Identification of Essential English Productive Skills for English-medium Instruction Courses: A Syllabus Analysis

Ji-Yeon Chang  
(Seoul National University)  
Wooyeon Kim  
(Seoul National University)  
Heewon Lee**  
(Seoul National University)


While the number of English-medium instruction (EMI) courses has increased in many EFL universities, relatively little attention has been paid to students who encounter language difficulties in EMI courses. In order to develop language support programs for Korean undergraduate students in foreign professors’ EMI courses, this study collected and analyzed the syllabi of target courses to identify what English language skills are necessary for these courses. Findings suggest that priority should be given to teaching research-oriented English skills such as academic writing skills, with particular emphasis on how to use primary and secondary sources. Furthermore, students need to acquire speaking skills based on an understanding of readings or lectures so as to participate in discussions and to make presentations. Given the greater number of opportunities to interact with foreign professors, it is necessary as well to teach the appropriate mode of speaking to them. This study also discusses the potential of syllabus analysis as a method to complement needs analysis and to develop language support programs for specific contexts.

Key words: English-medium instruction (EMI), foreign professors, syllabus analysis

---

* This work was supported by the SNU Foundation in 2011. The authors would like to thank three anonymous reviewers for their helpful comments and suggestions.  
** Ji-Yeon Chang: First author; Wooyeon Kim: Second author; Heewon Lee: Corresponding author
1. INTRODUCTION

As part of content-based instruction (CBI) or content and language integrated learning (CLIL), English-medium instruction (EMI) has been popular in Korea because of the expectation that it would increase students' English language proficiency as well as their content knowledge (Hong, Min, & Ham, 2008; Joe & Lee, 2013; Kang, 2007; Kang & Park, 2005; Oh & Lee, 2010; Park, 2007; Shim, 2010; Yu & Chung, 2009). In the field of second/foreign language education, EMI courses are highly valued in that they provide students with opportunities for authentic language use and increase their motivation (Brinton, Snow, & Wesche, 2003; Georgiou, 2012; Snow, Met, & Genesee, 1989; Stryker & Leaver, 1997; Wiesemes, 2009). However, many universities have offered EMI courses for economic benefits rather than for educational purposes because these courses can contribute to their competitiveness in the global market (Coleman, 2006; Shohamy, 2012; Wilkinson, 2012). Korean universities are not exceptions (Byun et al., 2011; Hwang & Ahn, 2011; Kang, 2007; Kim, 2011; Yu & Chung, 2009). For example, the globalization index used for evaluating universities in Korea is based on the number of foreign professors and EMI courses (Kim, 2011), and the number of EMI courses affects the levels of financial support granted to each university (Byun et al., 2011).

As increasingly more Korean universities offer EMI courses, research has started to be conducted on needs analyses of students (Hong et al., 2008; Jeon, 2002; Kang & Park, 2005; Kim, 2002; Shim, 2010; Yu & Chung, 2009), professors (Kang & Park, 2004; Oh & Lee, 2010), or students and professors combined (Byun et al., 2011; Kang, 2007; Kim, 2011) in EMI courses. Findings of previous studies indicated that, despite their overall positive attitudes, many Korean students suffered from language difficulties in EMI courses. Given that a certain degree of language preparedness is necessary for effective EMI courses (Shaw, 1997), taking active measures is required to help students overcome the lack of language skills and adapt to EMI courses.

In the year 2011, a research project was set up at a university in Seoul, Korea to develop English language support programs for EMI courses. It particularly aimed to increase Korean students’ preparation for foreign professors’ EMI courses, based on the assumption that they would face higher language barriers than their counterparts in Korean professors’ EMI courses. In order to design the program curriculum, the syllabi of foreign professors’ EMI courses were collected and analyzed to complement a preliminary EMI study on students’ needs (Hong et al., 2008) and to identify systematically what skills are essential or what skills should be taught to guarantee students’ successful adaptation to foreign professors’ EMI courses. This paper presents the results of the syllabus analysis and discusses its implications for successful preparation for EMI courses as well as the development of language support programs.
2. RESEARCH BACKGROUND

2.1. English-medium Instruction

Some studies on Korean EMI courses included both teaching English through English (TETE) or teaching English in English (TEE) and content-based instruction (CBI) (Jeon, 2002; Kim, 2002; Kim, 2011). On the other hand, other EMI research centered on CBI courses such as Introduction to English Linguistics, Introduction to Applied English Linguistics, and English Language Teaching and Theories rather than TETE/TEE (Ha, 2011; Hwang & Ahn, 2011; Park, 2007). In fact, EMI studies in Korea have established their theoretical backgrounds on content-based instruction (Hong et al., 2008; Kang, 2007; Kang & Park, 2005; Oh & Lee, 2010; Shim, 2010) or content and language integrated learning (Yu & Chung, 2009). In line with this research stream, the present EMI study also focused on CBI/CLIL to the exclusion of TETE/TEE.

As a component of CBI/CLIL, EMI is characterized by its “dual-focused, learning and teaching approach in which a non-language subject is taught through a foreign language, with the dual focus being on acquiring subject knowledge and competences as well as skills and competences in the foreign language” (Georgiou, 2012, p. 495). These courses are highly valued for their “potential to enhance students’ motivation, to accelerate students’ acquisition of language proficiency, to broaden cross-cultural knowledge, and to make the language learning experience more enjoyable and fulfilling” (Stryker & Leaver, 1997, p. 5). Brinton et al. (2003) noted that CBI, by providing “rich second language input in relevant context” (p. 9) as well as opportunities for output, leads to success in acquiring the target language. Georgiou (2012) even regarded the integration of content and language as “the most recent developmental stage of the communicative language teaching (CLT) approach” (p. 495).

