

Students' Perceptions of EMI in Higher Education in Korea

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This paper examines students' perceptions of English as a Medium of Instruction (EMI) in a Korean university. Using questionnaire methods, we explore how students perceive EMI courses they are currently taking, from a knowledge perspective and a language skills perspective respectively. The participants were 364 students enrolled in 11 different EMI courses. The courses were all related to business, taught by seven different instructors (two Americans, two Chinese, and three Koreans). Based on the collected data, students' level of satisfaction and ability to comprehend were measured, and compared according to their English proficiency along with instructor's native language and student profiles. Aspects of student profiles investigated included students' majors and years of study, prior EMI experiences, background knowledge, study-abroad experiences, etc. The results of the analyses showed that students' overall level of satisfaction and ability to comprehend were significantly different according to the instructor's native language (native English speaker or non-native English speaker), background knowledge, and study-abroad experiences, but not related to any of the other factors. From these findings, pedagogical implications are briefly discussed and ways of maximizing the effects of EMI courses are suggested.

Key words: English as a Medium of Instruction (EMI), Native English Speaker (NES), Non-Native English Speaker (NNES), English proficiency, background knowledge

INTRODUCTION

Globalization and internationalization, combined with the rapid growth of the internet, has resulted in the spread of English worldwide. Strongly influenced by this phenomenon, many Asian countries, where English is not officially used, have adopted diverse educational policies that aim to support students in acquiring higher levels of English proficiency and preparing them for better future jobs. In Korea, private schools at primary and secondary levels are advertising English immersion or Content-Based Instruction (CBI) programs to meet the country's strong demand for English. In the same vein, universities in Korea have encouraged instructors to offer English as a Medium of Instruction (EMI) since as early as the 1990s. While CBI or Content and Language Integrated Learning (CLIL) refers to an approach where language teaching is organized around the informational content rather than a linguistic syllabus (Richards & Rodgers, 2001), EMI is mostly used for educational programs at a tertiary level where professional knowledge is taught through English with the purpose of enhancing students' knowledge-specific ability as well as their English (Coleman, 2006). In fact, the proportion of EMI courses offered and the percentage of international faculty and students have become two of the important factors determining the internationalization index of universities, so that many leading Korean universities have competitively adopted an EMI policy to secure domestic and international university rankings (Cho, 2012). Beginning with enhanced college English programs, many of them have adopted diverse policies to expand their offering of EMI courses, mandatory and optional, in the areas of general and major-specific subjects (Hwang & Ahn, 2011; Shim, 2010; Yoo & Chung, 2009).

The need for an EMI policy in Asian higher educational settings is apparent for two main reasons. Firstly, students are trained for professional workplaces where English is used as a medium of communication. Trade, tourism, banking, government organizations and the exchange of culture, technology and knowledge are only a few examples where English is used for communication (Coleman, 2006; Crystal, 2004; Graddol, 1997, 2006). Secondly, as academic exchange programs are becoming more prevalent, there is a demand for more EMI courses to

support both incoming foreign students and local students who are preparing for future academic exchange abroad (Brumfit, 2004). As EMI courses have expanded, some Korean universities have instituted an English-only policy that mandates all lectures should be given in English regardless of the subject major. This policy has created public controversy over whether it is practical and whether it is against the rights of students to learn in their first language (Cho, 2012; Lee, Kim, & Jung, 2004). While content-area lectures in English are becoming popular in Korea, their effectiveness or benefit remains to be established.

Assessing the lasting effect of an EMI program requires follow-up studies with their outcomes measured longitudinally from multiple perspectives. In particular, it is important to pay attention to participants' perceptions of an academic initiative since those perceptions can show the ways to improve the initiative. In this context, this study attempts to thoroughly examine students' perceptions of EMI by investigating both student characteristics and instructor characteristics. Based upon self-reported questionnaire data, students' level of satisfaction and perceived ability to comprehend were measured in relation to their English proficiency and other individual characteristics. We also took into consideration how whether or not the instructor is a Native English Speaker (NES) influences the students' overall perception of the EMI program. The research questions of this study are as follows:

1. Do participants' overall satisfaction and ability to comprehend differ according to their English proficiency?
2. Do participants' perceptions of overall satisfaction and ability to comprehend differ according to their instructor's native language and nationality?
3. What are other individual characteristics influencing participants' perceptions of overall satisfaction and ability to comprehend?
4. How necessary do participants perceive English as being for their academic success and future success in the workplace?

Finally, this study suggests how to implement a more effective EMI class by taking into account students' responses to the way EMI classes are currently conducted in the Korean EFL context.

