CBI creates a natural context in which learners use the target language meaningfully, constantly encountering language forms and convey academic knowledge through the language. In addition, interest in content knowledge and the successes learners attribute to content learning can lead to powerful intrinsic motivation to language learning. In other words, they are aware that successful content learning can be fully achieved with the support of appropriate language competence. This awareness can motivate the learners for learning language as a necessary tool (Grabe & Stoller, 1997).

2. Prior Research on CBI

Several studies have conducted research on CBI across the various subject areas beyond English-related majors (Custodio & Sutton, 1998; J. B. Hwang, 2002; J. Jeon, 2002; A. J. Kang, 2007; D. H. Kang, 2008; E. J. Kim, 2003; H. O. Kim, et al., 2012; H. S. Park, 2006; Y. S. Shim, 2010; Rodgers, 2006). Overall, these studies produced mixed results. There is strong empirical support for CBI, and the success of many well-documented programs offers additional support for the approach in an ESL context. Custodio and Sutton showed how CBI could be used effectively in their classrooms, using sheltered content model for developing language with an introduction to U.S. history and culture. They found that CBI approach in ESL classes promoted higher-level thinking, allowed for meaningful discussion of students' cultures as reflected in the literature, and reinforced thinking through manageable amounts of speaking, listening, reading, and writing skills.

Also, many empirical studies lent support to the conceptualized benefits on CBI, particularly as reflected in the improvement of the content knowledge and of the written

and oral production of grammatical forms (Rodgers, 2006), enhanced speaking and listening skills (H. S. Park, 2006), increased interest and confidence in English (A. J. Kang, 2007), and enhanced motivation and production skills (D. H. Kang, 2008). In the studies examined the comparative effectiveness of English-mediated instruction (EMI) and Korean-mediated instruction (KMI), E. J. Kim (2003) investigated the difference in terms of the students' interest and motivation, class participation, lecture comprehension and note-taking, and interaction with the instructor between EMI and KMI. She showed that the students experienced greater difficulties with specific types of classroom activities in EMI, such as small group discussions or activities, asking and answering questions, and oral presentations. However, J. Jeon (2002) reported that there were no significant differences except for the area of the study load in both types of instructions. EMI students felt that the study load was heavier than KMI.

A. J. Kang (2007) and J. B. Hwang (2002) explored learners' anxiety and motivation toward CBI courses. They indicated that students were highly interested and motivated in CBI courses while their anxiety decreased significantly over the semester and were highly interested and motivated in CBI courses. Also, D. H. Kang (2008) investigated students' participation level concentrating on affective factors such as attention, motivation intensity, persistence, anxiety, willingness to participate and self-confidence. The findings showed that students with previous CBI experience were better accustomed to CBI and paid more attention to the lesson in CBI courses than in Korean-medium one did.

Y. S. Shim (2010) and H. O. Kim et al. (2012) investigated college students' perceptions toward CBI. Y. S. Shim' study addresses that students report that CBI courses provide beneficial effects such as teacher's teaching method, the enhancement of interest and English skills, and self-confidence, while their uneasiness with CBI was caused by several factors, including student's lack of English ability, inactive interaction with teacher, and instructors' nonnative-like English proficiency. H. Kim et al. indicate that participants considered the enhancement of English ability as the primary purpose of taking CBI courses. Although they showed positive reactions over the beneficial effect of CBI courses overall, they felt emotional stress and anxiety in CBI courses.

III. METHODS

1. Participants

The present study was conducted in the spring and the fall semester of the 2012 school year. The participants in this study were college students who enrolled in the subject areas via English mediated instruction in a university in Korea. For the purpose of the study, 130

students participated. There were 67 male (51.5%) and 63 female students (48.5%). The participants' majors were diverse, ranging from humanities and social sciences to natural sciences. There were 17 freshmen, 26 sophomores, 58 juniors, and 29 seniors. The participants were more juniors and seniors than freshman and sophomores.

As can be seen in Table 1, 57 (43.8%) students evaluated their English ability as 'intermediate' in speaking, 80 (61.5%) students 'very high' or 'high' in listening, 78 (60.0%) students 'very high' or 'high' in reading, 67 (51.5%) students 'intermediate' in writing. Participants self-evaluated themselves better in English receptive skills than productive skills.

TABLE 1
Participants' Self-evaluated English Ability

English Skills	Very High or High N(%)	Intermediate N(%)	Low N(%)
speaking	36(27.7)	57(43.8)	37(28.5)
listening	80(61.5)	40(30.8)	10(7.7)
reading	78(60.0)	47(36.2)	5(3.8)
writing	35(26.9)	67(51.5)	28(21.5)

Table 2 indicates the participants' experience of studying English or living in English-speaking countries. There were more students who responded that they never had studied or lived in English-speaking countries (70.8%) than students who had studied in English-speaking countries (29.2%).