Brinton et al. (2003) presented three CBI models, i.e., theme-based language instruction, sheltered content instruction, and adjunct language instruction, which differ in goals, institutions, instructors, students, and assessments. Among them, in the sheltered content instruction model, top priority is given to the subject matter which is taught by content instructors rather than language teachers. The class consists of nonnative English speakers. The teacher assesses students’ subject matter knowledge rather than their English proficiency. Since EMI courses in Korea are often composed of Korean students and content professors without great interest in students’ language development, they are usually classified as the sheltered model (Ha, 2011; Kang & Park, 2005; Park, 2007). Kang and Park (2005) and Park (2007) considered Korean EMI courses different from typical CBI ones in that they are targeted at post-secondary students. On the other hand, Brinton et al. (2003) viewed the sheltered model as not “appropriate for lower levels of second
language proficiency because of the inherent linguistic and conceptual complexity of academic subject matter.” (p. 20)

As for necessary conditions for successful learning outcomes, Stryker and Leaver (1997) suggested that courses should be structured according to the subject matter, provide opportunities for authentic input and output, and consider their students' needs. Given that instructors in the sheltered model are specialists in the subject matter rather than language education, they “need to be particularly sensitive to the needs and abilities of second language learners” (Brinton et al., 2003, p. 21). In particular, Snow et al. (1989) urged that “language teaching must be carefully considered and planned” (p. 204) because students' language proficiency is not automatically improved by integrating content and language.

2.2. Needs Analyses of EMI Courses in Korea

Previous needs analyses of EMI courses in Korea can be grouped into three categories, depending on whose needs were analyzed. The first group of research was targeted at instructors (Kang & Park, 2004; Oh & Lee, 2010). Through interviews and questionnaires, Oh and Lee (2010) investigated professors’ opinions about EMI courses. The respondents expected that EMI courses would increase the English ability of their students and themselves, despite the fact that they had to provide EMI courses due to the demands from their college or the international trend. As necessary skills for EMI instructors, they pointed out the ability to control the contents and the pace of courses according to students’ English proficiency levels, along with the ability to create a positive environment for students’ active participation. They considered that their English proficiency played an important role in EMI courses. For students’ better understanding, they often resorted to many visual materials and increased learner-centered activities. Given the lack of English proficiency of students and instructors, they suggested that the university should provide systematic programs to support EMI instructors. Kang and Park (2004) focused on the needs of engineering professors who were teaching EMI courses. Unlike the respondents in Oh and Lee’s (2010) study, the professors in this study answered that they voluntarily chose to teach EMI courses. Nevertheless, they were also under much stress and regarded teaching in English as a burden. In particular, they highlighted the lack of their students’ English proficiency such as poor speaking and listening skills as a serious problem, which resulted in ineffective communication between professors and students. Therefore, they expressed the strong need for “pre-EMI language courses” (p. 88) and English composition courses as well as native English speaking professors who would provide language feedback.

In the second group of research, the needs of both students and professors in EMI courses were analyzed (Byun et al., 2011; Kang, 2007; Kim, 2011). Kang (2007) collected primary data from students by means of questionnaires and interviews and asked EMI
professors to submit teaching guidelines for better CBI courses. By comparing students’ attitudes in EMI and KMI courses, she found that EMI students, who had high motivation and commitment, displayed positive attitudes toward EMI courses in terms of the acquisition of English skills and content knowledge. At the same time, however, they suffered from a lack of English proficiency, the burden of the English language, and the feeling of frustration. Based on these findings, Kang emphasized the importance of students’ effort to prepare themselves for EMI courses and instructors’ systematic guidance for students’ better understanding. She also suggested that the role of existing general English programs should be enhanced as a preliminary to EMI courses.

Likewise, in Byun et al.’s (2011) study, students showed overall satisfaction with EMI courses and agreed with the contribution of EMI courses to improving their English proficiency. However, the respondents, including students and professors, complained about a lack of consideration of their English proficiency, few support systems, and the lack of appropriate EMI instructors. Furthermore, students at the colleges of science, engineering, and nursing expressed relatively low satisfaction, placing less importance on English. Kim (2011) analyzed and compared students’ needs according to the levels of English proficiency. She also differentiated the results of TETE courses from those of CBI courses. As a result, she discovered that beginners and some intermediate students had great difficulty with EMI courses and that students did not agree with the need of CBI courses, preferring TETE courses for oral communication. Both professors and students in her study felt that a certain level of English proficiency was necessary for effective EMI courses.

The last group of research has focused on the needs of students in EMI courses (Hong et al., 2008; Jeon, 2002; Kang & Park, 2005; Kim, 2002; Shim, 2010; Yu & Chung, 2009). Kim (2002) collected students’ official course evaluations of EMI courses and analyzed them via both qualitative and quantitative methods. Like Kim’s (2011) study, she compared evaluation results according to the types of EMI courses and the instructors’ backgrounds. She found that students did not complain about the English use of Korean instructors. Most of their negative comments pertained to their own anxiety, tests or assignments, and feedback, while positive comments centered on enhanced motivation. The forward stepwise regression analysis showed that the evaluations of materials, tests/assignments, and instructors’ rapport with students were significant in predicting students’ motivation. The acquisition of knowledge was better predicted by the evaluations of materials, workload, and instructors’ teaching approaches.

Jeon (2002) also took advantage of the students’ official course evaluations students made. She analyzed these evaluations according to the class size as well as the types of courses and the first language of the EMI instructors. Her study demonstrated that there was no significant difference between EMI and non-EMI courses, except for the amount of
studying, which she attributed to the students' burden to study both the English language and content knowledge. Just as in Kim's (2002) study, the students' evaluations of foreign and Korean EMI instructors did not differ from each other. However, the students positively evaluated native English speaking professors for showing more interest in them. Finally, rather than small or large classes, a medium-sized class consisting of 20-40 students was considered optimal for EMI courses.