LITERATURE REVIEW

In the field of ELT, while the European CLIL has become an umbrella term covering others previously known as bilingual education, language immersion, CBI, and Language Across Curriculum (LAC), currently the term EMI is used to refer to educational policy. EMI has been implemented in Europe and other EFL countries in the common belief that frequent exposure to the target language facilitates language learning (Krashen & Terrel, 2000), and content-based learning positively motivates students to acquire both the language and subject content, leading to enhanced learning outcomes and increased competitiveness in the job market (Coleman, 2006; Deller & Price, 2007). Graddol (1997) long before noticed that content courses taught through the medium of English is one of the most significant educational movements around the world, and this phenomenon has been accelerated by the rapidly growing intercultural exchanges and globalization in every aspect of life (Brumfit, 2004; Coleman, 2006; Gardt & Huppaufl, 2004).

While school administrations claim that students gain academic, linguistic, and professional benefits from an EMI program, research on EMI has reported conflicting results (Arden-Close, 1993; Coleman, 2006; Dupuy, 2000; Flowerdew, Miller, & Li, 2000; Jensen & Johannesson, 1995; Kirkgöz, 2005, 2009; Vinke, 1995; Wu, 2006). Dupuy (2000) reviewed about 30 studies on CBI in higher education and concluded that it had advantages in four areas: (1) foreign language competence; (2) subject matter knowledge; (3) self-confidence in comprehending and using the target language; and (4) motivation to continue foreign language study beyond the requirement (p. 215). Coleman (2006) also noted that many European CLIL projects pursue the “double benefit of subject knowledge and improved target language proficiency” (p. 5). Arden-Close (1993), on the other hand, noticed that students had problems with understanding vocabulary after observing chemistry lectures given by NES instructors to NNES students. From his finding, Arden-Close suggested learning strategies available to foreign language learners (point-driven strategies, rather than information-driven strategies) to comprehend lectures more effectively. Vinke (1995, cited in Cho, 2012) also pointed out several negative effects of EMI outcomes in The Netherlands, based

upon comprehensive studies. In comparison with Dutch lectures, English lectures in engineering education had limited learning outcomes due to language problems, increased workloads, and the psychological burden on students and instructors. Moreover, the quality of instruction was significantly influenced by the instructors' command of English and their individual backgrounds, and teaching behaviors changed when teaching in another language.

In a Korean context, Kim (2002) investigated college students' reactions toward EMI lectures and reported that students responded positively about the overall learning atmosphere, learning motivation, and supplementary materials, but they were negative about the increased workload and psychological burden. Jeon (2002) compared students' overall evaluations of NES and NNEs lectures, and noticed that students felt pressure to take English lectures, but they perceived NES instructors to be more interested in helping students improve their comprehension level than Korean instructors. The findings of Jeon imply that Korean instructors need to respond more tactfully to student comments and develop interactive teaching techniques to meet students' expectations.

Earlier studies on the effects of EMI have mostly agreed that the English proficiency of students and instructors is one of the most significant factors in determining the outcomes of EMI courses (Stryker & Leaver, 1997; Swain & Johnson, 1997). Stryker and Leaver (1997) suggested that CBI could be implemented effectively when the learners' proficiency is above the threshold level. In particular, English proficiency is considered more important in late immersion than in early immersion (Swain & Johnson, 1997). In early immersion, language development takes place along with basic concept learning. In late immersion, however, subject content learning occurs with the improvement of Cognitive Academic Language Proficiency (CALP), where a larger cognitive capacity is required to comprehend and process abstract and complex academic concepts (Cummins, 1984). Several studies conducted in Korean settings also presented similar results. Kang (2005) examined students' perceptions of EMI in engineering education and noticed that students proficient in English are more positive about the learning outcomes of EMI, and less proficient students believe they need practical support from teaching assistants. In addition, proficient students show a higher level

of content comprehension with lower anxiety, and they are less likely to resort to the supplementary materials translated into Korean. They are more concerned about the subject content, rather than the instructors' accents or teaching techniques. After her questionnaire survey and interview with 130 college students, Bang (2013) also noted that while students at a lower level of English proficiency showed a great deal of anxiety, worrying about their lack of English proficiency and limited comprehension of the subject content, one of the benefits Korean college students gained after taking an EMI class is a lower level of anxiety and the enhanced motivation of English learning.

Earlier studies suggest language proficiency is considered to play a key role in student success in EMI classes, assuming students are above a threshold level to comprehend the content. They also suggest that the learning outcomes of EMI are influenced by the students' background knowledge or field-specific knowledge of the subjects. With regard to this, Clapham (1996, cited in Douglas, 2000) studied the effects of background knowledge on language test performance, and found out that there is a significant relationship between background knowledge and test performance. Her research showed that background knowledge influences students' test performance, particularly in the case of intermediate level students; whereas if language competence is below the threshold level, or highly advanced, background knowledge has little effect on test performance. Clapham also noticed that the role of background knowledge and cognitive ability becomes more significant as the content becomes more field-specific (Douglas, 2000, p. 32). Based on these findings, it might be argued that students with advanced language proficiency or field-specific background knowledge would gain greater benefit from an EMI program than those without.