TABLE 2
Students' Experience with English Study or in Living English-Speaking Countries

	Yes	No
N(%)	38(29.2)	92(70.8)

2. Data collection and Data analysis

Questionnaire has been used as a main research instrument to tap into students' perceptions on CBI. The questionnaire was administered to 130 students taking CBI courses. To identify the students' perceptions of CBI, the present study modified scales developed by prior studies on content-based instruction. It was designed to measure the two parts. In the first part, items asked students' overall reactions toward the current CBI class including reasons for taking the course, the level of understanding of lesson, the

satisfaction with the CBI course(s), difficulties students experienced in CBI, and students' concerns over the instructor for effective CBI, along with their background information such as gender, major, grade level, experience of studying or living in English-speaking countries, and self-evaluated English ability. In the second part, items were designed to measure the perceptions on their experiences of CBI including awareness toward necessity of CBI, benefits of CBI for students, anxiety arising from CBI, and considerations for future CBI courses. The scale is on a 5-point Likert scale, ranging from *strongly disagree* to *strongly agree*. The reliability analysis of the scale resulted in the Cronbach's Alphas of .81 and .80 for two constructs respectively. All statistical analyses for questionnaire were done using SPSS. For the analysis of the data, descriptive statistics was mainly used in this study.

In addition, a semi-structured interview was carried out in an effort to obtain additional clarification, which existing data of the questionnaire did not address, using both closed- and open-ended questions. For ten students participating in this study, the interview was conducted by the researcher at the end of the semester. Each participant was interviewed individually for twenty minutes and all interviews were tape-recorded with permission from the participants. Students were asked to respond to the questions including the perceptions of CBI, difficulties in CBI, and self-identified strategies for effective CBI. The interview data were analyzed according to the recurrent themes about the questions.

IV. RESULTS AND DISCUSSION

1. Students' Overall Reaction toward CBI

The students' overall reactions toward the current CBI were investigated in light of the following aspects: reasons for taking CBI class, the level of understanding the lesson, satisfaction with the quality of the current course being taught and the diversity of CBI courses, difficulties students experienced in CBI, and students' concerns over the instructor for effective CBI.

1) Reasons for taking CBI class

As shown in Table 3, participants' responses on motivation for taking CBI course were analyzed according to frequency. As to the reasons for taking CBI course, 49.2% of participants responded that they take CBI class in order to improve their English skills. This finding is supported by the previous study of H. O. Kim, et al., (2012). This study indicates that students have strong motivation for learning English through CBI course,

considering CBI is likely to help them prepare for future business careers or academic pursuits. Meanwhile, they did not show their strong intention for taking CBI course as the requirement for graduation (13.9%) and their development of knowledge in major areas or liberal arts (13.1%). With regard to the participation in study-abroad exchange program (6.2%), enhancement of global mind-set (6.2%), requirement of CBI course (5.4%), better understanding in English than Korean (2.3%), preference of evaluation policy: absolute evaluation (2.3%), and interest in the culture of English-speaking countries (1.5%), they show relatively very low motivation for taking CBI course.

TABLE 3
Reasons for Taking CBI Course (N (%))

Reason	N (%)
Improvement of English ability	64 (49.2)
Enhancement of global mind-set	8 (6.2)
Requirement of CBI course	7 (5.4)
Academic interest in major areas or liberal arts	17 (13.1)
Required course for graduation	18 (13.9)
Interest in the culture of English-speaking countries	2 (1.5)
Participation in study-abroad exchange program	8 (6.2)
Preference of evaluation policy: absolute evaluation	3 (2.3)
Better understanding in English than Korean due to the experiences of foreign residence or exchange student programs	3 (2.3)

2) Levels of understanding the lesson

Table 4 shows the extent to which the lesson students understand in CBI class. Of 130 respondents, 8 students (6.2%) show they can understand over 90% and 68 students (52.3%) between 70% and 90%, while 33 students (25.4%) between 50% and 69%, 16 students (12.3%) between 30% and 49%, and 5 students (3.8%) below 30%. The result shows that most of students did not have much trouble in understanding the lesson.

TABLE 4
The Level of Understanding the Lesson

	Over 90%	70%~90%	50%~69%	30%~49%	Below 30%
N (%)	8(6.2)	68(52.3)	33(25.4)	16(12.3)	5(3.8)

3) Satisfaction with the quality of current course and the diversity of CBI courses

Table 5 shows the participants' satisfaction with the quality of the current course and the diversity of CBI courses. Students' response about the quality of the current CBI is higher than 3. Meanwhile, they reported rather lower satisfaction levels with the number of CBI courses available in major areas or liberal arts ($M=2.85$). It is in line with that the more exposure students get to English the better they will acquire the language—and that they will learn the particular academic subject being taught at the same time.