Kang and Park (2005) and Shim (2010) focused on the needs of students in EMI courses offered by the colleges of engineering and social sciences, respectively. In Kang and Park's (2005) study, engineering students responded that they mainly used English in lectures and presentations and Korean in in-class discussions and small-group activities. Like students in the aforementioned studies (Jeon, 2002; Kim, 2002), they also did not care about the first language of their instructors. Students at higher English proficiency levels were likely to show better performance in EMI courses, including less difficulty and stronger preference. Given that English proficiency is an important factor for success in EMI courses, Kang and Park suggested “bridge courses” (p. 169) to facilitate students' successful adaptation to EMI courses. In Shim's (2010) study, the students' attitudes differed depending on whether they had to take EMI courses. For example, those who had no choice but to take EMI courses held more negative opinions of EMI courses than their counterparts. In general, the students had trouble understanding and preparing for EMI courses despite their positive attitudes toward satisfaction, confidence, and motivation.

The most negative attitudes toward EMI courses were expressed by the students in Yu and Chung's (2009) study. They did not feel the need for EMI courses, nor did they have the motivation to take EMI courses. They were reluctant to take EMI courses due to their lack of English proficiency, which would inhibit an understanding of content knowledge. Overall, they did not hold positive expectations for EMI instructors and courses, although the students in EMI courses showed less negative attitudes than their counterparts. In that sense, Yu and Chung suggested that there should be some supportive measures to unburden students of the English language.

In a preliminary analysis of EMI students' needs, Hong et al. (2008) discovered that good EMI courses were characterized by instructors' effective teaching with sufficient guidelines, an environment which encourages students' English use, and comprehensive evaluations without being influenced by students' poor English proficiency. More than two-thirds of the students responded that they were never or rarely prepared for EMI courses. In particular, they experienced difficulty in writing papers, participating in discussions, and making presentations. Therefore, they requested systematic English language support programs for EMI courses.

Although the aforementioned studies acknowledged the possibility that EMI courses could be beneficial for Korean college students to improve both English skills and content
knowledge, they also pointed out the language difficulties that their students underwent. These studies illustrated that students in EMI courses had to handle their language problems on their own without enough support from their professors and others. Therefore, they emphasized the need to increase students' language preparedness for effective EMI courses in the forms of pre-EMI language courses (Kang & Park, 2004), bridge courses (Kang & Park, 2005), or other systematic English language support programs (Hong et al., 2008; Yu & Chung, 2009).

2.3. Syllabus Analysis

A syllabus serves as “the fundamental source of information for students” (Canseco & Byrd, 1989, p. 306). Graves, Hyland, and Samuels (2010) considered it “a contract between students and instructors” (p. 296) that “mediates the relationship between students and instructors” (p. 297). A syllabus usually consists of the following components:

1. Name/number of course
2. Time/place of class meetings
3. Instructor's name/office number
4. Information about office hours of instructor
5. Prerequisites for the course
6. Course objectives and an outline of course content
7. Course description and rationale for course (sometimes wording from the institution’s catalog is given)
8. Explanation of grading system (or evaluation process)—test dates are often given
9. Required textbooks
10. Class schedule (topics for discussion, assignments, due dates, and so forth)
11. Rules of the institution/instructor (about attendance, plagiarism, cheating, and so forth)

(Connect & Byrd, 1989, pp. 306-307)

Analyzing a syllabus is not a new method as reflected in previous studies (Canseco & Byrd, 1989; Graves et al., 2010; Zhu, 2004), and these studies centered on investigating writing tasks. Syllabus analyses were often done to help nonnative English speaking students and their ESL instructors identify necessary writing assignments and genres (Canseco & Byrd, 1989; Zhu, 2004). For example, given the increasing number of foreign students in the graduate programs of business administration, Canseco and Byrd (1989) collected syllabi from graduate business administration courses and analyzed the writing
assignments required of graduate students. In addition, they investigated the roles of prompts that professors provided for their students. They identified seven types of writing, including exams, problems and assignments, projects, papers, case studies, reports, and miscellaneous writing assignments. Among them, the type of written exams was required most frequently. They also found that different terms were used to describe the same types of writing assignments. Based on these findings, they argued that international students need to be familiar with these various terms and also need to identify what their professors asked of them by reading prompts for writing assignments. As for ESL programs, they suggested that English instructors should focus on research-based writing with specific topics rather than the process approach to free writing, which is very unlikely to be required of graduate business administration students.

While Canseco and Byrd (1989) examined writing assignments in graduate business programs, Zhu (2004) analyzed both graduate-level and undergraduate-level writing assignments required in business courses. Along with syllabi, he also collected other data such as student writing samples and faculty interviews. Findings showed that there were nine genres in business courses, including case analyses, article or book reports, business reports, business proposals, design projects, library research, reflection papers, letters and memos, and research proposals or papers. Even within business courses, there were different student roles and data types, depending on the genre of writing assignments. For example, business students were required to perform either institutional or professional roles for a wider readership. Unlike typical academic writing assignments, visual impressions were important in business writing assignments to effectively express ideas. Furthermore, business students had to deal with data from a variety of sources and work in cooperation with others to complete assignments.

Graves et al. (2010) conducted their research at a liberal arts college to investigate writing assignments for undergraduate students. They classified assignments with their own coding modules. Findings showed that more than half of the writing assignments were classified as papers and that the humanities programs generally demanded more writing from their students. Unlike Canseco and Byrd’s (1989) study, they regarded presentations as part of writing assignments, given the fact that students prepared handouts, slides, or scripts. They also found that professors did not properly consider the process writing approach, specific learning goals, grading rubrics, and opportunities to reflect feedback, all of which are critical to the systematic development of students’ writing skills. There was no significant difference between upper-level and lower-level courses in terms of the length and value of writing assignments.

As shown in the above-mentioned studies, analyzing syllabi can serve to extract tasks and skills in a more systematic and direct manner. Therefore, it can be of great help in triangulating previous needs analyses. In the present research project, which aimed at
developing English language support programs for students in foreign professors’ EMI courses, this syllabus analysis was conducted to identify essential English productive skills on which the programs would focus with limited time and resources. The research questions that guided the present study were as follows:

1. What are English writing tasks and skills required in foreign professors’ EMI courses?
2. What are English communication tasks and skills required in foreign professors’ EMI courses?
3. What are English presentation tasks and skills required in foreign professors’ EMI courses?