In a Korean medical school context, Joe (2010) investigated the relationship between students' English proficiency and ability to comprehend EMI lectures. In this study, language proficiency did not influence students' ability to comprehend lectures. Rather, background knowledge measured by their pretest scores played a key role in their lecture comprehension measured by their posttest scores. Joe comments that considering Korean contexts, most students enrolled in medical school might be intermediate in English proficiency. Thus, it is possible that

background knowledge, rather than language proficiency, is more influential in determining their ability to comprehend the lectures. The results of this study support Clapham (1996) in that when the content is field-specific and the students are intermediate in language proficiency, background knowledge is more important than language proficiency itself.

RESEARCH METHODS

Participants

The present study was conducted with students enrolled in 11 different EMI classes at H University in the fall semester of 2012. They were all related to business administration or international business courses offered by the department of International Business; these included courses in International Business, Organizational Behavior, Investment Financing, Customer Behavior, and Business English. They were taught by seven different instructors; two Americans, two Chinese, and three Koreans. Students were from various departments such as Business, English, other foreign languages, Engineering and IT-related fields. They voluntarily took EMI classes as part of their majors, minors or as general elective courses. H University is specialized in foreign language education, and in accordance with university policy, the department of International Business offers many elective EMI courses taught by foreign and Korean instructors. As of the fall semester of 2012, the department provided 11 EMI classes and this number accounted for about 25 percent of the department's courses.

Instrument

A questionnaire was developed based upon earlier studies investigating students' general perception and demands of EMI classes including satisfaction level and their ability to comprehend instruction (Chia, Johnson, Chia, & Olive, 1999; Joe, 2010; Kim, 2003; Park, 2006). Extracting relevant items from the earlier studies,

we consulted experts in the business and language education fields, and modified the items considering the study context. After a repeated process of item extraction, 26 questionnaire items were finalized; seven items related to individual background information, 10 items measuring level of overall satisfaction and ability to comprehend, and nine other items evaluating students' general perception and needs of EMI classes. Level of satisfaction and ability to comprehend were measured by a five-point likert scale (0 to 4 points). Cronbach's alphas to estimate the reliability of satisfaction and comprehension items were .90 and .87 respectively. They showed that there was high internal consistency for each category.

TABLE 1
Questionnaire Items

No.	Category	Questions
1~7	Individual information (7 items)	Age & gender, major & years of study, relation of the course, English proficiency test score, EMI experience, study-abroad experience, content-exposure experience
8~12	Level of satisfaction (5 items)	General, knowledge-specific, English skill-specific, comparative satisfaction, desire for more EMIs
13~17	Degree of ability to comprehend (5 items)	General, knowledge-specific, relative comprehension (compared with Korean, the beginning of the semester, and other classes)
18~24	General perception (7 items)	Challenged, crucial and improved English skills in EMI class, crucial English skill for their major and EMI class, importance of English competence for future study and job
25~26	Needs for EMI class (2 items)	Reasons for taking an EMI courses, Preferred methods for effective EMI class

Data Collection

The questionnaire survey was conducted on the last day of the semester with instructors' support. The purpose of the survey was first explained to each instructor, and at the end of the semester they explained it to the students. After enough time was given for all the participants to complete the survey, it was directly collected. Out of 458 students who were registered for EMI classes

surveyed, 364 completed the semester-end survey by answering all the questions. Participants were aged between 18 and 29 (average age, 23 years old), ranging from first year (12 students, 3%) to fourth year (121 students, 33%). There were 194 male students (53%) and 170 female students (47%), with business-related majors (82 students, 23%), English-related majors (33 students, 9%), foreign languages-related majors (152 students, 42%), and engineering and other majors (97 students, 27%). Since EMI classes are not mandatory at H University, all voluntarily took the class as an elective course for a major (127 students, 35%), a minor (197 students, 54%) or general studies (40 students, 11%).

Data Analysis

In this study, data analysis aims to examine students' overall perception of EMI, including level of satisfaction and ability to comprehend, along with individual characteristics that might affect students' perception. It also investigates whether students' satisfaction level and comprehension ability are different in terms of the instructor's native language and nationality as well as students' English proficiency. For this purpose, the Statistical Package for the Social Science (SPSS) 18 was used to carry out correlations analysis, Analysis of Variance (ANOVA), and multiple comparisons. In addition, students' answers to open questions about 1) reasons for taking EMI classes, and 2) preferred methods for effective EMI classes were studied to find educational implications for better EMI programs.