TABLE 5
Satisfaction with Quality of the Current Course and Diversity of CBI Courses

item	strongly disagree	disagree	neither disagree nor agree	agree	strongly agree	M	SD
I am generally satisfied with the quality of CBI course that are currently available.	8 (6.2%)	29 (22.3%)	47 (36.2%)	34 (26.1%)	12 (9.2%)	3.10	0.80
I am very satisfied with the diversity of CBI courses offering in major areas or liberal arts.	12 (9.2%)	35 (26.9%)	49 (37.7%)	29 (22.3%)	5 (3.9%)	2.85	0.65

4) Difficulties students experienced

With regard to the difficulties students experienced in CBI, as shown in Table 6, participants selected either 'very difficult' or 'difficult' for the tasks related to "writing a term paper (56.9%)," "oral presentation (56.9%)," "asking and answering a question in English (54.6%), and "discussion in small-group or in whole class (51.5%). As we have seen, this finding is in line with students' perception of speaking and writing skill in English being the most challenging aspects.

However, as to the understanding of the lesson, comprehension of the texts or materials, and testing (mid-term and final exam), the students displayed relatively low levels of difficulty. It can be assumed that students tended to have more difficulty with productive skills (participating in small or whole group discussion, oral presentations, writing a paper) than receptive skills (understanding of the lesson, comprehending the texts or materials) of English. The result of the interviews seems to confirm these findings. Students described their difficulties in CBI courses as follows:

It's very difficult to hold a discussion in English. There are some students, who can speak English fluently, but most are not fluent, so only the fluent students speak or no one tries to take part in the discussion (LBS).

TABLE 6
Difficulties Students Experienced in CBI

Difficulties or concerns in CBI	never difficult	not so difficult	difficult	very difficult
understanding of the lesson	33(25.4)	52(40.0)	35(26.9)	10(7.7)
the comprehension of the texts or materials	35(26.9)	64(49.2)	26(20.0)	5(3.8)
testing (mid-term & final exam)	12(9.2)	71(54.6)	39(30.0)	8(6.2)
writing a term paper	8(6.2)	48(36.9)	59(45.4)	15(11.5)
oral presentation	8(6.2)	48(36.9)	58(44.6)	16(12.3)
discussion in a small-group or in whole class	16(12.3)	47(36.2)	54(41.5)	13(10.0)
asking and answering a question	11(8.5)	48(36.9)	53(40.8)	18(13.8)

5) Students' concerns over teacher for effective CBI

As to students' concerns over teacher for effective CBI, as indicated in Table 7, participants responded teacher's adjustment of the pace according to the student's level (23.6%), interaction with the students (22.8%), use of additional materials (e.g. handouts, visual support) (20.5%), and use of L1 (16.0%) for students' understanding as major concerns in CBI. It is worth noting, however, students' concerns about the evaluation based on the comprehension of the content (9.2%) and teacher's fluency in English (7.9%) were not so high. It seems that students do not consider much about teacher's English proficiency level but the adjustment of pace according to the student's level. Therefore, it is advisable that teachers develop ways to deliver the content of lesson effectively, using the pedagogical strategies such as repetition, elaboration, paraphrasing, and slower rate of speech, pausing regularly and speaking slowly.

In addition, teachers might need to organize the content and express clearly and accurately their subject matter by signaling major points and providing some background knowledge about the topic. In addition, students displayed a strong desire for more interactive instruction. It would be helpful to encourage students to raise questions and comments, to give the confirmation or clarification check during the lesson, and to review the content of the previous class to link lessons to provide cohesion and continuity between classes.

Also, participants of this study showed favorably disposed response to the use of L1 for better understanding. The result of the interviews seems to confirm these findings. Some students in their interview articulated that they encountered difficulty due to their limited

knowledge of English and preferred that teachers use at least some Korean in CBI class, indicating that they have trouble catching up with courses conducted entirely in English. Therefore, it is advisable that teachers use students' L1 when providing them with unfamiliar technical or professional terms, more complex topics, directions, and assignments or exams.

TABLE 7
Students' Concerns over Teacher for Effective CBI

Items	N (%)
Evaluation based on the comprehension of the content	36(9.2%)
Adjusting the pace according to the student's level	92(23.6%)
Providing additional materials or visual support (e.g. handouts or multimedia) for helping students' understanding	80(20.5%)
Instructor's fluency in English	31(7.9%)
Use of L1 for students' understanding	62(16.0%)
Interaction with the students	89(22.8%)

2. Students' perceptions of CBI

The students' perceptions of CBI were investigated in light of the following four aspects: awareness toward necessity of CBI, benefits of CBI for students, anxiety arising from CBI, and considerations for future CBI courses.

