KOREAN UNIVERSITY STUDENTS' SATISFACTION WITH ENGLISH-MEDIUM INSTRUCTION (EMI)

A Thesis

by

HAEMIN KIM

Submitted to the Office of Graduate and Professional Studies of
Texas A&M University
in partial fulfillment of the requirements for the degree of

MASTER OF SCIENCE

Chair of Committee,	Laurie Quentin Dixon
Committee Members,	Edith Cassell
	Li-Jen Kuo
Head of Department,	Michael de Miranda

May 2018

Major Subject: Curriculum and Instruction

ABSTRACT

As English has positioned itself as a lingua franca in various fields including academia, the importance of acquiring fluent English proficiency in South Korea is emphasized. As a way of improving its citizens' English proficiency, the Korean government implemented English-medium instruction (EMI) in higher education. However, there have been conflicting discussion regarding the effectiveness of EMI in developing English proficiency as well as the satisfaction with EMI. This study aimed to investigate how university students in Korea perceive EMI as well as how their satisfaction with EMI differ across different majors, year and English proficiency levels. The study implemented the descriptive statistics method to examine the overall satisfaction with EMI and one-way ANOVA to identify the relationships between major, year, English proficiency and satisfaction with EMI, respectively.

A total of 139 Korean university students from six different majors participated in electronic questionnaire survey. The results of this study reveal that Korean university students have moderate attitudes toward and satisfaction with EMI, scoring 3.37 out of the 5-point Likert scale. The outcomes of ANOVA analysis present that there is no significant differences found of the independent variables' (major, year and English proficiency) effect on the satisfaction level with EMI. However, it was found that there is a meaningful difference across students' self-perceived English proficiency on their satisfaction with EMI, implying that the higher English proficiency the students perceived they had, the more they were satisfied with EMI.

DEDICATION

To my love, Jaeyoung and Jungyu

ACKNOWLEDGEMENTS

I would like to thank my committee chair, Dr. L. Quentin. Dixon, who has always encouraged, supported and guided me throughout the course of this research. I would also like to thank my committee members, Dr. Edith Cassell and Dr. Li-Jen Kuo, for their generous and kind advise and suggestions throughout the research.

Thanks also go to my friends and colleagues and the department faculty and staff for making my time at Texas A&M University a great experience. I would also like to thank all my students who participated in my research for their help.

Finally, thanks to my family in Seoul and family-in-law in Pusan for their love and support. Special thanks go to my baby girl, Jungyu, for all the times she spent with me, inspiring me during my master's program from pregnancy to birth.

CONTRIBUTORS AND FUNDING SOURCES

This work was supervised by a thesis committee consisting of Professor L. Quentin Dixon and Professors Edith Cassell and Li-Jen Kuo of the Department of Teaching, Learning and Culture. All work for the dissertation was completed independently by the student.

There was no financial support from the university or any other outside financial support in conducting my thesis research.

TABLE OF CONTENTS

Page

LIST OF TABLES

Page

CHAPTER I

INTRODUCTION

Thanks to the development of the Internet since the 1990s, the world has become more globalized, calling for a need of a global language that can bridge other languages (Kedzierski, 2016). English has become the lingua franca in various fields including the academics and research (Corrales et al., 2016). According to Kedzierski (2016), it is reported that 1.75 billion people can speak English at a useful level worldwide and by 2020, some two billion people are to be learning the language. As English has positioned itself as an official language throughout the world, and acquiring a fluent English competency is gaining more and more importance where the ability to write and speak in English is considered as an imperative competency in diverse fields in this globalized era (Byun et al., 2010). Universities in Korea are not exceptions in trying their best to foster good English fluency in their students (Kim et al., 2009).

As English is gaining more power as an official global language, there have been diverse approaches to English language learning (ELL) in countries whose official language is not English. As part of a wave to improve its citizens' English proficiency, the Korean government has put much effort into providing quality English education in primary, secondary and higher education. Not only the Korean government is enthusiastic about fostering the global citizens with fluent English skills, but parents are also dedicated to English education, spending 15 trillion Korean won (US$15 billion) annually on their children's English education including private tutoring and study abroad programs (Kang, 2012).

Starting from 1997, the Korean government introduced English from third grade up until

12th grade. In 2001, the government announced that English classes should be conducted in English only, called English-medium instruction (EMI) (Kang, 2012). Among many approaches to ELL for English as a second language (ESL) learners, EMI has its advantages in improving the language skills as well as enriching content knowledge (Kang, 2007; Kym & Kym, 2014; Shim, 2006). The Korean government also adopted EMI in multiple universities and encouraged most of the universities in Korea to provide their students with EMI courses, promising and providing financial incentives to those that offer EMI courses (Byun et al., 2010)

However, there have been conflicting discussions among instructors and students about EMI courses. A few studies have been conducted to examine the stakeholders' perception of EMI courses in Korean higher education. Existing research on satisfaction with EMI in Korean higher education is characterized by two major limitations. First, previous studies targeted specific groups such as college of engineering students or college of medicine students. Since students from these colleges typically have better knowledge of English due to higher cutoff score in Korean college entrance exam when entering the university, their satisfaction with EMI courses may not be generalized among students from other departments. Second, the need, usage and purpose for acquiring English skills is different according to various majors. Students from college of engineering and college of liberal arts may have very different needs and ends in terms of their English usage, which can influence the level of satisfaction with EMI. Therefore, this study aims to extend the scope of existing research and address these limitations by studying how students from different colleges, specifically from the College of Computer and Information Sciences, Education, Engineering, Foreign Languages/Literatures, Liberal Arts and Sciences perceive EMI and expand the domains being examined to include more factors that contribute to

higher satisfaction with EMI or hinder ELL from EMI courses.

Research on Korean university students' satisfaction with current EMI courses will have profound pedagogical implications to quality improvement in Korean EMI policy. Though there have been a few studies that discussed students' attitudes and perceptions of EMI courses in Korean higher education, the studies were limited to specific groups of students who have relatively higher English proficiency from the same college. It is important, however, to examine how students with different English proficiencies, from different majors and years in college are satisfied with EMI in English as a foreign language (EFL) environment to better serve their needs in improving their English skills. The findings from this study will inform EMI instructors and policy makers how to practice EMI appropriately according to the students' needs from their perspectives. The specific research questions include:

1. What are the attitudes toward and the satisfaction with English-medium instruction (EMI) of Korean university students?
2. What are Korean university students' perceptions of the effectiveness of EMI in developing English competency?
3. What are the effects of Korean university students' English proficiency on their satisfaction with EMI courses?
4. Do different year and majors affect students' satisfaction with EMI?

CHAPTER II

LITERATURE REVIEW

English-medium Instruction (EMI) is characterized by students learning a language and content at the same time through teaching a non-language subject in a foreign language (Chang et al., 2013). Due to its dual-focused learning and teaching approach, EMI has been believed to increase language learners' intrinsic motivation by providing the opportunities to "receive comprehensible input and produce pushed output" (Shim, 2006, p. 6) and accelerate their target language learning with extensive language exposure (Kym & Kym, 2014). Moreover, EMI provides more authentic language use opportunities, increases students' motivation for language learning (Chang et al., 2013) and lowers students' anxiety level in language learning (Kim, 2011).

Further theoretical supports for EMI include Krashen's comprehensible input, Swain's pushed output and Long's interaction hypothesis (Kim, 2011; Shim, 2006). Comprehensible input, which refers to an input that is a "step higher than the learner's level" (Kim, 2011, p.717) can assist language learners to enhance their fluency by making it easier for them to process language acquisition (Shim, 2006). Pushed output is also regarded as important as comprehensible input in acquiring fluency in terms of three aspects: language learners can notice a gap between what they can say and what they want to say, reflect upon linguistic forms and test their linguistic hypotheses of what is possible or impossible in the target language (Kim, 2011; Shim, 2006). Long proposed that second language acquisition can be accelerated by interactions that occur during meaning negotiation (Kim, 2011). EMI incorporates all three theories by

providing language learners comprehensible input, opportunities to produce pushed output and environmental settings where meaning negotiation can occur (Kim, 2011; Shim, 2006).

However, there are criticisms held against EMI such as losing the mother tongue, the effectiveness of EMI in both language and content knowledge development and creating emotional and psychological anxiety and stress (Kang, 2012; Portes, 2002; Yip et al., 2003). Portes (2002) reported that only 29% of the students who are in an EMI situation remained to be fluent in both their mother tongues and English whereas more than 90% lost their native language. Although Portes' (2002) study was conducted in United States where English is the first official language and students have intensive exposure to the language, the findings potentially suggest that intensive and extensive practice of EMI may take away the learners' mother tongue eventually. Yip et al. (2003) doubts the effectiveness of EMI in fostering both language and content knowledge because their study outcomes in Hong Kong is evident that Cantonese-medium instruction students performed much better in terms of developing higher cognitive skills, understanding concepts in science and mastering scientific terminology, compared to the students who were in EMI classes. Kang (2012) argues that extensive EMI policy affects students' stress, motivation, anxiety and self-confidence. According to Kang (2012), affective filters play an important role in maximizing learning process and achieving learning outcomes. However, a high affective filter triggered by various input available to the learners may cause emotional discomfort, which can be counterproductive to what EMI aims for. (Kang, 2012).