Out of 364 participants, 197 students (54%) reported their English language test scores officially obtained from TEPS (Test of English Proficiency developed by Seoul National University), TOEFL (Test of English as a Foreign Language by ETS) or TOEIC (Test of English for International Communication by ETS). As of 2012, TOEIC was one of the most widely used English language tests in Korea, and among those who reported their official test score, most reported TOEIC scores (191 students, 97%) and only six had TEPS (2 students, 0.5%) or TOEFL scores (4 students, 1%). For statistical analysis, TEPS and TOEFL scores were converted into TOEIC scores according to TEPS vs. TOEFL vs. TOEIC Conversion Table officially announced by the TEPS Committee in Korea.

RESULTS AND DISCUSSION

Do Participants' Overall Satisfaction and Ability to Comprehend Differ According to Their English Proficiency?

Participants' level of overall satisfaction and ability to comprehend were measured with a five-point likert scale (0 to 4 points). The higher the mean score is, the higher their level of satisfaction and ability to comprehend is. The mean of satisfaction level and ability to comprehend was 2.27 ($SD = .88$) and 2.10 ($SD = .75$) respectively, showing participants' overall satisfaction level was higher than their ability to comprehend. In detail, the mean of general satisfaction for EMI ($M = 2.49$, $SD = .96$) and desire for more EMI ($M = 2.46$, $SD = 1.11$) were relatively high, but the mean of English skill-specific satisfaction ($M = 2.04$, $SD = 1.08$) was lowest. It reveals that participants are satisfied with taking EMI classes and willing to continue to take them, but they do not perceive that taking EMI classes substantially helps improve their English skills.

TABLE 2
Means of Satisfaction Measurement Items

	General	Knowledge-specific	Eng. skill-specific	Comparative satisfaction	Desire for more EMI
Valid N	364	364	364	364	364
Mean	2.49	2.26	2.04	2.13	2.46
<i>SD</i>	.96	1.01	1.08	1.01	1.11
Mean of Sum	2.27 ($SD = .88$)				

With regard to perceived ability to comprehend the course, the mean of general comprehension ($M = 2.48$, $SD = .90$) and the mean of field-specific knowledge comprehension ($M = 2.34$, $SD = .89$) were relatively high, but compared with Korean instruction and other Korean-mediated classes, their ability to comprehend the content were relatively low (in comparison with Korean instruction, $M = 1.59$, $SD = .99$; in comparison with other Korean mediated classes, $M = 1.78$, $SD = .93$). It shows that participants perceive they can handle the content of the course to some

degree, but they have more difficulty processing field-specific knowledge through English than through Korean. Their response is predictable when we consider the context of learning in a Korean EFL situation, where English is mostly used for English learning itself inside the classroom and not officially used for academic purpose or workplace communication.

TABLE 3
Means of Perceived Abilities to Comprehend Measurement Items

	General	Knowledge-specific	Compared with Korean	Compared with beginning	Compared with other classes
Valid N	364	364	364	364	364
Mean	2.48	2.34	1.59	2.30	1.78
SD	.90	.89	.99	.87	.93
Mean of Sum	2.10 (SD = .75)				

In order to investigate whether participants' level of satisfaction and ability to comprehend were different according to their English proficiency, correlations analysis was conducted. For more reliable outcomes, both Pearson correlation and Spearman rank correlation were carried out.

TABLE 4
Correlations between English Proficiency, Satisfaction, and Comprehension

		Proficiency	Satisfaction	Comprehension
Proficiency	Correlation		.041	.174
	Sig. (2-tailed)		.566	.014*
	N		197	197
Satisfaction	Correlation	.056		.763
	Sig. (2-tailed)	.437		.000**
	N	197		364
Comprehension	Correlation	.249	.720	
	Sig. (2-tailed)	.000**	.000**	
	N	197	364	

*. Correlation is significant at the 0.05 level (2-tailed).

**. Correlation is significant at the 0.01 level (2-tailed).

The results of the Spearman correlation showed that English proficiency is not correlated with the overall satisfaction level, $r(195) = .056, p = .437$, but significantly correlated with the ability to comprehend, $r(195) = .249, p < 0.00$. Participants' satisfaction level is significantly correlated with their ability to comprehend, $r(362) = .720, p < 0.00$, which implies that participants are more satisfied with an EMI class when they feel that they can comprehend the content of the course more easily.

For more detailed investigation, participants were grouped into threes according to their level of satisfaction and ability to comprehend, and an ANOVA test was carried out. The results showed that the mean of TOEIC scores was higher in the upper satisfaction group ($M = 807.76, SD = 106.88$), but not significantly different between groups, $F = 1.40, p = .250$.