3. METHOD

3.1. Data Collection

A small-scale research project for students in EMI courses was launched at a top research university in Seoul, Korea in 2011. Based on the assumption that students would experience more serious language difficulties in EMI courses where they do not share their mother tongue with professors, it particularly aimed to develop English language support programs for Korean undergraduate students in foreign professors’ EMI courses. As part of the project, a syllabus analysis was conducted to design the curriculum of the programs as well as to complement the findings of the preliminary needs analysis (Hong et al., 2008). At the time of the research, there were 251 foreign professors at this university, including both tenured and non-tenured faculty members.

For the fall semester which began on the first day of September, fifty-three undergraduate EMI courses were scheduled to be taught by foreign professors, excluding language courses like College English and Advanced English. Among these courses, twenty-nine syllabi were uploaded to the university portal site by August 1. Except for the syllabus for Introduction to Philosophy, for which the file was unavailable, twenty-eight syllabi were analyzed, and their courses were taught by nineteen professors. For a complete list of the twenty-eight courses, see Appendix.

3.2. Data Analysis

After twenty-eight syllabi were collected, all of their contents, including the following sections, were examined: course introduction, course descriptions, course objectives, course aims, course prerequisites, course requirements, grading policies, evaluation,
guidelines on homework or assignments and mid-term/final exams, course outlines, and course schedules. In the first round of coding, every task which appeared in the syllabi was individually coded with the aid of MAXQDA\(^1\) (Version 10), a computer-assisted qualitative data analysis software (CAQDAS) package. In the second round of coding, coded tasks were compared with one another and grouped into several task groups. The final categories consisted of English Writing, English Communication, English Presentation, Lectures, English Reading, and Others. “Others” included homework/assignments, quizzes, and mid-term/final exams, without any mention of specific tasks in the syllabi, as in Excerpts (1) and (2). Exams made up of short-answer questions only, as in Excerpt (3), were also classified as “Others.”

1. Assignments - 30%
   
   Midterm exam - 30%
   
   Final exam - 40% (Discrete Mathematics)

2. Final exam will be cumulative, but with a heavy emphasis on the materials after the midterm. You may bring a non-programmable calculator to the exams (cell phones, scientific or business calculators are not permitted). (Fundamentals of Economics)

3. There will be two take-home exams in the middle and at the end of semester. They will be made up of short answer questions. (Southeast Asia History and Maritime Trade)

In the final stage of the analysis, specific English skills were extracted from each category based on the task groups. The overall analysis basically followed the grounded theory approach (Corbin & Strauss, 2008), i.e., a bottom-up approach that analyzes qualitative data without predetermined categories, using MAXQDA (Version 10) for coding and Microsoft Office Excel 2003 for quantitative analysis. Since the purpose of this study was to identify tasks in EMI courses and extract essential skills from them, corresponding tasks in all of the tables (Tables 1-3 and Appendix) are denoted by 1, regardless of their exact numbers per course.

The preliminary study which investigated students' needs and difficulties in EMI courses (Hong et al., 2008) suggested language support programs for English productive skills rather than those for English comprehension skills. Therefore, the categories of English Writing, English Communication, and English Presentation were mainly used for program

\(^1\) http: // www.maxqda.com
development and are presented in this paper as well. On the other hand, since the information the syllabi provided with regard to Lectures, English Reading, and Others was extremely limited and was rarely used for program development, these three categories are excluded from the present paper.

4. RESULTS AND DISCUSSION

4.1. English Writing Tasks and Skills

Among twenty-eight courses whose syllabi were analyzed, eighteen courses (64.29%) required English writing from their students (see Table I), and twelve of them required papers or essays ranging from short writing assignments, short essays, and final essays to written papers, term papers, and journal articles. This result is consistent with that of Graves et al. (2010), who found that the genre of papers was the most frequent in undergraduate students' writing tasks at a liberal arts college, while written exams were most often required in graduate business administration courses (Canseco & Byrd, 1989). While non-major courses like Women's History, Music of the World, and Introduction to Korean Musical Culture required short essays or writing assignments, major courses like Regional Integration in Europe, Seminar in Korean History 2, and Tourist Region Landscape Planning and Development demanded more than ten-page long research papers.

(4) Write a 500-800 word essay (roughly two to three pages) detailing a performance event and its relevance to class materials and lectures (Introduction to Korean Musical Culture)

(5) The term paper should be 10-15 pages continuous text (1.5 line spacing, common fonts and margins), bibliography and annexes are not included. The term paper must be the sole authorship of the student. (Regional Integration in Europe)

As shown in Excerpt (4), even in an essay for a non-major course, students were required to link their opinions to what they learned in class rather than expressing their own ideas freely, which are often practiced in general English program courses (Canseco & Byrd, 1989). Furthermore, major courses strongly encouraged students to integrate references and develop their papers into research articles as in (6) and (7).
(6) Those are able to use primary materials in any of the East Asian, Southeast Asian or other are especially encouraged to do so, but please discuss your choice of materials with the instructor. Bonus marks will be awarded for use of primary source materials in their paper. (Southeast Asia History and Maritime Trade)

(7) The best papers will refer to relevant research and will provide a conclusion about the topic by evaluating the research. (Tourist Region Landscape Planning and Development)

This tendency of stressing the importance of students’ understanding of previous literature is clearly reflected in another task group: reviews and summaries. This group includes the following tasks: book reviews, written book reports, weekly article and chapter summaries, short comment papers on lectures and topics, weekly assignments for class questions, and weekly summary or analysis for readings. Students in seven courses needed to summarize or review assigned readings.

(8) Writing a one-page summary of the articles or chapters for each class - 20% (Women's History)

(9) TWO written book reports have to be handed in, dealing with Buddhism in East Asia; one book may be on a related subject (e.g., Indian Buddhism, Chinese Taoism) but permission is needed from me. (Buddhist Culture in East Asia)

In three courses, students had to take mid-term or final exams which included written responses.