Despite criticisms against EMI, EMI has been widespread in South Korea due to its advantages in learning and teaching a target language at the same time where natural exposure to English is limited. Therefore, it is leaving a room for offering more and more EMI courses in

higher education. The main reasons for implementing EMI courses in Korean universities are categorized into three subsets: meeting the needs of globalization or internationalization, preparing students with competitive language skills and supporting international faculty and students.

First, opening more and more EMI courses will achieve higher university rankings in Korea by scoring high in *internationalization* or *globalization* sector (Im & Kim, 2015; Kim et al., 2016). Achieving high university ranking is important in Korea because it not only provides a reference for the government to control contracts such as hiring and firing administrators but also provides better job opportunities for students (Kim & Lee, 2006). That is, the higher the university ranking or reputation is, the more likely its students have better chances to get highly paid jobs. Therefore, the importance of achieving high university ranking results in expanding EMI courses, believing that it will bring about higher ranking in *globalization* sector, raising the overall ranking. Moreover, having more EMI courses will earn the universities a world class level titles and enable them to obtain international recognition (Cho & Palmer, 2012). The status of ranking universities has been boosted by the Korean media. They accelerated the expansion of EMI courses in universities by introducing a *globalization* index. This media-initiated university ranking triggered the faster spread of EMI because it is one of the important criteria in determining high scores in *globalization* index along with how many foreign faculty and international students they have (Cho, 2012; Kim et al., 2016). Piller and Cho (2013) also recognized that the mass media in Korea is one of the driving factors in opening more and more EMI courses, imposing their rankings based on the category of *internationalization*. This is mainly due to the *globalization* phenomenon and the Korean universities' voluntary actions to keep up with the rest of the world. Therefore, with the media and universities' efforts to be more

recognized in the world, *globalization* settled as a major index in recognizing high rankings in universities in Korea.

Second, EMI courses support students to be prepared with internationally-oriented skills, and equipped with global competitiveness, providing opportunities to exchange ideas in the academic environment worldwide (Byun et al., 2010; Kim et al., 2016). The dominance of English throughout the world is a pushing factor in Korean universities to open more EMI courses to equip their students with competitive English skills (Joe & Lee, 2012). This is directly related to providing them an opportunity to survive intensive competition for jobs (Piller & Cho, 2013) in the Korean job market where having an English fluency is often prioritized. Therefore, as Piller and Cho (2013) identify, the concept of "English is competitiveness" (p. 35) has been widely spread in Korea, triggering the universities to expand their EMI courses. Moreover, EMI policy not only helps students find better jobs in the market but also prepares students with sufficient English proficiency for professions where English is the main communication channel (Kym & Kym, 2014). The efforts to foster globalized citizens started from a current trend of *internationalization* or *globalization*. As English became prevalent as a main medium of communication, Korea tried its best to enhance its students' English proficiency by providing more EMI courses starting in 1999 when Korean universities started to introduce EMI courses and gradually expanded their EMI courses to respond autonomously to the global market (Cho & Palmer, 2013). Major universities such as Yonsei and Korea University already provide 30% of their courses in EMI and they plan to increase the percentage of EMI courses in the upcoming years (Kim et al., 2009). Believing that the practice of EMI policy will be beneficial in creating a second language environment within the EFL context, the Korean government began to provide

financial support to universities that open more EMI courses, to encourage the growth of these courses (Kim et al., 2016; Kim et al., 2014).

Last, opening more EMI courses supports international faculty members and students who do not speak Korean fluently. It can enhance a globally friendly environment for supporting foreign faculty members and students (Kym & Kym, 2014). Also, in an effort to attract more diverse international students and scholars, the Korean government announced a comprehensive plan called "Study Korea Project," providing financial support to universities that open EMI courses (Byun et al., 2010). In fact, according to Jon and her colleagues (2013), EMI invites more scholars and students from abroad since the medium of instruction is one of the dominant factors that lead these students' decision on where to study. The enrollment of international students increased nearly 25 times from 1,983 students in 1995 to 49,270 students in 2007, most likely due to the EMI policy.

Though EMI is becoming more prevalent in universities in Korea, previous research on how students perceive EMI courses and their satisfaction with EMI courses have not been so positive. Only a few studies which examined students from the business school and students who took EMI courses provided by the English department showed high satisfaction with EMI courses with 80% and 96% of satisfaction, respectively (Byun et al., 2010; Kang, 2007). From Byun and his colleagues' (2010) study, students from business school showed a favorable attitude toward EMI with 4.1 out of a 5-point Likert scale. However, studies that involved students from other departments showed negative attitudes toward EMI courses. For example, Byun and his colleagues (2010) found out that only 60% of the students from college of science and engineering were satisfied with EMI courses, scoring 3.92 and 3.64, respectively, out of 5-point Likert scales. The reasons for such different attitudes toward EMI seems to be related to

differences in the students' perspectives of the importance of English proficiency that differ by college and school. For example, students majoring in business consider that they will benefit from taking EMI courses in terms of getting a job, and their average level of satisfaction with EMI is 4.41 out of 5. In terms of the satisfaction with EMI, students in the college of engineering and science ranked the lowest, even though the average number itself is high, with 4.12 and 4.04, respectively. This can be explained by students' belief in the college of engineering and science that acquiring proficient English competency was less likely to be needed in their job market.

Cho (2012) looked at satisfaction with EMI from both the faculty members' and the students' perspectives in a science-oriented university. Specifically, the faculty members were asked about their motivations, intention to continue to teach in English and the satisfaction level with EMI, whereas the students were asked about the necessity of EMI, and effects of and difficulties in taking EMI courses. Even the faculty members appeared to provide EMI courses in order to meet the requirement of the university policy (52.9% of the total respondents) and 53.6% had no intention to continue to teach in English if not forced. 85% of them responded that they were unsatisfied with their EMI courses because of students' and their own inadequate English proficiency levels as well as less interaction in classes. Moreover, Cho (2012) found that 85% of the respondents felt EMI courses were unsatisfactory while 75% and 64% of undergraduate and graduate students, respectively, did not see the need for EMI courses. This also implies the relationship between satisfaction and the importance of English proficiency as discussed in Byun and his colleagues' (2010) study. Since the students in the science-oriented university did not feel that they need high English competency, the participants from Cho's (2012) study were highly unsatisfied in the first place.

In the same sense, Kim and her colleagues (2016) examined students from college of science and engineering with a questionnaire survey and learned that 62.6% of 523 students had to take EMI courses because it was a school policy to take a certain number of courses in English in order to graduate, which resulted in unwillingness to take EMI courses. Among 523 students, 49.8% of the students perceived themselves to have insufficient English proficiency to take EMI courses. In terms of the effect of EMI courses in improving their English proficiency, only 22.7% of the respondents reported that their English improved while 24.6% responded that their English did not improve and 51.3% were undecided. Kim, Son and Sohn (2009) also explored how much Korean university students were satisfied with EMI courses provided by a high reputation university. Only 31% of the respondents responded that they were satisfied with EMI whereas the other 69% reported either unsatisfied or neutral views. Moreover, 45% of the respondents reported that their experience with EMI courses were worse than the same course offered in Korean. Kim, Son and Sohn (2009) further examined students' preferences of EMI course attributes in terms of class size, class type, teaching method and the usage of Korean. It is found that students preferred a small class with fewer than 20 students, where the main focus is on the lecture, not discussion. Students preferred that cultural study courses should be provided through EMI, not their major subjects and they wanted EMI classes be fully provided in English only. Though with a limited number of participants, Shim (2006) had an in-depth interview with 12 students from the College of Liberal Arts, not from English literature or English education majors. Only one student showed a positive attitude toward EMI courses, responding that they provided opportunities to speak in English. However, the student with a positive attitude toward EMI even felt frustrated because of the student's own lack of English ability. Others reported that they were not learning as much from EMI courses than Korean-medium instruction courses

mainly due to their insufficient English proficiency and also the instructors' lack of confidence and English proficiency. Shim's (2006) study implies that English proficiency may have a positive relationship with satisfaction level with EMI.

Joe and Lee (2012) not only explored how Korean university students perceive EMI courses but also investigated whether there is a meaningful relationship between students' English proficiency and the satisfaction level with EMI. Sixty-one students from the college of medicine in a major university in Korea and revealed that their overall satisfaction level with EMI was 2.93 out of a 5-point Likert scale. Results also show that there is no meaningful relationship between English proficiency and satisfaction level with EMI. Kym and Kym (2014) also examined the relationship between English proficiency and satisfaction level, and factors that contribute to satisfaction with EMI. A questionnaire with 26 questions was distributed to 364 students and the outcomes show that there is no meaningful relationship between proficiency level and satisfaction, which is consistent with Joe & Lee's (2012) study. However, Kym and Kym (2014) discovered that the participants' ability to comprehend the content had a positive correlation with satisfaction. This suggests that students are more satisfied with EMI when they think they can understand the content.

Despite recent findings, most existing research has been limited in two aspects. First, previous studies related to students' perception and satisfaction with EMI courses have been limited to specific group of students. The previous studies targeted students from colleges of science and engineering. Second, existing studies rarely touched on identifying how different English proficiency levels, year and major in college affect the satisfaction level with EMI courses.