TABLE 5
Differences Between Groups in Satisfaction Level and TOEIC Score

Satisfaction level	N		M	SD	ANOVA	
	Valid	Missing			f	sig.
Lower group	24	39	774.59	84.229	1.397	.250
Middle group	86	67	812.12	104.862		
Upper group	84	61	807.76	106.881		

As for perceived ability to comprehend, the TOEIC score mean was significantly different between groups, $f = 3.79, p = .024$. The mean of the lower comprehension group was 766.08 ($SD = 94.87$) and the mean of the upper comprehension group was 828.21 ($SD = 109.87$).

TABLE 6
Differences Between Groups in Comprehension and TOEIC Score

Ability to Comprehend	N		M	SD	ANOVA	
	Valid	Missing			f	sig.
Lower group	24	40	766.08	94.870	3.786	.024*
Middle group	102	94	798.23	98.471		
Upper group	71	33	828.21	109.868		

*. Significant difference between Lower group and Upper group at the 0.05 level (2-tailed)

The results illustrate that the satisfaction level of the participants is not different, but their perceived ability to comprehend is significantly different according to their language proficiency. The more proficient they are, the better they understand the content of the class. It implies that English-proficient students benefit more from EMI classes and the less proficient students benefit less in terms of content or field-specific knowledge learning. From the perspective of how satisfied they are with EMI classes, however, their satisfaction level was not significantly different. In other words, students were satisfied with taking EMI course regardless of their English proficiency.

Do Participants' Overall Satisfaction and Ability to Comprehend Differ According to the Instructor's Native Language and Nationality?

In this section, we examine whether participants' overall level of satisfaction and ability to comprehend were different depending on the instructor's native language and nationality. Seven different instructors (three males and four females) taught eleven classes; they were two Americans (two NESs), two Chinese and three Koreans (five NNESs). They received their degrees from America (two Americans), United Kingdom (one Chinese), Australia (one Chinese) and Korea (three Koreans). About half of the participants (52%) were taught by Korean instructors, 21 percent by Americans instructors and 27 percent by Chinese instructors.

The results of the ANOVA test showed that the participants' level of satisfaction and ability to comprehend were different according to the instructor's native language and nationality. Satisfaction level showed a significant difference between groups at the level of 0.01, $f = 7.72, p = .001$; the mean of the American instructor group was highest ($M = 2.61, SD = .87$) and the mean of the Korean instructor group lowest ($M = 2.17, SD = .81$). Ability to comprehend, however, was statistically different only at the level of 0.1, $f = 2.58, p = .076$; the mean of the American group was highest ($M = 2.25, SD = .69$) and the mean of the Korean group lowest ($M = 2.03, SD = .69$).

TABLE 7
ANOVA Tests Between Nationality and Satisfaction, and
Nationality and Comprehension

Nationality	Valid	<i>M</i>	<i>SD</i>	ANOVA	
				<i>f</i>	<i>sig.</i>
Satisfaction	American	77	2.61	7.721	.001**
	Chinese	99	2.20		
	Korean	188	2.17		
Comprehension	American	77	2.25	2.597	.076
	Chinese	88	2.10		
	Korean	188	2.03		
Total		364			

** . Significant difference between groups at the 0.01 level (2-tailed)

For more detailed information, a multiple comparisons analysis was carried out as a post hoc test, and the results showed that as for satisfaction level, group difference is significant between the American and Korean groups, $p < .001$, and the American and Chinese groups, $p = .005$, but not between the Chinese and Korean groups, $p = .966$. With regard to ability to comprehend, group difference is significant between the American and Korean groups only at the level of 0.1 level, $p = .061$, but not between the American and Chinese groups, $p = .401$ or the Korean and Chinese groups, $p = .643$. These results imply that participants are more satisfied with an EMI class when the instructor is a NES (American), but when the instructor is a NNES (Chinese or Korean), their satisfaction level is not different depending upon the instructor's native language (Mandarin or Korean) or nationality (Chinese or Korean). Meanwhile, their ability to comprehend is significantly lower when the instructor is a Korean, but it is not statistically different whether the instructor is an American or Chinese. We are very cautious about interpreting these results because of the small sample size of the instructors and their individual backgrounds. However, the fact that American and Chinese instructors obtained their degrees in English-speaking countries, but all Korean instructors did their academic work inside Korea might have some impact on these outcomes. Although the Chinese instructors were not native speakers of English,

they had been frequently exposed to an environment where the primary method of communication was English, due to their educational backgrounds and their current professional requirements. Thus, they might be more capable than Korean instructors, of delivering their lectures in English, leading to higher satisfaction and comprehension of the students. In addition, it might also be noticeable that Korean instructors share their first language with the students; therefore their motivation for sustaining English communication in class might be much weaker than other foreign instructors, which results in lower satisfaction and comprehension of the students.

What are Other Individual Characteristics Influencing Participants' Perception of Overall Satisfaction and Ability to Comprehend?