(10) The exams may include short answers, term definitions, instrument identifications, an essay, and identifications and discussions of concepts from the required listening. (Music of the World)
TABLE 1
A List of Courses Which Required English Writing

<table>
<thead>
<tr>
<th>Courses</th>
<th>Papers/ Essays</th>
<th>Reviews/ Summaries</th>
<th>Exams</th>
<th>Miscellaneous</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fundamentals of Economics (M)</td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Southeast Asia History and Maritime Trade (M)</td>
<td>1</td>
<td>1</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Implication of Chinese Traditional Culture and the Contemporary China (M)</td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Seminar in Korean History 2 (M)</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Topics in Western History (M)</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Buddhism in Korea (M)</td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Topics in Contemporary Aesthetics (M)</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Regional Integration in Europe (M)</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Field Techniques and Exercises (M-SE)</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Landscape Materials and Construction (M-SE)</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tourist Region Landscape Planning and Development (M-SE)</td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Selected Topics Seminar 3 (M)</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Women's History (N)</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Southeast Asia and the Maritime Silk Road (N)</td>
<td>1</td>
<td>1</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Literati Culture in East Asia (N)</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Buddhist Culture in East Asia (N)</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Music of the World (N)</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Introduction to Korean Musical Culture (N)</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>18 courses</td>
<td>12</td>
<td>7</td>
<td>3</td>
<td>8</td>
</tr>
<tr>
<td>100%</td>
<td>66.67</td>
<td>38.89</td>
<td>16.67</td>
<td>44.44</td>
</tr>
</tbody>
</table>

Note 1. The number “1” denotes that corresponding tasks exist rather than referring to the exact number of tasks or codes.

Note 2. (M) = major courses; (M-SE) = major courses offered by science and engineering departments; (N) = non-major courses

Eight courses required other types of writing, including translation, a request for regrading, a field book and a small report after the excursion, a case study report, weekly diary-like listening journals, and annotated bibliographies.

(11) Following each field excursion students prepare a field book and a small report in the week following the excursion, which also contributes to about a third of the total core. (Field Techniques and Exercises)
A Listening Journal in which students are expected to record notes about the musical instruments, elements, and contexts for 1 listening file (ETL) each week that accompanies the text (15% of final grade) (Introduction to Korean Musical Culture)

In particular, annotated bibliographies were required in two courses by the same professor. They served as references for students’ final papers as in (13).

The annotated bibliography should be between 3-5 pages, double-spaced, and of font-size Times Roman 12. It shall consist of a one-page outline of the final paper topic that the student wishes to work on. This bibliography should explain the choice of topic, how this paper will contribute to the student’s understanding of Modern Southeast Asia and imperialism, and state his or her hypothesis and how he or she wishes to go about doing research for the paper. It should be followed by a list of books and articles that the student finds pertinent to the paper. Each of these entries should be accompanied by a short paragraph explaining the argument and significance of the entry. The student should start thinking about a possible topic as early as possible, and discuss the topic with the instructor, latest by the 5th week. (Southeast Asia History and Maritime Trade)

Those courses which demanded English writing tasks seem to have assumed that their students were already proficient at academic English writing. Among the twenty-eight courses, only one course, Implication of Chinese Traditional Culture and the Contemporary China, was scheduled to provide instructions on academic English writing in class. Two courses provided by one instructor, Music of the World and Introduction to Korean Musical Culture, included written guidelines in their syllabi about the process, organization, and criteria of academic English writing. Except for these three courses (10.71%), students had to acquire necessary English writing skills on their own to accomplish writing tasks, including research papers. One syllabus clearly mentioned this as in (14):

Note 2: This class does not presume familiarity with the basic concepts of Buddhism, but it does presume basic knowledge of academic English. (Buddhist Culture in East Asia)

Although many courses required students to review or integrate previous literature, only six courses including Music of the World and Introduction to Korean Musical Culture explicitly mentioned plagiarism and cautioned against it in their syllabi.
Identification of Essential English Productive Skills for English-medium Instruction Courses

(15) Plagiarism: Plagiarism or the copying and use of the phrasing and ideas of others without citation, attribution or quotation marks, will not be tolerated. It may result in failure of a course or expulsion from the university. (Southeast Asia and the Maritime Silk Road)

The analysis of English writing tasks which appeared in foreign professors’ syllabi demonstrates that students need to have appropriate academic English writing skills with regard to the use of primary and secondary sources. In addition, students are also required to have an understanding of academic ethics and plagiarism, lest they find themselves in deep trouble. In particular, findings show that, instead of copying, which can amount to plagiarism, summarizing and paraphrasing skills in English are very necessary for Korean students to survive in foreign professors’ EMI courses.

In order to successfully accomplish writing tasks, it would be desirable to possess a certain level of English proficiency such as the ability to organize and express one’s ideas clearly in English with a sufficient amount of vocabulary. However, this usually takes a long time to develop and can hardly be achieved through a support program with limited time and resources. Furthermore, what is essential in foreign professors’ EMI courses includes academic English writing skills such as summarizing or paraphrasing previous literature with appropriate references and citations. Therefore, unlike general English program (GEP) courses which aim to improve students’ English skills overall, the EMI support program for English writing needs to place a higher priority on research-oriented academic English writing skills.

Among the eighteen courses which demanded English writing from their students, twelve (66.67%) were major courses, while six (33.33%) were non-major ones. In particular, those courses where students had to write a relatively longer research paper (e.g., 12-15 pages in Seminar in Korean History 2, 10-15 pages in Regional Integration in Europe, and 3000 words in Tourist Region Landscape Planning and Development) were all major courses. Despite the widespread assumption that writing skills are not necessary in undergraduate science and engineering courses, three major courses—Field Techniques and Exercises, Landscape Materials and Construction, and Tourist Region Landscape Planning and Development—which assigned writing tasks were offered by science and engineering departments. Given that two of the three courses were taught by the same professor, they can be considered exceptions. However, there is no doubt that the needs of a variety of courses should be taken into account in designing a support program for English writing. Finally, none of the science and engineering courses required students to review previous literature as separate writing tasks, although these were assigned in both major and non-major courses of humanities and social sciences. Instead, the science and engineering courses demanded term papers, field books, small reports, or case study
4.2. English Communication Tasks and Skills

As shown in Table 2, communication tasks appeared in sixteen syllabi (57.14%). While four syllabi merely said that classroom performance or class participation would be encouraged, eleven courses explicitly mentioned class discussion in their syllabi as follows: class discussions, class discussions (questions), intensive class or group discussions, out-of-class discussions (online & offline), free class discussion and debate, class discussion (the format of class discussions), discussion and giving answers to the professor's questions, and class discussion (monitored) + questions encouraged. Among them, only one course, Selected Topics Seminar 3, included class debates as well as discussions, and the course Theories in Korean Language Education as a Foreign Language demanded both online and offline discussions. For active class discussions, rather than expressing ungrounded opinions, students had to prepare themselves based on weekly readings or lectures.