1) The Awareness toward Necessity of CBI

As to the necessity of CBI, the participants' responses showed a strongly positive tendency. As Table 8 indicates, participants were found to hold the belief that "CBI enhances more opportunities to get exposed to English (M=4.24)," "CBI is necessary for stimulating international and global mind-set (M=4.15)," and "CBI helps the development of my English proficiency and knowledge for my major areas (M=3.87)." Surprisingly, the participants' response about the requirement of CBI courses for graduation was somewhat close to neutral (M=3.09). It is worth noting that although the students realize the necessity of CBI for the communicative competence in the era of globalization, they feel the psychological burdens or fears associated with taking a certain number of CBI academic units to graduate. A few students interviewed did not positively support CBI policy, which

they thought deprived the advantages of using L1, where pedagogically appropriate. In particular, one student in the interview in his criticisms of the obligation of CBI said:

Frankly speaking, I am more concerned with learning the subject knowledge than improving my English skills. In that sense, I don't care about the CBI policy. CBI should not be compulsory but a choice. It requires additional studying at home to be able to fully understand the lesson (KJS).

TABLE 8
Awareness toward Necessity of CBI

Awareness toward Necessity of CBI	strongly disagree	disagree	neither disagree nor agree	agree	strongly agree	M	SD
CBI is necessary for cultivating an international and global mind-set.	0 (0.0)	2 (1.5)	25 (19.2)	54 (41.5)	49 (37.7)	4.15	0.64
CBI helps the development of my English proficiency and knowledge for my liberal arts or major studies.	3 (2.3)	5 (3.8)	37 (28.5)	46 (35.4)	39 (30.0)	3.87	0.77
CBI provides more opportunities to be exposed to English.	0 (0.0)	3 (2.3)	17 (13.1)	56 (43.1)	54 (41.5)	4.24	0.63
CBI courses should be required for graduation.	8 (6.2)	39 (30.0)	38 (27.7)	24 (16.2)	21 (20.0)	3.09	1.02

2) Benefits of CBI for Students

The present study examined the students' perceptions on the benefits of CBI in terms of 7 aspects. As Table 9 summarizes, mean scores of 4 items (enhanced motivation for learning English, stimulated interest and motivation for learning subjects, increase in the level of concentration on the lesson, increased motivation for taking more CBI courses) were higher than 3.30. The findings are in line with the results of prior studies of CBI. CBI maximizes learners' exposure to the contextualized language by providing language input in the form of academic content, creating a natural context in which learners use the target language meaningfully (Wesch & Skehan, 2002).

Also, it provides the motivating purpose for language learning (Grabe & Stoller, 1997). In CBI class, students generally have urgent needs for content learning. They are aware that successful content learning can be achieved with the support of appropriate language competence. This awareness can motivate the students for learning language as a necessary tool. Together with this awareness, they reported that they were able to concentrate better when taking CBI. As expected, it can be assumed that CBI could require more conscious attention for acquiring subject material being taught through language. Surprisingly, the

students' awareness of 3 items (improvement of overall English skills ($M=3.08$), the decrease of anxiety in gradual CBI experiences ($M=3.09$), and development of the confidence in English ($M=2.95$) was not powerful enough to display strong agreement. It seems that CBI stimulates students' interest and motivation for learning subject matters and language but does not necessarily reduce their anxiety or ascertain students' English proficiency levels. Nevertheless, students considered the possibility of taking more CBI courses very positively in their response to item "I would like to take more CBI courses in the future ($M=3.36$)."

It can also be assumed that students convince the value of CBI in acquiring subject matter and language and that they would choose to take more CBI courses in the future.

TABLE 9
Benefits of CBI for Students

Benefits of CBI for Students	strongly disagree	disagree	neither disagree nor agree	agree	strongly agree	M	SD
CBI contributes to the improvement of my English skills such as speaking, listening, reading, and writing.	5 (3.8)	28 (21.5)	59 (45.4)	28 (21.5)	10 (7.7)	3.08	0.69
CBI enhances motivation for learning English.	2 (1.5)	20 (15.4)	48 (36.9)	44 (33.8)	16 (12.3)	3.40	0.80
CBI enhances interest and motivation for learning subjects in major areas or liberal arts studies	4 (3.1)	24 (18.5)	46 (35.4)	41 (31.5)	15 (11.5)	3.30	0.71
I developed confidence in English by taking CBI.	7 (5.4)	35 (26.9)	55 (42.3)	23 (17.7)	10 (7.7)	2.95	0.72
Overtime, I felt less anxiety about taking CBI courses.	7 (5.4)	35 (26.9)	39 (30.0)	37 (28.5)	12 (9.2)	3.09	0.87
CBI increases the level of concentration on the lesson.	7 (5.4)	20 (15.4)	46 (35.4)	36 (27.7)	21 (16.2)	3.34	0.90
I would like to take more CBI courses in the future.	3 (2.3)	28 (21.5)	41 (31.5)	35 (26.9)	23 (17.7)	3.36	0.92