In light of these limitations, this study will critically extend the scope of existing research on students' satisfaction with EMI in current Korean higher education system by investigating students from departments that have different usage of the language, exploring how different classification in college affect their satisfaction with EMI and examining the effect of students' English proficiency in their satisfaction with EMI.

CHAPTER III

METHODOLOGY

1. Research Design

A one-time online questionnaire survey was conducted to obtain data about perceptions and satisfaction with EMI from Korean students who are currently enrolled at Korean universities. More specifically, current university students from Colleges of Computer and Information Sciences, Engineering, Education, Foreign Literature and Languages, Liberal Arts and Sciences were invited to participate. The primary reason for adopting a survey was that it is time- and cost-efficient (Ruel et al., 2016). Ruel and her colleagues also described that a survey is an ideal method to ask people's attitudes or opinions while guaranteeing anonymity.

Among different forms of surveys, an electronic questionnaire survey was designed and implemented due to the following reasons. An electronic survey questionnaire is cost-saving because it does not require paper or stamps to be distributed (Kraut et al., 2004; Reips, 2002; Thach, 1995; Varga, 2013). Furthermore, the data collection process itself is quicker and is easy to analyze the questionnaire during the data collection process and can be compared to traditional mail surveys (Thach, 1995; Varga, 2013). An electronic questionnaire survey is not only accessible through various devices including phones, laptops, desktops and tablets, it also allows flexibility to the respondents to take as much time as they want and to answer questions at their own pace, in any location (Reips, 2002; Ruel et al., 2016; Varga, 2013). Last but not least, an electronic questionnaire survey has a high degree of automation, needing low maintenance and limiting experimenter effects as well as reducing errors in data collection since no human transcription is involved (Kraut et al., 2004; Reips, 2002).

However, there are limitations in conducting electronic surveys in terms logistical and statistical issues. Since there is no control over the environment, the dropout rate is high and multiple submissions by one participant is possible (Kraut et al., 2004; Reips, 2002). More importantly, appropriate debriefing of the study is difficult and therefore misunderstandings may arise from less communication (Kraut et al., 2004; Reips, 2002). Compared to the traditional phone or mail surveys, the respondents who participate in the survey are considered biased sample because the respondents are self-selected (Reips, 2002). In case of electronic questionnaire survey, the survey is placed on the Internet and the respondents who are motivated and have the link to the survey choose to take part in the survey, without too much control from the researcher over the participant selection process (Bethlehem, 2010).

To compensate for the disadvantages of electronic surveys, the survey was designed to be simple, short and in Korean to avoid high dropout rates. To prohibit multiple submissions, demographic information was asked in depth but not violating privacy. The debriefing of the study was also presented in Korean, the participants' native language. Last but not least, the link to the electronic questionnaire survey was distributed to multiple websites and Social Networking Services.

2. Population & Sampling

In this study, the target population was both undergraduate and graduate students who are currently enrolled at Korean universities. Purposive and snowball sampling, non-probability or nonrandom sampling method (Tongco, 2007) were implemented where participants choose to take the survey because it was easier to approach to participants in these ways (Ruel et al., 2016) considering the geographical distance between potential participants (South Korea) and the

researcher (United States). In the first phase of the study, purposive sampling technique was adopted since the researcher had acquaintance with Korean university students and they are easier to reach. Purposive sampling technique has a great advantage in that it can "produce excellent data" (Ruel et al., 2016, p. 152) when a large sample is collected. The first 10 participants I recruited all went to a different college and I named them Wave 1. Then, in the second phase of the study, a respondent-driven sampling technique, a variation of snowball sampling was employed. It is a chain-referral process where participants recruit one another (Goel & Salganik, 2010). Therefore, each participant in Wave 1 were asked to refer other students who are eligible for the study (Ruel et al., 2016), who have taken at least one EMI course and who are currently a student at a Korean university for this study.

The potential bias incorporating purposive and respondent-driven sampling is known as selection bias where the participants in Wave 1 may refer to the same potential participants (Baker et al., 2013; Ruel et al., 2016). To eliminate selection bias, participants who do not know each other were recruited in Wave 1 so that they are able to recruit the next group, Wave 2, from different pools.

3. Instrumentation

First, the questionnaire survey was developed by the researcher considering the objectives of the study. Based on the objectives, 14 questions were developed including 13 closed-ended questions and one open-ended question. Among 14 questions, four questions ask demographic information whereas four questions are related to the participants' previous experience with EMI courses. Six questions are concerning the participants' perceptions and satisfaction with EMI courses with a 5-point Likert scale.

A 5-point Likert scale was adopted in the three questions that asked participants' opinions and attitudes about EMI experience because Likert scales are frequently used in attitude measurement due to their advantage in providing a scope of diverse responses to a given question (Jamieson, 2004). Allen and Seaman (2007) also describe the Likert scale as a commonly implemented rating format and point out that it is critical to provide at least five response levels or more where each scale ranges represent how much the respondents agree or disagree to a given question. Allen and Seaman (2007) also recommended the use of an even number rating format such as six to eliminate a neutral option. In this study, however, a five-point Likert continuum scale was implemented, following the traditional format while all the response categories were weighted. On the scale, items were coded as 1=strongly disagree, 2=disagree, 3=neutral, 4=agree and 5=strongly agree.

In order to measure the participants' English proficiency in a fair but accurate way, the researcher included a question that asks the respondent to report their English section score on the Korean College Scholastic Aptitude Test (KCSAT) score. KCSAT is also known as *suneung* in Korean and it is a high-stakes standardized test which every Korean university regards as the most predictable and reliable indicator for selecting their students for admission (Choi, 2008; Han et al., 2016; Lee, 2005; Sohn & Ju, 2010). KCSAT is managed by a government-based institute, the Korean Institute of Curriculum and Examination (KICE) (Sohn & Ju, 2010), and it is considered very important because the score from KCSAT is a ticket to college admission; depending on the exam result, students go to different universities with different degrees of reputation and ranking, which is extremely influential on the students' future success (Kim & Dembo, 2000). Chon (2014) describes that KCSAT also serves as a strong indicator "of

academic achievement" (p. 342), and therefore the KCSAT English score was used to identify each participant's English proficiency level.

In identifying satisfaction level, the questionnaire asked three questions: whether their experience with EMI was positive, whether they were willing to recommend taking EMI courses to others or whether they were willing to take another EMI course in the future. These behavioral intention (recommendation) and retention are investigated because these can be very strongly affected by satisfaction (Choi et al., 2004; Mittal et al., 1999). Cronin et al. (2000) also described that behavioral intentions are directly impacted by satisfaction and Zeithaml et al. (1996) state that positive behavioral intentions are likely to result in recommendation to other potential customers and being loyal. Baker and Compton (2000) are in line with Zeithaml et al. (1996) finding that when people have high satisfaction, they tend to be devoted, meaning they continue to use the service or buy the item. All in all, satisfaction affects behavioral intentions such as recommendation of the service or an item to others and remain loyal. Therefore, the degree to which Korean university students are willing to recommend and take another EMI course have been measure to entail their satisfaction level with the EMI courses they have taken.

4. Validity

An electronic questionnaire survey has limitations in that it may not provide adequate and appropriate debriefing of the study and that it may result in misunderstandings for the participants since there exists less communication. To ensure validity, the developed questionnaire survey was reviewed by five experts, three associate professors in the English as a Second Language field and two statisticians. In the expert reviews and assessment, the researcher received constructive feedback on how to improve the questionnaire before distributing it. The

experts helped in clarifying the questions, organizing questions in thematic order and polishing questions with more appropriate vocabulary and phrases. For the field test, three students reviewed the questionnaire and helped the researcher to clarify the questions and provided feedback on questions that may cause possible confusion in understanding them.

5. Data Collection

First, the invitation to the questionnaire survey was sent to acquainted students and teaching assistants (TAs) in Korean universities to spread the survey link to potential participants who were currently enrolled at universities. The invitation was also posted online via Social Networking Services such as Kakao Story. The recruitment began on January 30, 2018 and lasted until February 20, 2018. During three weeks, a total of 139 participants responded to the electronic questionnaire survey. Table 1 below presents the descriptive data related to demographic information about the participants in terms of gender, year classification, majors and self-perception of English proficiency.

Table 1

Demographic characteristics of the respondents z

Feature	Classification	Number of respondents
Gender	Female	78
	Male	61
	Total	**139**
Year classification	Freshman	24
	Sophomore	33
	Junior	35
	Senior	26
	Graduate	21
	Total	**139**

Table 1

Continued

Feature	Classification	Number of respondents
Major	Computer and Information Sciences	13
	Education	17
	Engineering	27
	Foreign Languages/Literatures	9
	Liberal Arts	51
	Science	22
	Total	**139**
Self-perception of English proficiency	Beginner	19
	Intermediate-low	40
	Intermediate-mid	44
	Intermediate-high	25
	Advanced	11
	Total	**139**

6. Data Analysis

In the first phase of the analysis, the data collected based on 5-point Likert were analyzed using descriptive statistics to address the first and second research questions: examining the percentage of the participants who are in favor of or unsatisfied with EMI and its effectiveness in developing students' English proficiency. The descriptive analysis allowed the investigation of the attitudes toward and the satisfaction level with EMI on the students' sides, as well as its effectiveness in fostering English competency. Loeb et al. (2017) explain that descriptive analysis is not only used to identify the patterns in data but also simplifies and visualizes them for the audience. Grimes and Schulz (2002) also maintain that good descriptive analysis answers five questions: who, when, where, what and why "and an implicit sixth question, so what?" (p. 145) In order to investigate significant patterns and to examine the "so what" part in the collected data, six steps to approach descriptive analysis was employed from Loeb et al. (2017, p. 8):

1. Identify a phenomenon;
2. Consider which features of the phenomenon are most salient;
3. Identify the constructs (measures) that best represent the most salient features;
4. Determine whether there are observable patterns in the data;
5. Communicate the patterns in the data that describe the realities of the phenomenon; and
6. Rethink and repeat as needed.