(16) Students will be expected to read the assigned material (about 30-50 pages per week) and be prepared to discuss it during weekly meetings of the course. Grades will be assessed both on class participation and a final written paper in English of 12-15 pages. (Seminar in Korean History 2)

(17) READING is one of the core activities for this class; students are asked to read and report on the assigned readings and be prepared to answer questions related to the readings in discussions. (Buddhism in Korea)

Some courses even prepared discussion formats or questions that would guide in-class discussions as follows:

(18) Students will be expected to participate in class discussions. Details of the format of class discussions will be announced later. (Southeast Asia and the Maritime Silk Road)
(19) You should always arrive prepared; questions will be given at the end of a lesson, and students should prepare critically considered answers by the next class; sometimes you will be asked to do this in the light of the reading. (Buddhist Culture in East Asia)

In those courses which strongly encouraged students' participation, students' activities were often monitored and recorded to include them in students' final grades, as in (20) and (21).

(20) We will record your attendance at each class session on the class role sheet. Participation will also be monitored through in-class discussion. Students are expected to contribute to in-class discussions and are encouraged to ask questions freely. (Music of the World)

(21) The presentations and the readings should be subject of intensive discussions during class. Each student should actively participate in these discussions. Mere attendance is no active participation and results in the participation grade “b-.” (Regional Integration in Europe)

Six courses required students to meet their professors on a one-to-one basis in order to report the progress of their work or to discuss their presentations or term papers.

(22) You will consult with the professor as indicated in the class schedule about progress on your work. (Landscape Materials and Construction)

(23) It is mandatory that the student meets the instructor in advance to discuss the paper's subject. (Regional Integration in Europe)

Finally, three courses held field trips, including indoor or outdoor activities, as shown in (24). It can be assumed that students in these courses were required to have appropriate English speaking skills to communicate with foreign professors in close proximity.

(24) The class mainly comprises indoor exercises, but also includes outdoor activities. There are about 5 outdoor classes on the Campus of *****, where different rocks put in gardens and walls offer good opportunities to study many features, like folds, joints, veins, and shear zones with their sense of shear indicators. Skills learned are put into practice during two Saturdays of fieldwork around Seoul (Surisan; polyphase deformation in Proterozoic metamorphic rocks and
Gwanaksan; measuring brittle structures in granite. (Field Techniques and Exercises)

**TABLE 2**

A List of Courses Which Required English Communication

<table>
<thead>
<tr>
<th>Courses</th>
<th>Class Discussion</th>
<th>Discussion/Meeting with the Professor</th>
<th>Participation</th>
<th>Field Trips</th>
</tr>
</thead>
<tbody>
<tr>
<td>Southeast Asia History and Maritime Trade (M)</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Implication of Chinese Traditional Culture and the Contemporary China (M)</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Seminar in Korean History 2 (M)</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Buddhism in Korea (M)</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Topics in Contemporary Aesthetics (M)</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Regional Integration in Europe (M)</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Readings in Anglo-American Law (M)</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Field Techniques and Exercises (M-SE)</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Landscape Materials and Construction (M-SE)</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tourist Region Landscape Planning and Development (M-SE)</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Theories in Korean Language Education as a Foreign Language (M)</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Selected Topics Seminar 3 (M)</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Southeast Asia and the Maritime Silk Road (N)</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Buddhist Culture in East Asia (N)</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Music of the World (N)</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Introduction to Korean Musical Culture (N)</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>16 courses</strong></td>
<td><strong>11</strong></td>
<td><strong>6</strong></td>
<td><strong>4</strong></td>
<td><strong>3</strong></td>
</tr>
<tr>
<td><strong>100%</strong></td>
<td><strong>68.75</strong></td>
<td><strong>37.5</strong></td>
<td><strong>25</strong></td>
<td><strong>18.75</strong></td>
</tr>
</tbody>
</table>

**Note 1.** The number “1” denotes that corresponding tasks exist rather than referring to the exact number of tasks or codes.

**Note 2.** (M) = major courses; (M-SE) = major courses offered by science and engineering departments; (N) = non-major courses

The English communication tasks show that class discussion should be preceded by an understanding of class readings and lectures. Rather than offering unsupported opinions or
expressing their own feelings freely, students are expected to exhibit their understanding of what they have read or heard and to contribute to class discussion. In addition, the findings suggest that it is necessary for students to learn how to make conversation with professors as well as how to promote active discussion with classmates. In particular, given more opportunities to talk with foreign professors during office hours or field trips, students need to know the appropriate mode of English speaking such as polite ways of agreeing or disagreeing and asking or answering questions in case they inadvertently offend their professors.

Among the sixteen courses in which communication tasks appeared, all of the non-major courses (Southeast Asia and the Maritime Silk Road, Buddhist Culture in East Asia, Music of the World, and Introduction to Korean Musical Culture) required students to participate in class discussion, while seven out of the twelve major courses demanded it. On the other hand, none of the three science and engineering major courses (Field Techniques and Exercises, Landscape Materials and Construction, and Tourist Region Landscape Planning and Development) mentioned class discussion in their syllabi. Instead, students in these courses were scheduled to meet with their professors or conduct fieldwork. Due to the fact that two of them were taught by the same professor and that the size of the data is very limited, it would be premature to draw a conclusion from these data. However, what is certain is that science and engineering students in these courses need to equip themselves with appropriate one-to-one English communication skills for their successful adaptation.