3) Students' Anxiety Arising from CBI

As shown in Table 10, students in this study reported that they experienced anxiety associated with CBI. As expected, they felt more anxious in CBI class, compared to regular Korean classes ($M=3.31$). This indicates that, in general, students' English proficiency levels play a major role in their understanding of subject knowledge in CBI courses. This is in line with that their limited knowledge of English had prevented their understanding of course content in their response to item "I feel anxious about being unable to understand

the lesson due to my lack of English proficiency (M=3.02)” and therefore their anxiety for not being able to get a good grade in their response to item “I feel anxious about not being able to get a good grade. (M=3.12).” However, regarding the decrease in attention due to the low level of English proficiency, students’ responses displayed relatively low level of agreement (M=2.40).

As for the possibility of taking Korean version of the class, if there is any on the same subject, the students showed unfavorable response (M=2.62). From the interview, students indicated that if a given class were held in Korean, they would need much less time to prepare for that class, while their comprehension of the subject matter would be greater. Nevertheless, this finding seems to be in line with the implied assumption that students recognize the potential of CBI in terms of the exposure to a considerable amount of language while learning content.

TABLE 10
Students’ Anxiety Arising from CBI

Students’ Anxiety Arising from CBI	strongly disagree	disagree	neither disagree nor agree	agree	strongly agree	M	SD
I feel much more anxious in CBI courses compared with regular Korean courses.	8 (6.2)	23 (17.7)	35 (26.9)	49 (37.7)	15 (11.5)	3.31	0.91
I feel anxious about being unable to understand the lesson due to my lack of English proficiency.	14 (10.8%)	32 (24.6%)	38 (29.2%)	30 (23.1%)	16 (12.3%)	3.02	0.94
CBI decreases the level of my concentration due to my lack of English proficiency.	19 (14.6)	59 (45.4)	36 (27.7)	13 (10.0)	3 (2.3)	2.40	0.77
I feel anxious about not being able to get a good grade.	15 (11.5)	26 (20.0)	33 (25.4)	41 (31.5)	15 (11.5)	3.12	0.99
I would like to take the Korean version of the class if there is any on the same subject.	15 (11.5)	56 (43.1)	30 (23.1)	21 (16.2)	8 (6.2)	2.62	0.91

4) Considerations for the Future CBI Courses

Table 11 summarizes the students’ responses on the considerations for future CBI courses. As indicated in Table 11, students’ responses showed high levels of agreement about 9 items (expanding CBI courses in liberal arts (M=3.85), offering a variety of CBI courses in major areas (M=3.58), providing prerequisite programs for effective CBI courses (M=3.61), improving the quality (content and teaching method) of CBI courses (M=3.70), encouraging teacher-student interaction (M=4.30), employing more native-

speaking instructors (M=3.69), implementing flexible grading policy (M=3.98), giving more opportunities for international exchange program (M=4.04), developing texts or materials that could supplement CBI courses (M=3.88)). However, the students' response of expanding obligatory CBI courses for graduation displayed relatively low level of agreement (M=2.90).

In particular, students evaluated the interaction with teacher for effective CBI courses very high as reflected in the mean score of 4.30. It can be assumed that placing students in CBI class does not automatically guarantee successful language learning. To better serve the students, serious instructional attempts need to be made. It is advisable that the instructor develop the specific ways to interact with students in terms of asking and answering questions in class, elaborating their speech, or checking students' comprehension of the lesson. Furthermore, to make CBI courses more effective it appears necessary to provide students with opportunities to develop four skills of English providing prerequisite supplementary programs such as academic speaking or writing in English.