In order to see what other individual characteristics influence participants' level of satisfaction and ability to comprehend, an ANOVA test was conducted. Individual characteristics investigated were students' majors and years of study, relation of the course to their program of study (*"Are you taking this course as your major, minor, or general subjects?"*), previous EMI experiences (*"How many EMI courses including 'General English' have you taken prior to this course?"*), background knowledge (*"How many courses in this field have you taken prior to this course?"*), and time spent in English speaking countries (*"Have you ever been in a country where English is officially used, and if so, how long?"*).

The results of the analysis showed that students' level of overall satisfaction and ability to comprehend were significantly different according to time spent in English-speaking countries and background knowledge, but not different in relation to other factors. Out of 364 students, about 70% of participants (group A, 257 students) had less than three months or no experience, 19% of them (group B, 70 students) had stayed three months to one year, and 10% (group C, 37 students) had lived longer than one year in English speaking countries. The results of the ANOVA test showed that the satisfaction level was statistically different depending on time spent in English-speaking countries at the level of 0.01, $f = 6.04$, $p = 0.003$. The means of groups B ($M = 2.50$, $SD = .85$) and C ($M = 2.54$, $SD = 1.00$) were

significantly higher than the mean of group A ($M = 2.17$, $SD = .85$) in the satisfaction level. The ability to comprehend, however, was statistically different only at the level of 0.1, $f = 16.49$, $p = .080$. The means of groups B ($M = 2.40$, $SD = .68$) and C ($M = 2.47$, $SD = .77$) were higher than the mean of group A ($M = 1.95$, $SD = .72$) in terms of ability to comprehend, but the mean differences were not as significant as in the satisfaction level.

TABLE 8
ANOVA Tests Between Time and Satisfaction, and Time and Ability to Comprehend¹

Time Spent in English-speaking countries	Valid N(%)	<i>M</i>	<i>SD</i>	ANOVA		
				<i>f</i>	<i>sig.</i>	
Satisfaction	group A	257 (71)	2.17	.85	6.040	.003**
	group B	70 (19)	2.50	.85		
	group C	37 (10)	2.54	1.0		
Comprehension	group A	257 (71)	1.96	.72	16.486	.080
	group B	70 (19)	2.41	.68		
	group C	37 (10)	2.47	.77		
Total	364(100)					

** . Significant difference between groups at the 0.01 level (2-tailed)

For more detailed comparison, a Multiple Comparisons analysis was carried out as a post hoc test. The results showed that there were significant differences in the means of groups A and B ($p = .13$ in satisfaction, $p < 0.00$ in comprehension), and groups A and C ($p = .42$ in satisfaction, $p < 0.00$ in comprehension), but there was no statistical difference in the means of groups B and C both in satisfaction ($p = .98$) and comprehension ($p = .91$). In other words, if they have had experiences of staying in English-speaking countries, how long they have stayed in those countries did not have any significant impact on the level of satisfaction and ability to comprehend.

The influence of background knowledge was investigated by the number of

¹ Group A refers to the participants who have less than three-months or no experience; group B who have three-months to one-year experience; group C who have longer than one-year experience in English speaking countries.

courses taken by the participants in the related fields. Out of 364 participants, 254 students (group A, 70%) had taken none or one course, 67 (group B, 18%) had taken two or three, and 43 (group C, 12%) more than four courses in a business-related field. The results of the analysis showed that students' level of satisfaction, $F = 6.30, p = .002$ and ability to comprehend, $f = 3.03, p = .050$ were significantly different depending on the number of courses previously taken. The mean of group C ($M = 2.70, SD = .70$) was significantly higher than the means of group A ($M = 2.20, SD = .87$) and group B ($M = 2.27, SD = .92$) in satisfaction. Likewise, the mean of group C ($M = 2.35, SD = .68$) was significantly higher than the means of groups A ($M = 2.06, SD = .73$) and B ($M = 2.05, SD = .85$) in comprehension.

TABLE 9
ANOVA Tests Between Background Knowledge and Satisfaction, and
Background Knowledge and Comprehension²

Number of courses taken in the related field		Valid (%)	<i>M</i>	<i>SD</i>	ANOVA	
					<i>f</i>	<i>sig.</i>
Satisfaction	group A	254 (69.8)	2.20	.872	6.299	.002**
	group B	67 (18.4)	2.27	.921		
	group C	43 (11.8)	2.70	.697		
Comprehension	group A	254 (69.8)	2.06	.728	3.025	.050*
	group B	67 (18.4)	2.05	.848		
	group C	43 (11.8)	2.35	.627		
Total			364			

*. Significant difference between groups at the 0.05 level (2-tailed)

**. Significant difference between groups at the 0.01 level (2-tailed)

According to the results of the post-hoc test (multiple comparisons), there were significant differences in the means of groups A and C ($p = .001$) and groups B and C ($p = 0.28$), but there was no statistical difference in the means of groups A and B ($p = .825$) in the satisfaction level. In the ability to comprehend, there was a significant difference in the means of groups A and C ($p = .043$), but no difference

² Group A refers to the participants who have taken none or one course; group B who have taken two or three courses; group C who have taken more than four courses in the related fields of business or international business.

between groups A and B ($p = .997$), or groups B and C ($p = .095$). The results revealed that students were more satisfied and capable of understanding the content of EMI courses if they had been more frequently exposed to the field-specific knowledge. Response groups who had taken more than four prior courses had significantly higher level of satisfaction and ability to comprehend than those who had taken less. It implies that background knowledge plays a key role in successfully implementing an EMI program.