One consideration in implementing descriptive analysis was whether to calculate means from Likert scale responses because it is not valid because of the fact that it cannot show the distribution of the whole data and therefore can mislead the conclusion (Allen & Seaman, 2007; Roever & Phakiti, 2018). However, means were calculated in this study because of its advantages, as described by Roever and Phakiti (2018): the mean enables relatively easy comparisons between groups or samples, as well as providing a summary at a glance.

In the second phase of the analysis, the one-way analysis of variance (ANOVA) was implemented to answer the third and fourth research questions: Do year classification, major and English proficiency affect the students' satisfaction with EMI? Roever and Phakiti (2018) states that one-way ANOVA is used in examining "the differences among three or more groups based on the background variable that distinguishes participants," (p. 117). The one-way ANOVA was conducted using a computer software program Statistical Package of Social Sciences (SPSS, version 23). The ANOVA investigated whether year classification, which has 5 groups, major, which has 6 groups, and English proficiency levels (with 5 self-perception and 9 KSAT levels) affects the students' satisfaction with EMI.

In the last phase of the analysis, responses to open-ended question, which asked for suggestions for further improvement in EMI courses, were analyzed based on word-based analysis method. In the analysis, words are used as units to identify "keywords in context [KWIC]" (Jackson & Trochim, 2002, p. 309) and therefore subsets of keywords from existing

studies were preselected. Carefully navigating through the previous literature, the researcher identified four categories, namely class size, supportive programs or lectures for improving students' English proficiency, providing extra materials for preview and review and proficient instructors in terms of the language. For the unexpected answers, the data were carefully examined by the researcher and were categorized under new keyword subsets such as qualified native English-speaking instructors, Korean versions of the textbooks and opening EMI courses based on need analysis.

7. Results

RQ 1: What are the attitudes toward and the satisfaction with English-medium instruction (EMI) of Korean university students?

The participants were asked why they took EMI courses provided by the universities. They were allowed to choose more than one answer for this question and not surprisingly, the most common reason for taking EMI courses was because it was the school's policy. As a means to secure their place in the global market, most Korean universities have graduation requirements related to EMI, in an effort to foster students' English proficiency (Byun et al., 2014; Kim, 2014). That is, students should take a minimum number of courses in EMI in order to graduate. Sixty-nine participants, about 50% of the total participants, listed the university policy as their reasons for taking EMI courses. The second most frequent reason for taking EMI courses was the improvement of English proficiency. Forty-one participants, 30% of the total, responded that they registered for EMI courses to develop their English proficiency. The other reasons for taking EMI courses entailed obligation to some degree, such as no alternatives or time conflict. Thirty-eight participants, about 28% of the total, responded that they had no choice but to take

EMI courses because the content was provided in EMI courses only. Thirty-two participants answered that they had a time conflict and they had to take EMI courses. In addition, some responses in 'other' option were related to external-driven factors such as EMI as a prerequisite course for applying for an exchange student program or pre-degree planning done by the department. However, there were respondents whose reasons for taking EMI were based on their positive experience with EMI. For example, 17 participants explained their reason for taking EMI courses as having had an interesting experience. They responded that they learned EMI courses are interesting from their previous experience. Eight participants also responded that their English proficiency developed while taking EMI courses from their previous experience. Table 2 presents the respondents' reasons for taking EMI more vividly.

Table 2

Reasons for taking EMI courses

Reasons	Responses	
	Percentage	Number of participants
It was a school policy to take at least one EMI course.	49.64%	69
I thought it would help improve my English proficiency.	29.50%	41
The class content was only available in EMI format and I wanted to take it whatever the language.	27.34%	38
I had no other choice due to time conflict in my schedule.	23.02%	32
It was interesting from my previous experience.	12.23%	17
Other (prerequisite for applying exchange program, pre-degree planning, easier to get good grade)	7.91%	11
It was recommended by a friend, a senior student or a professor.	7.19%	10
It was effective in improving my English proficiency from my previous experience.	5.76%	8
Total	162.59%	226

Note. The participants were allowed to choose multiple reasons.

Every participant was asked whether they had a positive experience in EMI courses. Table 3 illustrates the percentages of each level in terms of the students' positive EMI experience. Forty-eight percent of the total participants responded that they had positive experience in EMI courses, whereas 17% of the total participants did not. The remaining 35% of respondents stayed neutral.

Table 3

Positive experience with EMI

	1	2	3	4	5	Total	Mean
My experience in EMI courses is positive.	7.19% 10	10.07% 14	34.53% 48	34.53% 48	13.67% 19	100% 139	3.37

Note. 1=strongly disagree, 2=disagree, 3=neutral, 4=agree, 5=strongly agree

The follow-up question involved the reasons for positive experience regarding EMI courses and it showed very interesting results. More than 50% of the participants indicated that taking EMI course itself was an interesting experience. Thirty-six percent of the participants also responded that their English proficiency increased thanks to EMI courses. Adequate English proficiency level of the student himself or herself as well as the instructors' also resulted in positive experience in EMI courses. However, some interesting reasons were reported for their positive experience with EMI. Three participants mentioned that they were able to get better scores when taking EMI courses compared to Korean-medium instruction because EMI courses take absolute evaluation method. Table 4 below visually outlines the distribution of the reasons for positive experience with EMI courses.

Table 4

Reasons for positive experience regarding EMI courses

Reasons	Responses	
	Percentage	Number of participants
The course was an interesting experience.	54.68%	76
The course helped improve my content knowledge.	17.27%	24
The course helped improve my English proficiency.	35.97%	50
The instructor provided extra materials to help understand the course.	11.51%	16
The course content was easy to understand thanks to my English proficiency.	22.30%	31
The course content was easy to understand thanks to my instructor's English proficiency.	25.18%	35
Other	7.91%	11
Total	174.82%	243

Note. The participants were allowed to choose multiple reasons.

Taking behavioral intention into consideration, the participants were asked two different questions: whether they were willing to recommend EMI courses to other friends or take another EMI courses in the future. 36% of the participants either agreed or strongly agreed that they will recommend EMI courses to their friends. However, 35% of the participants remained neutral while 29% were not willing to recommend EMI courses to others. Slightly differently, 40% of the respondents answered that they were willing to take other EMI courses in the future while 32% were not. Responses from these two questions show that there were more people who have more positive attitudes toward EMI than those who do not. Table 5 shows each percentage and the number of participants for each agreement level.

Table 5

Behavioral intention resulted from EMI courses

	1	2	3	4	5	Total	Mean
I will recommend EMI courses to other friends	9.35% 13	19.42% 27	35.25% 49	25.9% 36	10.07% 14	100% 139	3.08
I am willing to take another EMI course.	11.50% 16	20.86% 29	28.06% 39	26.62% 37	12.95% 18	100% 139	3.09

Note. 1=strongly disagree, 2=disagree, 3=neutral, 4=agree, 5=strongly agree

RQ 2: What are the Korean university students' perceptions of the effectiveness of EMI in developing English competency?

In order to investigate the Korean university students' perceptions of the effectiveness of EMI in fostering English competency, the respondents were asked to rate to what degree they agree or disagree with the statement "My English proficiency has improved compared to the first year I took an EMI course," in the first phase. Approximately 35% of the total respondents felt that their English proficiency has improved whereas 32% responded that their English proficiency did not improve. A similar percentage of the respondents, 33%, remained on the neutral side. Table 6 below illustrates an overview of the percentages and the number of respondents of their perception of effectiveness of EMI in developing their English proficiency.

Table 6

Agreement to the effectiveness of EMI in developing English proficiency

	1	2	3	4	5	Total	Mean
My English proficiency has improved compared to the first year I took an EMI course.	11.51% 16	20.14% 28	33.09% 46	25.90% 36	9.35% 13	100% 139	3.01

Note. 1=strongly disagree, 2=disagree, 3=neutral, 4=agree, 5=strongly agree

In the second phase, the respondents were asked a follow-up question regarding their specific fields of difficulties, such as reading, listening, writing or speaking. This question was asked to examine which skills most Korean university students find difficult when taking EMI classes and to further suggest supports in specific areas of language skills for enhancing their English proficiency in EMI courses. Approximately 36% of the total respondents answered that they had difficulties in understanding the written texts because of their lack of vocabulary. About the same percentage, 34%, of the respondents claimed that they did not fully understand the lecture due to their insufficient listening skills. On the other hand, 50% of the students reported that they had challenges when writing reports and papers in English. Moreover, 53% of the students were having trouble with participating in classroom activities or discussion due to fear of making mistakes. It is interesting to pay close attention to the numbers in each skill. In receptive skills, reading and listening, about one third of the total respondents had difficulties whereas in productive skills, writing and speaking, more than half of the total students found it challenging. Table 7 below presents an overall summary of the percentages and the number of the participants' perception of difficulties in each language skill in EMI courses.