TABLE 11
Considerations for Future CBI Courses

Considerations for future CBI courses	strongly disagree	disagree	neither disagree nor agree	agree	strongly agree	M	SD
CBI courses in general arts studies should be expanded and diversified.	2 (1.5)	0 (0.0)	46 (35.4)	49 (37.7)	33 (25.4)	3.85	0.69
Offering a variety of CBI courses in major areas is needed.	7 (5.4)	16 (12.3)	38 (29.2)	33 (25.4)	36 (27.7)	3.58	1.00
Obligatory CBI courses for graduation should be expanded.	8 (6.2)	49 (37.7)	34 (26.2)	26 (20.0)	13 (10.0)	2.90	0.91
Prerequisite programs (speaking, listening, reading, writing in Eng.) for CBI courses should be offered.	2 (1.5)	15 (11.5)	38 (29.2)	52 (40.0)	23 (17.7)	3.61	0.81
The quality (content and teaching method) of CBI courses should be improved.	3 (2.3)	2 (1.5)	54 (41.5)	43 (33.1)	28 (21.5)	3.70	0.76
The instructor-student interaction should be further encouraged.	2 (1.5)	0 (0.0)	25 (19.2)	33 (25.4)	70 (53.8)	4.30	0.75
More native-speaking instructors for CBI courses are needed.	0 (0.0)	16 (12.3)	43 (33.1)	36 (27.7)	35 (26.9)	3.69	0.87
Implementing flexible grading policy is needed.	0 (0.0)	0 (0.0)	38 (29.2)	57 (43.8)	35 (26.9)	3.98	0.57
More opportunities for international exchange programs should be provided.	0 (0.0)	3 (2.3)	22 (16.9)	72 (55.4)	33 (25.4)	4.04	0.49
Texts or materials that could supplement CBI courses should be developed.	0 (0.0)	5 (3.8)	41 (31.5)	48 (36.9)	36 (27.7)	3.88	0.70

3. Students' self-identified strategies for effective CBI

In addition, students' self-identified strategies for effective CBI were analyzed from the interviews. Regarding students' self-identified strategies that they perceived useful for effective CBI, the finding suggests that there were two main strategies behind their ultimately successful adjustment to CBI: unremitting preparation or practice and peer support. Most of the interviewed students in this study responded that they had trouble understanding disciplinary terminology or academic vocabulary and it required much more time to prepare thoroughly for the lessons compared with the Korean version of the same subject. As a result, they generally preview or review the content of lesson before and after the instructions.

I have a great difficulty in listening English because some technical terms are specialized words and difficult for me to understand and I don't know what the instructor is saying. So I need to preview the lesson in advance (LYH).

When I listen to the lesson, there are so many words I don't know that it takes too much time to look them up. So I have to prepare thoroughly for the lesson before and after the instruction, recording the lesson with an MP3 player and subsequently listening to the playback two or three times to the lesson repeatedly. It requires additional studying at home to be able to fully understand the content (CMS).

If I don't study the content and terms in the lesson in advance, I can't understand it and can't follow the class. I think practice or preparation really makes things perfect and just by practicing more and more, then I think I can feel more confident (KYJ).

Peer support seems to be another coping strategy employed by students in CBI. In other words, peer collaboration and support play a crucial role in enabling students to adapt the challenges posed by CBI.

It takes such a long time to study for the CBI course by myself, and I received assistance from peer students. When writing a paper or analyzing a problem I need to read the books and ask my classmates. Because their English is much better than mine, so I ask for their comments (PYB).

My limited English proficiency prevented me from fully comprehending the lesson. So I made a study group for this class. The group consists of 5 students taking the same class. We met once or twice a week, sharing and demonstrating our understanding of the relevant subject matter. I really received a great amount of support from the study group (YHK).

V. CONCLUSION

The purpose of this present study was to explore EFL university students' perceptions toward content-based instruction. As described earlier, the findings indicate that most of the students participating in this study felt higher interest and strong motivation for learning English and subject matter through CBI courses. Furthermore, they showed a very positive response about the necessity of CBI. However, the descriptive statistics showed that they felt less competent in speaking and writing, compared with listening and reading skills, which indicates that they need to have more opportunities to produce L2 through the content-based instruction (Swain, 1985; Swain & Lapkin, 1995). This is the reason why participants encountered difficulties with classroom tasks such as small or whole group discussion, oral presentation, and writing a paper. Therefore, university administration should provide students with opportunities to develop four skills of English through prerequisite programs such as academic speaking or writing in English.

With regard to the beneficial effects of CBI for students, this study showed that students' experiences with CBI seemed to play positive effects in the development of content and language learning. For example, students highly evaluated CBI in light of the contribution to lower levels of anxiety, the enhancement of motivation of learning English, confirming the value of CBI in the content and language learning process and the desire of taking more CBI courses in the future. In other words, students who had an experience in CBI classes have increased opportunities to use the content knowledge and expertise that they bring to class. The use of coherently developed content resources allows students to recall their own prior knowledge to learning language and content material, which leads to intrinsic motivation. Also, motivation and interest arise partly from the recognition that they are indeed learning and that it is worth the effort, and partly from the appropriate matching of increasing student knowledge of a topic with increasing learning challenge. Such setting makes students more consciously attentive to the content knowledge being taught, engaging in appropriate language-dependent activities (Stoller, 2002).