4.3. English Presentation Tasks and Skills

Eight courses (28.57%) required students to make English presentations in class (see Table 3). Among them, two courses merely mentioned oral presentation or class presentation in their syllabi and thus are classified as “Miscellaneous.” Except for these two courses, the other six courses provided detailed presentation guidelines on what students were to present, and they were divided into three groups according to the presentation contents, i.e., paper presentation, project presentation, and presentation on given topics. First, presentations on final term papers were requested in four courses as follows:

(25) There will be opportunities to present a draft of the paper for review and discussion (informal presentations in tutorials during the semester - see schedule). (Tourist Region Landscape Planning and Development)

(26) Students might be required to give a 10-15 min presentation of their paper in the last week of class. (Southeast Asia History and Maritime Trade)
TABLE 3
A List of Courses Which Required English Presentation

<table>
<thead>
<tr>
<th>Courses</th>
<th>Paper Presentation</th>
<th>Project Presentation</th>
<th>Presentation on Given Topics</th>
<th>Miscellaneous</th>
</tr>
</thead>
<tbody>
<tr>
<td>Southeast Asia History and Maritime Trade (M)</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Topics in Contemporary Aesthetics (M)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Regional Integration in Europe (M)</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Astronomical Observation and Lab 2 (M-SE)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Landscape Materials and Construction (M-SE)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tourist Region Landscape Planning and Development (M-SE)</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Selected Topics Seminar 3 (M)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Southeast Asia and the Maritime Silk Road (N)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

| 8 courses | 4 | 3 | 2 | 2 |
| 100%       | 50 | 37.5 | 25 | 25 |

Note 1. The number “1” denotes that corresponding tasks exist rather than referring to the exact number of tasks or codes.

Note 2. (M) = major courses; (M-SE) = major courses offered by science and engineering departments; (N) = non-major courses

In addition, students in three courses were required to make presentations on projects or case studies that they would carry out during the semester.

(27) Through this lecture, students are divided into several groups and work on an observational project using a spectrograph. They analyze the acquired data and summarize the results. In the last class, they will present the results in English. (Astronomical Observation and Lab 2)

Finally, two courses demanded class presentations on topics assigned by their professors. Therefore, students had to be familiar with not only weekly readings but also other relevant studies to prepare for their presentations.
(28) The presentation will deal with the weekly topic. It is mandatory that the student meets with the instructor at least one week in advance to discuss the presentation. The initiative for this meeting has to come from the student. For its preparation, the students should feel free to acquire information beyond the literature provided by the reader. It should not exceed 20 min. and be given in a freely spoken manner, not simply read (PPTs are welcome). (Regional Integration in Europe)

None of the above syllabi provided any resources for English presentation, and thus students had to prepare on their own with their limited English skills and little prior experience. These findings also show that, in order to make successful English presentations, it is necessary for students to report their research in English within the time allowed. Therefore, students would need good summarizing skills in spoken English as well as effective presentation strategies. Furthermore, similar to English writing, the topics of English presentation are very research-oriented. Students are thus expected to use proper academic or technical vocabulary based on their thorough understanding of given topics through their own research or literature review.

Among the eight courses, three (37.5%) were major courses offered by science and engineering departments. Interestingly, all these courses uniformly requested project presentations, a task not found in any other course. Two of them (Landscape Materials and Construction and Tourist Region Landscape Planning and Development) were taught by the same professor, who assigned writing and communication tasks as well. Finally, only one non-major course, Southeast Asia and the Maritime Silk Road, demanded student presentations.

5. CONCLUSION AND PEDAGOGICAL IMPLICATIONS

Byun et al. (2011) argued that “we are not facing whether to adopt EMI but, rather, how to effectively implement EMI at higher education institutions, how EMI can be maximized to meet policy objectives, and how to reduce EMI’s side effects” (p. 447). In that sense, the issue of students’ language difficulties in EMI courses should not be underestimated, because EMI “leads to discrimination against students whose English proficiency is not high and who are prevented from maximizing their academic knowledge” (Shohamy, 2012, p. 198). To complement students’ lack of language skills, additional measures were recommended, including pre-EMI language courses (Kang & Park, 2004), bridge courses (Kang & Park, 2005), and remedial English courses (Joe & Lee, 2013). In particular, Shaw (1997) proposed “a twelve- to fifteen-hour training workshop for learners before the CBI
course begins” (p. 282) based on the observation that “students in classes where a foreign language is the medium of instruction need help with reading skills, interactive listening skills, organizing and expressing ideas in writing, organizing their own learning, identifying and deploying successful language learning strategies, and seeking out and dealing with appropriate feedback on their performance” (pp. 281-282).

In accordance with these suggestions, a pilot research project was implemented to develop English language support programs for undergraduate students in foreign professors’ EMI courses. In order to design the program curriculum, a syllabus analysis was conducted, which is considered very effective in extracting essential tasks and skills as shown in earlier syllabus analyses (Canseco & Byrd, 1989; Graves et al., 2010; Zhu, 2004). Its main difference is that this study included communication and presentation as well as writing.

Findings consistently show that foreign professors’ EMI courses required students to possess highly research-oriented speaking and writing skills in English. These skills seem to be more advanced forms of cognitive/academic language proficiency (CALP) in Cummins’s (1980) terms. For example, students had to be well acquainted with relevant literature and deal with it appropriately to accomplish writing tasks or to participate in discussions. During presentations, they needed to explain their research effectively within time limits. In addition, students had many chances to communicate with foreign professors in close proximity about their research. Unlike the prevalent assumption that non-major or science and engineering courses require lesser English proficiency, this study demonstrates that this belief is not always true.