Table 7

Korean university students' difficulties in each language skill in EMI courses

	1	2	3	4	5	Total	Mean
I did not fully understand the written texts due to my lack of vocabulary skills.	12.23%	29.50%	22.30%	28.06%	7.91%	100%	
	17	41	31	39	11	139	2.90
I did not fully understand the lecture due to my listening comprehension skills.	17.99%	23.02%	25.18%	24.46%	9.35%	100%	
	25	32	35	34	13	139	2.84
I had difficulties writing reports and papers in English.	9.35%	17.27%	23.02%	37.41%	12.95%	100%	
	13	24	32	52	18	139	3.27

Table 7

Continued

	1	2	3	4	5	Total	Mean
I did not fully participate in classroom activities or discussion due to my fear of making mistakes.	9.35%	15.83%	21.58%	35.25%	17.99%	100%	
	13	22	30	49	25	139	3.37

Note. 1=strongly disagree, 2=disagree, 3=neutral, 4=agree, 5=strongly agree

In the last phase, the researcher conducted a need analysis to examine the ways to improve EMI courses to help the students improve their English competency. Choosing multiple answers was allowed as well as an 'other' option where the respondents were able to freely express their own opinions. Approximately 47% of the respondents reported that extra effort and time in preparation as the most needed, which was surprising because many students felt that they were not well prepared for taking EMI courses, but then blamed themselves. Fourty percent of the respondents felt they needed a bilingual teaching assistant from whom they could get help. Thirty-seven percent responded that a recording of the lecture or lecture notes provided in an online community would be of great help. Other suggestions included better English proficiency of the instructor, higher quality of the content and active participation in classes. Table 8 below lays out a summary of the need analysis for improving EMI courses.

Table 8

Need analysis for improving EMI courses

Suggestions to improve EMI courses to provide more effective content comprehension	Responses	
	Percentage	Number of participants
Extra effort and time in preparing EMI course	46.76%	65
Bilingual teaching assistant (TA)	40.29%	56
Lecture notes/video recording of the lecture on online community	37.41%	52
Summary of the lesson provided by the instructor	33.09%	46
None of the above	7.19%	10
Others (Better English proficiency of the instructor, active participation in the class, higher quality of the content)	5.04%	7

Note. The participants were allowed to choose multiple reasons.

RQ 3: What are the effects of Korean university students' English proficiency on their satisfaction with EMI courses?

To investigate whether Korean university students' English proficiency affects their satisfaction with EMI course, every participant was asked to self-assess their English proficiency as well as to provide a level in English section of Korean College Scholastic Aptitude Test (KCSAT). The English section of KCSAT is measured with 9 scales ranging from 1st to 9th (Kim et al., 2014). The top 4% of the total KCSAT takers get the 1st level while the next 7% of the takers get the 2nd. The top 11-22% of the takers are on the 3rd level tier followed by 23% to 39% of the takers are labeled 4th, as shown in Table 9 (Zucker, 2003).

Table 9

Stanines and corresponding percentile ranks

Stanine	1	2	3	4	5	6	7	8	9
Percentile	Below 4%	4-10%	11-22%	23-39%	40-59%	60-76%	77-88%	89-95%	Above 95%

The one-way ANOVA was conducted to compare the effect of English proficiency of Korean university students on their satisfaction with EMI courses. There was not a significant effect of English proficiency on the satisfaction level with EMI at the $p<.05$ level [$F(6, 132)=1.149$, $p=.338$]. Taken together, the result indicates that students' satisfaction level did not vary across proficiency levels. The following Table 10 presents the analysis result from ANOVA on students' satisfaction level with EMI.

Table 10

The effect of English proficiency on satisfaction with EMI

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	7.867	6	1.311	1.149	.338
Within Groups	150.680	132	1.142		
Total	158.547	138			

The study also looked at the behavioral intention and retention, which can be strongly affected by the level of satisfaction (Choi et al., 2004; Mittal et al., 1999). When the respondents were asked to rate to what degree they were willing to recommend EMI courses to their peers, there was no significant difference found among different English proficiency groups. [$F(6, 132)=.723$, $p=.631$]. Moreover, there was no significant difference found on their willingness to

take another EMI course among different English proficiency groups. [F(6, 132)=1.545, p=.168]. Table 11 and Table 12 below illustrate the details.

Table 11

The effect of English proficiency on willingness to recommend EMI courses

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	5.416	6	.903	.723	.631
Within Groups	164.713	132	1.248		
Total	170.129	138			

Table 12

The effect of English proficiency on willingness to take another EMI course

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	13.190	6	2.198	1.545	.168
Within Groups	187.774	132	1.423		
Total	200.964	138			

On top of KCSAT scores, the respondents' self-assessment of English proficiency was measure to examine whether self-perception of English proficiency influenced the level of satisfaction with EMI courses. The same three categories, satisfaction, behavioral intention and retention, were measured in accordance with the respondents' self-assessed English proficiency levels and the results show an interesting phenomenon. In terms of satisfaction with EMI courses, the one-way ANOVA result represents a marginally significant difference among different English proficiency levels: [F(4, 134)=1.993, p=.099]. Table 13 below shows the details.

Table 13

The effect of self-perceived English proficiency on satisfaction with EMI

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	8.901	4	2.225	1.993	.099
Within Groups	149.646	134	1.117		
Total	158.547	138			

In regard to behavioral intention, the one-way ANOVA result does not show any meaningful differences among different English proficiency levels: [F(4, 134)=1.689, p=.157]. Table 14 below represents the details.

Table 14

The effect of self-perceived English proficiency on willingness to recommend EMI courses

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	8.158	4	2.040	1.687	.157
Within Groups	161.971	134	1.209		
Total	170.129	138			

As regard to willingness to take another EMI course, there was also a significant difference among different English proficiency levels, which are self-assessed by the participants. [F(4, 134)=3.033, p=.020] (Table 15). Therefore, descriptive analysis was conducted to investigate how much differences exist among each group. In the beginner group, about 20% of the total beginners wanted to take another EMI course in the future while about 35% of them was unsure and 47% of them would not want to take it. From the intermediate-low group, 32.5% of the total respondents would be willing to take another EMI course whereas 37.5% of them was uncertain and 30% of them would not. In the intermediate-mid group, approximately 36% answered that they would take another EMI course and about 23% remained

unsure, about 41% did not want to take another one. In the intermediate-high group, 56% agreed that they are interested in taking another EMI course while 16% did not want to and 28% stayed neutral. Last but not least, respondents in the advanced group, approximately 73% were willing to take another EMI course while 18% was not and 9% remained uncertain. Taken all together, students who perceived that their English proficiency is high were more willing to take another EMI courses. Table 16 illustrates the retention percentage and the number of participants in each English proficiency group.

Table 15

The effect of self-perceived English proficiency on willingness to take another EMI course

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	16.686	4	4.171	3.033	.020
Within Groups	184.278	134	1.375		
Total	200.964	138			

Table 16

Willingness to take another EMI course based on self-assessment of English proficiency

	1	2	3	4	5	Number of participants	Mean
Beginner	15.79%	31.58%	34.58%	21.05%	0%		2.58
	3	6	6	4	0	19	
Intermediate-low	12.5%	17.5%	37.5%	20%	12.5%		3.02
	5	7	15	8	5	40	
Intermediate-mid	9.09%	31.82%	22.73%	29.55%	6.82%		2.93
	4	14	10	13	3	44	

Table 16

Continued

	1	2	3	4	5	Number of participants	Mean
Intermediate-high	8%	8%	28%	36%	20%		3.52
	2	2	7	9	5	25	
Advanced	18.18%	0%	9.09%	27.27%	45.45%		3.82
	2	0	1	3	5	11	

Note. 1=strongly disagree, 2=disagree, 3=neutral, 4=agree, 5=strongly agree

RQ 4: Do different year and majors affect students' satisfaction with EMI?

To examine whether year classification and different majors influenced the students' satisfaction with EMI, the participants were first grouped according to their year classification: freshman, sophomore, junior, senior and graduates. The one-way ANOVA analysis showed that there was no significant difference among year classifications in all three categories: satisfaction, behavioral intention and retention. ([F(4, 134)=.258, p=.904], [F(4, 134)=.649, p=.629], [F(4, 134)=.188, p=.944]) Table 17, Table 18 and Table 19 present the details.

Table 17

The effect of year classification on satisfaction with EMI

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	1.212	4	.303	.258	.904
Within Groups	157.335	134	1.174		
Total	158.547	138			

Table 18

The effect of year classification on willingness to recommend EMI courses

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	3.232	4	.808	.649	.629
Within Groups	166.898	134	1.246		
Total	170.129	138			

Table 19

The effect of year classification on willingness to take another EMI course

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	1.120	4	.280	.188	.944
Within Groups	199.844	134	1.491		
Total	200.964	138			

In the second phase, the participants were regrouped based on their majors. There were six majors, namely, Computer and Information Sciences, Education, Engineering, Foreign Languages/Literature, Liberal Arts and Science. The one-way ANOVA analysis discovered that there was no statistically significant difference on the satisfaction level depending on the respondents' majors: satisfaction [$F(5, 133)=.914$, $p=.474$], recommendation to others [$F(5, 133)=1.016$, $p=.411$], and willingness to take another EMI course [$F(5, 133)=1.328$, $p=.256$]. Table 20, Table 21 and Table 22 provide the details.