Based on the results of the present study, the implications for CBI courses at university level can be made as follows. First, the students of this study displayed a strong desire for more interactive instruction. Several studies indicate that the nature of teacher-student interaction significantly determines students' learning (Fassinger, 1995; Gibbons, 2003; S. H. Kang et al., 2007). For effective interactive instruction it is very important for teachers to build intimacy and close rapport with students. Gibbons stresses that teachers need to call students by their name, show interest, provide positive feedback toward students' contribution, and encourage students to raise questions and comments. This can be done not only during the lesson, but teachers also might need to arrange a regular meeting with students to get feedback for their teaching and to monitor students' learning. Fassinger

claims that, for effective interactive instruction, teachers should try to shorten the distance between themselves and students by giving encouragement and compliments and sharing personal stories if necessary.

Second, teachers should realize that students' major concern toward the instructor in CBI does not lie in teacher's English proficiency but the adjustment of pace according to student's level. Therefore, it is advisable that teachers develop the specific ways to deliver the content of lesson effectively considering students' English proficiency level. For instance, teachers may need to consider the pedagogical strategies, such as repetition, elaboration, paraphrasing, and slower rate of speech, pausing regularly and speaking slowly and clearly. Also, teachers might need to organize the content and express clearly and accurately their subject matter by signaling major points and providing some background knowledge about the topic. Gibbons (2003) and Snow (1998) suggest a variety of techniques which can be used to ensure that students understand both the language used in the instruction and the concepts being imparted. Snow recommends that, in order to help students comprehend their lessons, teachers should clarify uncertain points, review previously covered materials, mark major points explicitly to evaluate, and check for understanding during the lesson and at the end of class. Gibbons highlights the use of discourse markers indicating major transitions and emphasis on the complex idea or definition to enhance students' comprehension.

Fourth, students' English proficiency levels were reflected the varying degree of their participations in the classroom tasks and level of their anxiety. Students having low proficiency level of English had more trouble understanding the lesson, which could cause them to worry about their own proficiency level in comparison to others having higher English proficiency. This finding is supported by the previous study of Y. S. Shim (2010) and S. H. Kang et al. (2007). Therefore, teachers should create a classroom environment in which the students can feel more secure and relaxed and develop ways to decrease students' anxiety level. For example, teachers could encourage students with different proficiency levels to work together on a project or assignment or variety of grouping arrangements could be employed. Students can work in pairs, in small groups, and in structured cooperative learning groups to maximize different sources of input and output and to increase interaction.

Finally, providing additional or supporting materials relevant to the lesson seems to enhance students' comprehension, motivation, and confidence of the content knowledge. For example, well-prepared handouts or visual support might help to provide them with background information for more complex topics of the lesson. That is, teachers need to organize the lessons through supporting materials so that students can see the written language forms of the contents being taught and remember the presented ideas. Also, participants of this study showed favorably disposed response to the use of L1 for better

understanding. This finding is in line with D. H. Kang's (2008) study. He stresses that to help students understand the lesson, teachers should use visual support or L1 as the medium of instruction for complex idea or difficult texts. Furthermore, teachers in CBI need to stimulate students' background knowledge in some ways, such as providing students with the opportunity to think and share everything they know about a given topic, asking questions to build on students' ideas during the brainstorming, and developing a frame of reference for cognitively demanding content material (Snow, 1998).

These findings have valuable implications for successful implementation of CBI at the university context. First of all, a close examination of students' perceptions of CBI helps to identify their needs and difficulties and to design CBI programs accordingly. It suggests from the present study that future research should consider what conditions or with what kinds of classroom teaching techniques would be a most successful CBI. More importantly, considering that the university requires students to take a certain number of CBI courses to graduate but does not have the means to ascertain students' English proficiency levels, there should be an understanding of specific aspects of English use in classroom tasks for the educational effectiveness of CBI in contexts where English is not L1, and the adequacy of the CBI implementation method.

For future research, it would be meaningful to look into actual classroom contexts where CBI is being carried out. Discourse features in classroom teacher talk, interaction patterns in CBI, and learner performance in CBI context can be the focuses of further research.

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APPENDIX

Questionnaire for Content-based Instruction

This questionnaire is to see how you think of content-based instruction (CBI). Your answers will be helpful to a better planning and implementation of future CBI. Thank you very much.

A. Background Information

1. Major: Year: Gender: Male ____ Female

2. Self-Evaluation of English Ability

English Skill	Very High or High	Intermediate	Low or Very Low
Speaking			
Listening			
Reading			
Writing			

3. Have you had any overseas living or learning experiences? If so, where? how long?

4. Have you taken any CBI courses before? Yes No

If you have taken before, how many courses did you take?