The syllabi analyzed in this study were collected from foreign professors’ undergraduate CBI courses at a top research-based university. As a result, the findings would be very different from what is generally expected in Korean professors’ EMI courses, foreign professors’ GEP/TETE/TEE courses, or even foreign professors’ CBI courses at teaching-based universities. Furthermore, since this study mainly targeted those courses which demanded productive skills, its results cannot be generalized to other EMI situations, let alone EMI courses where only comprehension skills are required. However, this study, though rather limited, can serve as an extreme example where there is a huge gap between foreign professors’ expectations and the level of typical Korean college students without any prior experience of EMI courses, and also where there is a huge discrepancy between required EMI skills and English skills being taught in ESL/EFL programs now. Based on their syllabus analysis, for example, Canseco and Byrd (1989) criticized the practice of free writing with the process approach in ESL programs and emphasized the need to teach research-based writing with specific topics assigned to students. Kırkgöz (2009) also strongly argued that the EAP program for undergraduate students should prepare students to enter their academic discourse communities rather than teaching surface-level English
skills. Given that more Korean universities force students to take a certain number of EMI courses to graduate (Byun et al., 2011), it is apparent that Korean students would compete with international students and other Korean students with overseas learning experience, and that they are more likely to experience language discrimination in those EMI courses which heavily demand research-oriented skills in English as well as English productive skills.

Based on the findings of the present study and the preliminary needs analysis (Hong et al., 2008), EMI support programs for English writing, English communication, and English presentation were developed at this university. Through these programs, students have primarily learned how to use primary and secondary sources with appropriate citations and references and how to paraphrase and summarize in English writing. In addition, they have acquired essential English communication skills to promote English discussion and to interact with foreign professors. The programs also introduced basic principles and commonly used expressions for effective English presentation. Students have practiced these English writing, communication, and presentation skills under the guidance of graduate tutors during the tutoring sessions of the programs.2

Due to the fact that syllabi are tentative guidelines and subject to change, they can be considered questionable sources. However, considering that needs analysis relies on the memories and perceptions of respondents and thus can lead to inaccuracy or incompleteness, syllabus analysis can serve to triangulate typical needs analysis of students and/or instructors. As shown in this study, syllabi can inform program developers and instructors about exactly which skills to focus on in preparation for target courses. Furthermore, the results of syllabus analysis can be utilized again to identify target students, i.e., students in need of English language support. For example, after the support programs were organized, courses were identified which incurred heavy demands for English writing, English communication, and English presentation, respectively. After that, the researchers contacted foreign professors of those courses, and all of them willingly helped the researchers introduce the programs in class and recruit students. Therefore, analyzing syllabi can provide a valuable guide for the design and implementation of English programs which serve to unburden EMI professors from additional work and to reduce educational inequalities among students in EMI courses.

2 Details on program development and implementation as well as program evaluation results will be found in a separate paper currently in preparation. For a brief overview, refer to Chang, Kim, and Lee (2012).
REFERENCES


## Identification of Essential English Productive Skills for English-medium Instruction Courses

### APPENDIX

A Complete List of the Courses Whose Syllabi Were Analyzed

<table>
<thead>
<tr>
<th>Courses</th>
<th>W</th>
<th>C</th>
<th>P</th>
<th>L</th>
<th>R</th>
<th>O</th>
</tr>
</thead>
<tbody>
<tr>
<td>Microeconomics (M)</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fundamentals of Economics (M)</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Discrete Mathematics (M-SE)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Computer Programming (M-SE)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Operating Systems (M-SE)</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Southeast Asia History and Maritime Trade (M)</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Implication of Chinese Traditional Culture and the Contemporary China (M)</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Seminar in Korean History 2 (M)</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Topics in Western History (M)</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Buddhism in Korea (M)</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Topics in Contemporary Aesthetics (M)</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Regional Integration in Europe (M)</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Readings in Anglo-American Law (M)</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Astronomical Observation and Lab 2 (M-SE)</td>
<td></td>
<td></td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Field Techniques and Exercises (M-SE)</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Landscape Materials and Construction (M-SE)</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tourist Region Landscape Planning and Development (M-SE)</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Theories in Korean Language Education as a Foreign Language (M)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Selected Topics Seminar 3 (M)</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Women's History (N)</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Southeast Asia and the Maritime Silk Road (N)</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Literati Culture in East Asia (N)</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Buddhist Culture in East Asia (N)</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Music of the World (N)</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Introduction to Korean Musical Culture (N)</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Physics 2 (N-SE)</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reviews of Korean History (N)</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Extraterrestrial Planets and Life (N-SE)</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>28 courses</th>
<th>18</th>
<th>16</th>
<th>8</th>
<th>28</th>
<th>28</th>
<th>20</th>
</tr>
</thead>
<tbody>
<tr>
<td>100%</td>
<td>64.29</td>
<td>57.14</td>
<td>28.57</td>
<td>100</td>
<td>100</td>
<td>71.43</td>
</tr>
</tbody>
</table>

**Note 1.** The number "1" denotes that corresponding tasks exist rather than referring to the exact number of tasks or codes.

**Note 2.** (M) = major courses; (M-SE) = major courses offered by science and engineering departments; (N) = non-major courses; (N-SE) = non-major courses offered by science and engineering departments

**Note 3.** W = writing; C = communication; P = presentation; L = lectures; R = reading; O = others
Applicable levels: College

Ji-Yeon Chang
Education Research Institute
Seoul National University
San 56-1, Shinrim-dong, Kwanak-gu
Seoul 151-748, Korea
Phone: 02-880-7615
Cell: 016-255-6848
Email: jchang200@gmail.com

Wooyeon Kim
Dept. of English Education
College of Education, Seoul National University
San 56-1, Shinrim-dong, Kwanak-gu
Seoul 151-748, Korea
Phone: 02-880-7670
Cell: 010-6399-0237
Email: hallokatze@snu.ac.kr

Heewon Lee
Center for Teaching and Learning
Seoul National University
San 56-1, Shinrim-dong, Kwanak-gu
Seoul 151-748, Korea
Phone: 02-880-5418
Cell: 010-5578-6228
Email: hwbio@snu.ac.kr

Received in June 2013
Reviewed in July 2013
Revised version received in August 2013