How Necessary do Participants Perceive English as Being for Their Academic Success and Future Success?

In this section, how participants perceive English for their current and future success was examined. According to the analysis of the questionnaire survey, 45% of the participants (162) considered that listening ability is most important for successful EMI course-taking, followed by vocabulary power (86, 24%), speaking (60, 16%) and reading (52, 14%) abilities. With regard to a specific English skill for their future career success, however, 46% of the participants (168 out of 364) answered that speaking ability is most important for their major areas, followed by vocabulary power (75 students, 21%), listening (52 students, 14%) and reading (47 students, 13%) abilities. Considering that the participants came from diverse major areas, it could be concluded that English speaking ability is considered one of the most widely required skills across all sectors of major fields. The participants perceived that listening is most important for their current EMI success (162 students, 45%), but speaking is more crucial for their future success (168 students, 46%). Writing skill is regarded as least important for their current (22 students, 6%) and future success (4 students, 1%).

TABLE 10
Participants' Perception: Which Skill is Crucial for Your Success?

English skills	For their current EMI success		For their future success	
	frequency	percentage	frequency	percentage
speaking	60	16	168	46
listening	162	45	52	14
reading	52	14	47	13
writing	4	1	22	6
vocabulary	86	24	75	21
total	364	100	364	100

When the participants were asked if they consider English ability important for their current and future success, most of them answered that they perceive English is crucial for their current academic performance (286 students, 79%) and future career success (313 students, 87%). The mean of English importance for their current academic success was 3.18 ($SD = 0.97$), and the mean of English importance for their future career success was 3.41 ($SD = 0.83$). It might be inferred that Korean students regard English as more crucial for their future success than for their current performance.

TABLE 11
Participants' Perception: Is English Crucial for Your Success?

likert scale	For their academic success			For their career success		
	freq.	%	cum.%	freq.	%	cum.%
4. strongly agree	174	48	48	213	59	59
3. agree	112	31	79	100	28	87
2. neutral	56	15	94	38	10	97
1. disagree	15	4	98	12	3	100
0. strongly disagree	7	2	100	1	0	100
Total	364			364		
Mean (SD)	3.18 (.97)			3.41 (.83)		

With regard to reasons for taking EMI courses, more than half answered they took the course to improve their English communicative ability (192 students, 53%),

followed by to meet the requirements for a future job (63 students, 17%) and to acquire knowledge in their major area (55 students, 15%). It shows that most of the participants took EMI courses for their English ability and future job (255 students, 70%), not for content or field-specific knowledge learning. Other reasons were for better opportunities (such as exchange programs, study-abroad, etc.) and for a better grade from absolute evaluation. Most Korean universities adopt the grading system in which students are graded based on the performance in relation to others, but they allow EMI courses to adopt absolute evaluation (grading students based on their own performance) to encourage more students to take them.

For more effective EMI programs, most of the participants perceived that recapping (repetition or summary) is crucial in the middle, or at the end of every class to ensure their content comprehension (167 students, 46%). They also suggested that providing English lecture notes in advance facilitates their learning by giving them a chance to preview the content before class (135 students, 37%). Other suggestions were course assistants who are fluent both in English and in content-knowledge to support them, and more interactive discussion between instructor and students, or between students. Increased student participation via group discussion, presentation and questions were also proposed. One interesting observation is that some students preferred no Korean be used in class, while others preferred more Korean support provided from Korean instructors. The difference may derive from different levels of English proficiency or background knowledge, or different reasons for taking EMI courses (English skill vs. content knowledge).

CONCLUSION

Although the spread of English around the world has spurred changes in educational language policy, the effectiveness of EMI programs, mandatory or optional, is still a question under discussion. In particular, when an EMI policy is practiced at tertiary levels, educational benefits are more difficult to measure because the outcomes tend to be complex and multifaceted, and involve abstract concepts. Earlier studies on the benefit of EMI programs are inconsistent as well.