5. What is your best reason(s) for taking this course?

- ① Improvement of English ability
- ② Enhancement of global mind-set
- ③ Requirement of CBI course
- ④ Development of knowledge in major areas or liberal arts
- ⑤ Required course for graduation
- ⑥ Interest in the culture of English-speaking countries
- ⑦ Participation in study-abroad exchange program
- ⑧ Preference of evaluation policy: absolute evaluation
- ⑨ Better understanding in English than Korean due to the experiences of foreign residence or exchange student programs

6. How amount of the lesson did you understand in every class?

- ① Below 30% ② Between 30% and 50% ③ Between 50 and 70%
- ④ Between 70% and 90% ⑤ 100%

7. What do you think the quality of the current course and diversity of CBI courses?

Satisfaction with diversity of CBI courses and quality of the current course	strongly disagree	disagree	neither disagree nor agree	agree	strongly agree
I am generally satisfied with the quality of CBI course that are currently available.					
I am very satisfied with the diversity of CBI courses offering in major areas or liberal arts.					

8. What difficulties or troubles do you think you would have in each class?

Difficulties or troubles in CBI class	very difficult	difficult	not so difficult	never difficult
understanding texts or materials				
the comprehension of the texts or materials				
testing (mid-term and final exam)				
writing a term paper				
oral presentation				
discussion in a small-group or in whole class				
asking and answering a question				

9. Choose the three for instructor to be considered for effective CBI.

- ① Evaluation based on the comprehension of the content
- ② Adjusting the pace according to the student's level
- ③ Providing additional materials or visual support for helping students' understanding
- ④ Instructor's fluency in English
- ⑤ Use of L1 for students' understanding
- ⑥ Interaction with the students

B. Students' Overall Reaction over CBI

1. Check the following questions about the necessity of CBI with 5 Likert scale.

The Necessity of CBI	strongly agree	agree	neither disagree nor agree	disagree	strongly disagree
CBI is necessary for cultivating an international and global mind-set.	①	②	③	④	⑤
CBI helps the development of my English proficiency and knowledge for my liberal arts or major studies.	①	②	③	④	⑤
CBI provides more opportunities to be exposed to English.	①	②	③	④	⑤
CBI courses should be required for graduation.	①	②	③	④	⑤

2. Check the following questions about benefits of CBI for students with 5 Likert scale.

Benefits of CBI for Students	strongly agree	agree	neither disagree nor agree	disagree	strongly disagree
CBI contributes to the improvement of my English skills such as speaking, listening, reading, and writing..	①	②	③	④	⑤
CBI enhances motivation for learning English.	①	②	③	④	⑤
CBI enhances interest and motivation for learning subjects in major areas or liberal arts studies	①	②	③	④	⑤
I developed confidence in English by taking CBI.	①	②	③	④	⑤
Overtime, I felt less anxiety about taking CBI courses.	①	②	③	④	⑤
CBI increases the level of concentration on the lesson.	①	②	③	④	⑤
I would like to take more CBI courses in the future.	①	②	③	④	⑤

3. Check the following questions about students' anxiety arising from CBI with 5 Likert scale.

Students' Anxiety Arising from CBI	strongly disagree	disagree	neither disagree nor agree	agree	strongly agree
I feel much more anxious in CBI courses compared with regular Korean courses.					
I feel anxious about being unable to understand the lesson due to my lack of English proficiency.					
CBI decreases the level of my concentration due to my lack of English proficiency.					
I feel anxious about not being able to get a good grade.					
I would like to take the Korean version of the class if there is any on the same subject.					

4. Check the following questions about opinions for the future CBI courses with 5 Likert scale.

Opinions for the future CBI courses	strongly agree	agree	neither disagree nor agree	disagree	strongly disagree
CBI courses in general arts studies should be expanded and diversified.	①	②	③	④	⑤
Offering a variety of CBI courses in major areas is needed.	①	②	③	④	⑤
Obligatory CBI courses for graduation should be expanded.	①	②	③	④	⑤
Prerequisite programs (speaking, listening, reading, writing in Eng.) for CBI courses should be offered.	①	②	③	④	⑤

The quality (content and teaching method) of CBI courses should be improved.	①	②	③	④	⑤
The instructor-student interaction should be further encouraged.	①	②	③	④	⑤
More native-speaking instructors for CBI courses are needed.	①	②	③	④	⑤
Implementing flexible grading policy is needed.	①	②	③	④	⑤
More opportunities for international exchange programs should be provided.	①	②	③	④	⑤
Texts or materials that could supplement CBI courses should be developed.	①	②	③	④	⑤

Interview Questions about Content-based Instruction

1. What kinds of difficulties or troubles do you think you would have in the CBI class?
2. What instructional strategies/activities used by the instructor helped you most to understand the lesson content?
3. What are your learning strategies/activities for understanding the lesson well before or after class?
4. In what ways do you think you can benefit in CBI class?
5. Are there any other comments you may have about the CBI class you participating in this semester?

Examples in: English

Applicable Languages: English

Applicable Levels: Tertiary

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Received 15 December 2012

Revised 26 January 2013

Accepted 15 February 2013