Table 20

The effect of major on satisfaction with EMI

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	5.268	5	1.054	.914	.474
Within Groups	153.279	133	1.152		
Total	158.547	138			

Table 21

The effect of major on willingness to recommend EMI courses

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	6.258	5	1.252	1.016	.411
Within Groups	163.871	133	1.232		
Total	170.129	138			

Table 22

The effect of major on willingness to take another EMI course

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	9.559	5	1.912	1.328	.256
Within Groups	191.405	133	1.439		
Total	200.964	138			

A descriptive analysis was conducted to confirm whether there was no significant difference found across diverse majors and to investigate which major students have the most favorable and the least favorable perception of EMI. Table 23 illustrates the means and standard deviations from each major. Although there was little difference on satisfaction with EMI based on majors, it shows that the students in Foreign Languages and Literatures were more satisfied with EMI courses than other students although the distribution was spread out widely. On the other hand, the students majoring in Science showed the least satisfaction with EMI courses. In terms of whether they were likely to recommend or take another EMI course, the same pattern was found; students from Foreign Languages/Literatures had the highest scores, whereas students from Sciences had the lowest.

Table 23

Korean university students' satisfaction differences in diverse majors

	Satisfaction		Recommendation		Retention	
	M	SD	M	SD	M	SD
Computer and Information Sciences	3.54	.776	3.38	.768	3.23	.725
Education	3.53	.943	3.18	1.131	3.29	1.213
Engineering	3.26	1.163	3.15	1.099	3.07	1.238
Foreign Languages/Literatures	**3.67**	1.225	**3.44**	1.236	**3.56**	1.333
Liberal Arts	3.45	1.154	3.04	1.183	3.14	1.281
Science	**3.00**	.926	**2.68**	1.041	**2.55**	1.101

Note. 1=strongly disagree, 2=disagree, 3=neutral, 4=agree, 5=strongly agree

CHAPTER IV

DISCUSSION

This study tried to examine how Korean university students perceive EMI courses provided by their universities. Satisfaction with EMI was investigated by using behavioral intention and retention indicators and year, major and English proficiency were examined to find out whether they are critical in determining their satisfaction level with EMI. From the study, the results show that Korean university students have a moderate satisfaction with their EMI courses. As evident in Table 3, the average satisfaction level with EMI courses is 3.37 out of 5-point Likert scale (1=strongly disagree and 5=strongly agree). As shown in Table 5, Korean university students remain neutral in recommending or taking another EMI courses. By looking at the distribution, Table 3 and Table 5 indicate that the most respondents chose 3 (=neutral) as their answers, while a similar or some little less respondents chose 4 (=agree), meaning they are likely to recommend or take EMI courses.

People are likely to choose a neutral option because of multiple reasons such as social desirability, uncertainty and avoidance of cognitive effort (Edwards, 2011). Krosnick et al. (2002) explain that the respondents have a tendency to choose “don’t know” or a neutral option on socially undesirable opinion, even if they have an opinion. When people do not recall or cannot retrieve their memory or experience about certain things, they are also likely to choose a neutral option in order to avoid cognitive effort in restoring the memory (Edwards, 2011; Krosnick et al., 2002). This is also especially true with Koreans. Chun et al. (1974) conducted a cross-cultural research between U.S. and Korea on response styles and found out that more extreme responses were examined in the U.S. sample whereas the Korean sample stayed more toward the neutral option. Lee and Green (1991) also conducted a cross-cultural research

between U.S. and Korea to examine the relationship between behavioral intentions and cultural dimensions such as individualism and collectivism. It is found that Koreans have a tendency not to lose their "face," a social status or position and to conform to the social norms regardless of their personal perspectives (Lee & Green, 1991) Therefore, they are prepositioned to be neutral to avoid any extremes that may stand out from the cultural norm. These explain the Korean university students' tendency to choose a neutral option when it is given, whether to avoid their cognitive effort to evoke their memory or are unsure about their own opinions or to stay on the safer side, not standing out by not choosing one extreme end.

Regarding the Korean university students' perception of the effectiveness of EMI in developing their English proficiency, their agreement to the effectiveness of EMI in improving their English proficiency was directly measured. As indicated in Table 6, about 33% of the total respondents stayed in the neutral domain where a slightly more respondents agreed that their English proficiency has improved (35.25% for agreement and 31.65% for disagreement). This implies conflicting perspectives on whether EMI is effective in enhancing Korean university students' English skills. To provide further pedagogical implications, two follow-up questions were asked: in what language skills they had difficulties and what their needs are. Table 7 illustrates in what areas most Korean university students had difficulties. It reveals that productive skills such as writing and speaking are more challenging to Korean university students compared to receptive skills such as listening and reading. This is in line with Mondria and Wiersma's (2004) and Webb's (2008) that receptive knowledge is easier to acquire than productive knowledge. A need analysis was administered to identify potential supports that can be provided to improve the quality of EMI courses. It was interesting to find out that approximately 47% of the respondents answered that they needed extra effort and time in

preparing EMI course as shown in Table 8. Almost half of the respondents found a solution in themselves. From the institutional level, approximately 40% suggested that Bilingual teaching assistants would be helpful. Other suggestions such as providing lecture notes, video recordings and summary notes followed. Some participants did mention the need of instructors who are more fluent in English and emphasize both language and content, instead of focusing on the language alone. These suggestions imply that more qualified instructors in both the language and the content should be hired at the institutional level.

This study also looked into whether English proficiency, year classification and major had an impact on the satisfaction level with EMI. Table 10, Table 11, Table 12, Table 14, Table 17, Table 18, Table 19, Table 20, Table 21 and Table 22 clearly present that there were no significant differences found of the independent variables' (year classification and major) effects on the satisfaction level with EMI. That is, whether the participants were freshmen or graduates, whether they majored Education or Science, whether they have higher or lower English proficiency, their satisfaction level with EMI did not differ much. However, Table 13, Table 15 and Table 16 indicate that self-perception of English proficiency was positively related to the satisfaction level with EMI and to the degree that they were willing to take another EMI course, one of the indicators of measuring satisfaction. The higher English proficiency the participants think they had, the more they were satisfied with EMI courses and were willing to take another EMI course. Judge and Bono (2001) explain that there is a positive correlation between self-esteem and job satisfaction or job performance. Alavi and Askaripur (2003) also agree that there is a meaningful relationship between job satisfaction and self-esteem where people with higher confidence tend to have higher satisfaction than those with lower confidence. Likewise, Korean

university students who participated in this study showed that they had higher satisfaction with EMI courses when they felt more confident with their English proficiency.

The results of the questionnaire survey presented extra findings such as difficulties and challenges faced by the Korean university students, when taking EMI courses. Approximately 46% of the total respondents stated that their insufficient English proficiency was the major difficulty in taking EMI courses while 35% responded that taking EMI courses took too much of their time and required more effort compared to Korean-medium instruction courses. Other difficulties included instructors' inadequate English proficiency, as well as different English proficiency levels of classmates, and evaluation based on English proficiency, not on the content knowledge.

The other additional finding involves suggestions for further improvement in EMI courses. The responses were categorized into two different levels, namely, institutional and class or instructor level. First, each institute should verify that the students enrolled in EMI courses have sufficient English proficiency to take the courses by setting up a requirement of certain level of English proficiency for EMI courses. It needs to provide multiple levels of the same content in EMI with smaller sizes to make sure each student is placed in the adequate level of the class and take the full advantage of EMI courses. The results of the questionnaire also depict the need of level-differentiated EMI classes. Moreover, each institute should be willing to and be ready to provide beginner level English courses as a preparation for taking EMI courses. This supportive basic English course will help students be mentally and physically ready for taking EMI courses. On the class or instructor level, the suggestions included providing additional materials for deeper understanding of the content, summary of the lesson, audio or video recording of the lesson. Aside from providing materials for preview and review, many

respondents called for the need of qualified instructors. It was interesting to find out that the students had different expectations for native English-speaking instructors and Korean instructors. For example, the students wanted more qualified native English-speaking instructors who have better knowledge of teaching skills and cultural awareness while they wanted fluent English proficiency for Korean instructors. This implies that students are not only interested in fostering their English competency through EMI courses but also interested in learning the content as well.

Lack of qualifying teachers has been a thorny issue in EMI (Suwannoppharat & Chinokul, 2015; Tsuchiya & Perez Murillo, 2015). Not only it is very hard to find qualified teachers who are fluent in English and have good knowledge of content area, setting up a standard level of English required by EMI instructors challenging as well because having an abroad education experience is not enough (British Council, 2014; Suwannoppharat & Chinokul, 2015). British Council (2014) conducted a cross-cultural study about perceptions of EMI in 55 countires and found out that 83% of the total respondents felt that there are not enough qualified EMI instructors in their countries while only 1.8% answered that they had enough qualified EMI instructors. The respondents' needs and suggestions from the current study is in agreement with British Council's (2014) report in that there needs to be more qualified instructors to provide higher quality instruction.