Some of the research conducted in Europe and Asia has suggested positive effects; reporting a high rate of satisfaction for both students and professors along with enhanced motivation to continue to participate in EMI programs (Kang, 2005; Kang & Park, 2004; Kirkgöz, 2005; Lee, Kim, & Jung, 2004; Oh & Lee, 2010). The studies have also projected that participants would improve their English proficiency and demonstrate the content and language achievement by overcoming problems they may have initially encountered in EMI programs (Evans & Morrison, 2011; Kim, 2009; Paseka, 2002). On the other hand, some studies have suggested the negative effect of English-mediated classes by pointing out limited learning outcomes resulting from a lack of English proficiency of both students and instructors (Jochems et al., 1994; Kim, 2007; Klaassen & De Graaff, 2001). Psychological burdens and anxiety felt by students and instructors have also been reported as some of the problems caused by EMI classes (Kang & Park, 2004; Yoo & Chung, 2009). In particular, research suggest that when the EMI policy is mandatorily imposed from above, students and instructors felt less autonomous and they were less likely to continue to participate in EMI programs (Cho, 2012).

In this study, students chose the EMI classes by their own free will, and from their desire for more EMI courses, it could be inferred that their motivation to participate in an EMI program was considerably high. The results of analyses show that the students' overall level of satisfaction was relatively high regardless of their English proficiency, but that their ability to comprehend was significantly influenced by their language proficiency. Students proficient in English benefited more from EMI classes, and less proficient students had difficulty comprehending and handling the content itself. Thereby, it can be concluded that in order for EMI programs to achieve the ultimate goal of acquiring the language and content subject, it should be a prerequisite that the participants, students and instructors, have obtained a certain level of English proficiency. Then, an assumption that could be made is that EMI programs cannot exist independently of language program, at least at a level of higher education.

Another interesting finding is that students' level of satisfaction and ability to comprehend were affected by the instructor's native language and nationality. When the instructors were NESs, students' satisfaction level was significantly

higher than when they were NNEs. In this study, the students' satisfaction with the instructors was, in the order of highest to lowest, American, Chinese, and Korean instructors. Likewise, ability to comprehend was highest when the instructors were Americans, followed by when they were Chinese and Koreans. Students' ability to comprehend was significantly lower when the instructors were Korean, but groups with American and Chinese instructors were not significantly different in comprehension. Considering the individual backgrounds of each instructor, a possible conclusion drawn from these results is, when the instructor is an NES or an English speaker with native-like proficiency, the students are more likely to be satisfied with the EMI classes and comprehend the content more easily. However, it could be also claimed that a Korean instructor could be a good role model for students if he or she is equipped with a high level of English proficiency and professional content knowledge. With regard to the individual characteristics influencing the participants' level of satisfaction and ability to comprehend, background knowledge and time spent in English speaking countries were the only two significant factors. The students who had taken more than four courses in the related fields were more satisfied with the EMI classes and more capable of understanding the content through English. Similarly, those who had stayed longer than three months in English speaking countries were more satisfied with and capable of comprehending the content in the EMI classes.

These findings suggest several implications for the practice of EMI in Asian EFL contexts. Firstly, in order for the EMI programs to achieve desired outcomes, both instructors and students should be equipped with better communicative English skills. Intensive English programs in advance of, or along with EMI classes should be provided for those who need to improve their language proficiency. In particular, the response from the students suggests that listening ability and vocabulary power are the most demanding skills for their current EMI success. Therefore ESP (English for Specific Purpose) notes, or field-specific vocabulary notes, for example, would be helpful for students before or while taking EMI classes. Secondly, the findings of this study strongly suggest that background knowledge or content familiarity is as important as students' English proficiency for the success of an EMI program. The impact of individual learner factors shows that

background knowledge enhances students' satisfaction and comprehension, and it implies that content familiarity partially compensates for limited English proficiency by filling in missing information with background knowledge. Thus, it would be effective if the instructor distributed supplementary learning material in advance and encouraged students to preview it for the sake of content preparation. As illustrated by Evans and Morrison (2011), students encounter challenges in English-mediated higher education, and they are able to deal with a variety of adaptation problems during their earlier years at university. Those problems include understanding field-specific or technical vocabulary, comprehending English lectures, and mastering an appropriate academic style. The findings of this study support Evans and Morrison (2011), by implying that the success of EMI programs may be determined by how efficiently and quickly those problems can be addressed both inside and outside the lecture room.

In sum, it needs to be clearly understood that the ultimate goal of an EMI program is for students to acquire both the content and language, not sacrificing one for the other. Students are likely to maximize benefits from EMI classes as they improve their English proficiency and increase their background knowledge as suggested by this study. Therefore, realistic school policies should be implemented for students to be more frequently exposed to both English and the subject content. While this study covers only a small group of students and instructors with a limited questionnaire, the results of this study and its implications can be added to the growing body of knowledge in the area of EMI programs. Further research into this field, especially the long-term effect of EMI programs and in-depth interviews with the participants would significantly help to expand our comprehension of how content and language can be learned simultaneously.

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