CHAPTER V

CONCLUSION AND PEDAGOGICAL IMPLICATION

This study explored Korean university students' satisfaction with EMI. This study drew on data that were collected through an electronic questionnaire survey to understand how much Korean university students were satisfied with current EMI courses as well as to recognize any positive relationship among English proficiency, year and major and satisfaction level with EMI. The findings from this study show that there was no meaningful or significant positive relationship between English proficiency, year and major and satisfaction level with EMI. They do show, however, that self-perception of English proficiency was positively related to the level of satisfaction with EMI. That is, the higher the self-assessment of English proficiency, the more the student was satisfied with EMI courses.

The pedagogical implications drew from this study involve two levels. First, the institute needs to not only provide multiple levels of EMI courses depending on the students' English proficiency but also provide additional supportive English classes to foster students' basic English proficiency as well as preparing them for EMI courses. It needs to be carefully and systematically involved in the hiring process to ensure qualified instructors in both language and content are employed. Second, the instructors of EMI courses should meticulously design their courses, providing additional materials for preview and review as well as summary notes and audio and video recording files for the students as references.

The limitations of this study are as follows: 1) this study involved a limited number of participants from each major and each year classification; and 2) the use of 5-point Likert scale resulted in "neutral" positions, whereas an even number of Likert scale such as 4 or 6 might have revealed more meaningful and accurate opinions from the respondents. Further studies regarding

the influence of English proficiency, year and major on satisfaction with EMI may contribute to improving this study by conducting a larger scale study with an even number of Likert scale to force the respondents to choose one side.

REFERENCES

Alavi, H., & Askaripur, M. (2003). The relationship between self-esteem and job satisfaction of Personnel in government organizations. *Public Personnel Management*, *32*(4), 591-600. http://dx.doi.org/10.1177/009102600303200409

Allen, E., & Seaman, C. (2007). Likert scales and data analyses. *Quality Progress, 40*(7), 64-65.

Baker, D., & Crompton, J. (2000). Quality, satisfaction and behavioral intentions. *Annals of Tourism Research*, *27*(3), 785-804. http://dx.doi.org/10.1016/s0160-7383(99)00108-5

Baker, R., Brick, J., Bates, N., Battaglia, M., Couper, M., & Dever, J. (2013). Summary report of the AAPOR task force on non-probability sampling. *Journal of Survey Statistics and Methodology*, *1*(2), 90-143. http://dx.doi.org/10.1093/jssam/smt008

Bethlehem, J. (2010). Selection bias in web surveys. *International Statistical Review*, *78*(2), 161-188. http://dx.doi.org/10.1111/j.1751-5823.2010.00112.x

British Council. (2014). *English as a medium of instruction – a growing global phenomenon*. University of Oxford.

Byun, K., Chu, H., Kim, M., Park, I., Kim, S., & Jung, J. (2010). English-medium teaching in Korean higher education: policy debates and reality. *Higher Education*, *62*(4), 431-449. http://dx.doi.org/10.1007/s10734-010-9397-4

Chang, J., Kim, W., & Lee, H. (2013). Identification of essential English productive skills for English-medium instruction courses: a syllabus analysis. *English Teaching*, *68*(3), 159-186. http://dx.doi.org/10.15858/engtea.68.3.201309.159

Cho, D. (2012). English-medium instruction in the university context of Korea: tradeoff between

teaching outcomes and media-initiated university ranking. *The Journal of Asia TEFL, 9*(4), 135-163.

Cho, Y., & Palmer, J. (2012). Stakeholders' views of South Korea's higher education internationalization policy. *Higher Education, 65*(3), 291-308. http://dx.doi.org/10.1007/s10734-012-9544-1

Choi, I. (2008). The impact of EFL testing on EFL education in Korea. *Language Testing, 25*(1), 39-62. http://dx.doi.org/10.1177/0265532207083744

Choi, K., Cho, W., Lee, S., Lee, H., & Kim, C. (2004). The relationships among quality, value, satisfaction and behavioral intention in health care provider choice. *Journal of Business Research, 57*(8), 913-921. http://dx.doi.org/10.1016/s0148-2963(02)00293-x

Chon, Y. (2014). Lexical threshold of L2 reading in the Korean CSAT. *Journal of British And American Studies, 31*, 341-375.

Chun, K., Campbell, J., & Yoo, J. (1974). Extreme response style in cross-cultural research. *Journal of Cross-Cultural Psychology, 5*(4), 465-480. http://dx.doi.org/10.1177/002202217400500407

Corrales, K. A., Rey, L. A. P., & Escamilla, N. S. (2016). Is EMI enough? Perceptions from university professors and students. *Latin American Journal of Content & Language Integrated Learning, 9*(2), 318.

Cronin, J., Brady, M., & Hult, G. (2000). Assessing the effects of quality, value, and customer satisfaction on consumer behavioral intentions in service environments. *Journal of Retailing, 76*(2), 193-218. http://dx.doi.org/10.1016/s0022-4359(00)00028-2

Edwards, M. (2011). The effects of the neutral response option on the extremeness of participant responses. *Journal of Undergraduate Scholarship, 6*.

Goel, S., & Salganik, M. (2010). Assessing respondent-driven sampling. *Proceedings of The National Academy of Sciences, 107*(15), 6743-6747. http://dx.doi.org/10.1073/pnas.1000261107

Grimes, D., & Schulz, K. (2002). Descriptive studies: what they can and cannot do. *The Lancet*, *359*(9301), 145-149. http://dx.doi.org/10.1016/s0140-6736(02)07373-7

Han, J., Kim, Y., & Kang, M. (2016). A study on the activation measures for communicative-centered English teaching under the criterion-referenced evaluation. *International Information Institute, 19*(12), 5697-5701.

Im, J., & Kim, J. (2015). Use of blended learning for effective implementation of English-medium instruction in a non-English higher education context. *International Education Studies*, *8*(11), 1. http://dx.doi.org/10.5539/ies.v8n11p1

Jamieson, S. (2004). Likert scales: how to (ab)use them. *Medical Education*, *38*(12), 1217-1218. http://dx.doi.org/10.1111/j.1365-2929.2004.02012.x

Jackson, K., & Trochim, W. (2002). Concept mapping as an alternative approach for the analysis of open-ended survey responses. *Organizational Research Methods*, *5*(4), 307-336. http://dx.doi.org/10.1177/109442802237114

Joe, Y., & Lee, H. (2012). Does English-medium instruction benefit students in EFL contexts? A case study of medical students in Korea. *The Asia-Pacific Education Researcher*, *22*(2), 201-207. http://dx.doi.org/10.1007/s40299-012-0003-7

Judge, T., & Bono, J. (2001). Relationship of core self-evaluations traits—self-esteem, generalized self-efficacy, locus of control, and emotional stability—with job satisfaction and job performance: A meta-analysis. *Journal of Applied Psychology*, *86*(1), 80-92. http://dx.doi.org/10.1037/0021-9010.86.1.80

Kang, A. (2007). How to better serve EFL college learners in CBI xourses. *English Teaching*, *62*(3), 69-100. http://dx.doi.org/10.15858/engtea.62.3.200709.69

Kang, H. (2012). English-only instruction at Korean universities: Help or hindrance to higher learning?. *English Today*, *28*(01), 29-34. http://dx.doi.org/10.1017/s0266078411000654

Kedzierski, M. (2016). English as a medium of instruction in East Asia's higher education sector: a critical realist cultural political economy analysis of underlying logics. *Comparative Education*, *52*(3), 375-391.

Kim, A., Son, Y., & Sohn, S. (2009). Conjoint analysis of enhanced English medium instruction for college students. *Expert Systems with Applications*, *36*(6), 10197-10203. doi:10.1016/j.eswa.2009.01.080

Kim, C., & Dembo, M. (2000). Social-cognitive factors influencing success on college entrance exams in South Korea. *Social Psychology of Education*, *4*, 95-115.

Kim, E. (2014). Korean engineering professors' views on English language education in relation to English-medium instruction. *The Journal of Asia TEFL*, *11*(2), 1-33.

Kim, E., Kweon, S., & Kim, J. (2016). Korean engineering students' perceptions of English-medium instruction (EMI) and L1 use in EMI classes. *Journal of Multilingual and Multicultural Development*, *38*(2), 130-145. http://dx.doi.org/10.1080/01434632.2016.1177061

Kim, J., Tatar, B., & Choi, J. (2014). Emerging culture of English-medium instruction in Korea: experiences of Korean and international students. *Language and Intercultural Communication*, *14*(4), 441-459. http://dx.doi.org/10.1080/14708477.2014.946038

Kim, K. (2011). Korean professor and student perceptions of the efficacy of English-medium

instruction. *Linguistic Research, 28*(3), 711-741. http://dx.doi.org/10.17250/khisli.28.3.201112.013

Kim, S., & Lee, J. (2006). Changing facets of Korean higher education: Market competition and the role of the state. *Higher Education, 52*(3), 557-587. http://dx.doi.org/10.1007/s10734-005-1044-0

Kim, Y., Kim, Y., & Loury, G. (2014). Widening gap in college admission and improving equal opportunity in South Korea. *Global Economic Review, 43*(2), 110-130. http://dx.doi.org/10.1080/1226508x.2014.920241

Kraut, R., Olson, J., Banaji, M., Bruckman, A., Cohen, J., & Couper, M. (2004). Psychological research online: Report of board of scientific affairs' advisory group on the conduct of research on the Internet. *American Psychologist, 59*(2), 105-117. http://dx.doi.org/10.1037/0003-066x.59.2.105

Krosnick, J., Holbrook, A., Berent, M., Carson, R., Hanemann, W., & Kopp, R. et al. (2001). The impact of "no opinion" response options on data quality. *Public Opinion Quarterly, 66*(3), 371-403. http://dx.doi.org/10.1086/341394

Kym, I., & Kym, M. (2014). Students' perceptions of EMI in higher education in Korea. *The Journal of Asia TEFL, 11*(2), 35-61.

Lee, C. (2005). Korean education fever and private tutoring. *KEDI Journal of Educational Policy, 2*(1), 99-107.

Lee, C., & Green, R. (1991). Cross-cultural examination of the Fishbein behavioral intentions model. *Journal of International Business Studies, 22*(2), 289-305. http://dx.doi.org/10.1057/palgrave.jibs.8490304

Loeb, S., Morris, P., Dynarski, S., Reardon, S., McFariand, D., & Reber, S. (2017). *Descriptive*

analysis in education: A guide for researchers. Institute of Education Sciences.

Mittal, V., Kumar, P., & Tsiros, M. (1999). Attribute-level performance, satisfaction, and behavioral intentions over time: A consumption-system approach. *Journal of Marketing*, *63*(2), 88. http://dx.doi.org/10.2307/1251947

Mondria, J., & Wiersma, B. (2004). Receptive, productive, and receptive+productive L2 vocabulary. In P. Bogaards & B. Laufer, *Vocabulary in a second language: Selection, acquisition, and testing*. John Benjamins Publishing Company.

Piller, I., & Cho, J. (2013). Neoliberalism as language policy. *Language in Society*, *42*(01), 23-44. http://dx.doi.org/10.1017/s0047404512000887

Portes, A. (2002). English-only Triumphs, but the costs are high. *Contexts*, *1*(1), 10-15. http://dx.doi.org/10.1525/ctx.2002.1.1.10

Reips, U. (2002). Standards for Internet-based experimenting. *Experimental Psychology*, *49*(4), 243-256. http://dx.doi.org/10.1026/1618-3169.49.4.243

Roever, C., & Phakiti, A. (2018). *Quantitative methods for second language research*. New York: Routledge.

Ruel, E., Wagner III, W.E & Gillespie, B.J. (2016). The practice of survey research: Theory and applications. Thousand Oaks, CA: Sage Publications, Inc.

Shim, Y. (2006). Voices of students from English-medium courses in Korean universities. *KATE*, *June*, 6-8.

Sohn, S., & Ju, Y. (2010). Conjoint analysis for recruiting high quality students for college education. *Expert Systems with Applications*, *37*(5), 3777-3783. http://dx.doi.org/10.1016/j.eswa.2009.11.043

Suwannoppharat, K., & Chinokul, S. (2015). Applying CLIL to English language teaching in

Thailand: Issues and challenges. *Latin American Journal of Content And Language Integrated Learning*, *8*(2), 237-254. http://dx.doi.org/10.5294/laclil.2015.8.2.8

Thach, L. (1995). Using electronic mail to conduct survey research. *Educational Technology*, *35*(2), 27-31. Retrieved from http://www.jstor.org/stable/44428960

Tongco, M. (2007). Purposive sampling as a tool for informant selection. *Ethnobotany Research and Applications*, *5*, 147. http://dx.doi.org/10.17348/era.5.0.147-158

Tsuchiya, K., & Pérez Murillo, M. (2015). Comparing the language policies and the students' perceptions of CLIL in tertiary education in Spain and Japan. *Latin American Journal of Content and Language Integrated Learning*, *8*(1), 25-35. http://dx.doi.org/10.5294/laclil.2015.8.1.3

Varga, M. (2013). Application of ICT in a company after identifying the characteristics of a crisis. *TEM Journal*, *2*(1), 57-65.

Webb, S. (2008). Receptive and productive vocabulary sizes of L2 learners. *Studies in Second Language Acquisition*, *30*(01). http://dx.doi.org/10.1017/s0272263108080042

Yip, D., Tsang, W., & Cheung, S. (2003). Evaluation of the effects of medium of instruction on the science learning of Hong Kong secondary students: Performance on the science achievement test. *Bilingual Research Journal*, *27*(2), 295-331. http://dx.doi.org/10.1080/15235882.2003.10162808

Zeithaml, V., Berry, L., & Parasuraman, A. (1996). The behavioral consequences of service quality. *Journal of Marketing*, *60*(2), 31. http://dx.doi.org/10.2307/1251929

Zucker, S. (2003). *Fundamentals of Standardized Testing*. San Antonio: Pearson.

APPENDIX

KOREAN UNIVERSITY STUDENTS' SATISFACTION WITH EMI

QUESTIONNAIRE SURVEY

1. How do you identify your gender?
    a. Female
    b. Male

2. During your current college education, which – if any - of the following type of classes have you taken? (Choose all that apply.)
    a. English-Mediated Instruction course(s): class delivered in English
    b. Face-to-face course: class meets on a regular basis on campus
    c. Online course(s): class fully taken on computer, without any lectures or supervised exercises session
    d. Exercise only course(s): class without lectures but with supervised exercise sessions
    e. Remote course(s): lecture given from a remote teacher retransmitted in the university via webcam
    f. None of the above

3. What is your classification in college?
    a. Freshman
    b. Sophomore
    c. Junior
    d. Senior
    e. Graduate

4. Which of these fields best describes your major?
    a. Computer and Information Sciences
    b. Education
    c. Engineering
    d. Foreign Languages/Literature
    e. Liberal Arts
    f. Science

5. How would you assess your English proficiency?
    a. Beginner
    b. Intermediate-low
    c. Intermediate-mid
    d. Intermediate-high
    e. Advanced

6. What was your KSAT English score level?
    a. 1

b. 2
c. 3
d. 4
e. 5
f. 6
g. 7
h. 8
i. 9

7. Why did you take EMI course(s) in college?
(Choose all reasons that apply.)

a. It was interesting from my previous experience.
b. It was a school policy to take at least one EMI course.
c. It was recommended by a friend, a senior or a professor.
d. I had no other choice due to time conflict in my schedule.
e. I thought it would help improve my English proficiency.
f. It was effective in improving my English proficiency from my previous experience.
g. The class content was only available in EMI format and I wanted to take it whatever the language
h. Other: _____ (Please indicate the reason.)

8. Do you agree or not with the following statements? Please use the scale to grade your answer.
(1=strongly disagree, 2=disagree, 3=neutral, 4=agree, 5=strongly agree)

a. My experience in EMI courses is positive.
b. I will recommend EMI courses to other friends.
c. I am willing to take another EMI course.

9. Please check all the reasons that apply for your positive experience regarding EMI courses.

a. The course was an interesting experience.
b. The course helped improve my content knowledge.
c. The course helped improve my English proficiency.
d. The instructor provided extra materials to help understand the course.
e. The course content was easy to understand thanks to my English proficiency.
f. The course content was easy to understand thanks to my instructor's English proficiency.
g. Other: _____ (Please indicate the reason.)

10. Which of the following, if any, did you find challenging when taking EMI course(s)?
(Choose all that apply.)

a. I had to spend extra time and put extra effort to understand EMI courses.
b. It was hard to understand the content because of my English proficiency.
c. It was hard to understand the content because of my instructor's English proficiency.
d. The course was graded upon English proficiency, not the understanding of the content.
e. It was difficult to participate in classroom activities or discussion due to different English proficiency levels of classmates.

f. Other: _____ (Please specify.)
g. None of the above

11. How much do you agree or disagree with the following statements? Please use the scale to grade your answer.
(1=strongly disagree, 2=disagree, 3=neutral, 4=agree, 5=strongly agree)

a. My English proficiency has improved compared to the first year I took an EMI course.
b. My satisfaction with EMI courses have increased compared to the first year I took an EMI course.
c. My impression of EMI courses has become more positive compared to the first year I took an EMI course.

12. How much do you agree or disagree that the following statement describes your situation when you took the EMI class(es). Please use the scale to grade your answer.
(1=strongly disagree, 2=disagree, 3=neutral, 4=agree, 5=strongly agree)

a. I did not fully understand the written texts due to my lack of vocabulary skills.
b. I did not fully understand the lecture due to my listening comprehension skills.
c. I had difficulties writing reports and papers in English.
d. I did not fully participate in classroom activities or discussion due to my fear of making mistakes.

13. What, if anything, do you think will help in improving your content comprehension in EMI courses?
(Choose all that apply.)

a. Bilingual teaching assistant (TA)
b. Extra effort and time in preparing EMI courses
c. Summary of the lesson provided by the instructor
d. Lecture notes or video recording of the lecture on online community
e. Other: _____ (Please specify.)
f. None of the above

14. Do you have any additional recommendations or suggestions do to improve EMI courses?